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**REDUCING THE COST OF AGENCY: LOOKING BEYOND TOP
MANAGEMENT TEAMS**

A Dissertation

Submitted to the Graduate Faculty of the
University of South Alabama
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

in

Business Administration

by
Stephen C. Giles
B.S., Troy University, 2006
M.B.A., Troy University, 2015
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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CCA	Confirmatory Composite Analysis
CPO	Collective Psychological Ownership
HTMT	Heterotrait-Monotrait Ratio
IC	Innovation Climate
OCB	Organizational Citizenship Behavior
OCB-O	Organizational Citizenship Behaviors Organizational
LM	Linear Regression Model
MEA	Mean Absolute Error
OID	Organizational Identification
OLC	Organizational Learning Culture
PO	Psychological Ownership
RMSA	Root Mean Squared Error
ROA	Return on Assets
TE	Team Empowerment
TMT	Top Management Team

ABSTRACT

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The year 2020 demonstrates that powerful forces exist in the external environment, which may threaten a firm's survival, but agency problems, within the organization, persist even in years where there are minimal external pressures on the firm. Agency costs can present meaningful challenges to the firm beyond the chief executive and top management team, and the concept of agency is applicable to all employees, not just management. An organizational learning culture is proposed to both aid firms in reducing the cost associated with agency, as well as to enable firms to adapt to rapid changes in the external environment. In this study, the three proposed antecedents of an organizational learning culture are organizational identification, an innovation climate, and team empowerment, and the two measures of collective psychological ownership and organizational citizenship behaviors organizational are proposed as favorable outcomes. When firms look to decrease agency costs, it is important to consider that all firm employees can aggregately influence these costs, and thus, it is important to look beyond top management teams.

CHAPTER 1

INTRODUCTION

The timeless adage still rings true that “if you want something done right, then you have to do it yourself.” The first thing to note about this statement is that the person desiring the successful completion of the task in a business context is either the legal owner or feels a sense of ownership for the task. In this case, I refer to the person who wants a task completed as the principal who has a greater vested interest in a successful task completion than does the person who was asked to complete the task, referred to as the agent (Panda & Leepsa, 2017). As the connotation of the adage suggest, this vested interest may drive the principal to complete the task without the involvement of the agent, simply because the cost may be prohibitive to monitor the actions of the agent effectively (Jensen & Meckling, 1976). Additionally, if the principal does not delegate the task, this then gives rise to the discussion of opportunity cost, because the cost of the principal performing the task, which should have been delegated to the agent, is often more valuable than the dollar amount of the principal’s wage (Shaw, 1992). Not only is the principal’s time valuable, but in practical terms, having the principal engage in every firm task likely limits the efficiency and productivity of an organization. Internal problems, such as agency and monitoring costs can influence firm outcomes, but external influences can impact firm outcomes as well.

A black swan event is an unforeseen event with substantial and extensive consequences to the broader environment and, if other recent black swan events have not emphasized this point enough, 2020 demonstrates that the broader environment has a considerable vote in organizational outcomes (Phan & Wood, 2020). In the first week of April 2020, the U.S. unemployment rate surged from a near record low of 3.5% to above 10% due to the COVID-19 pandemic and, in that single week, the new unemployment claims jumped by 6.6 million (Cox, 2020). This recent black swan event reveals that no industry is exempt from environmental forces, but some are more susceptible to rapid changes than others, namely services businesses. In 2020, restaurants were forced to transform their business models over a very short period from a dine-in experience to delivery, takeout, and curbside services, and the change in the business model also altered previous industry models for satisfactory levels of labor expenses and packaging expenses (Trentmann & Maurer, 2020). In sum, many organizations were coerced into ceasing business operations, laying off staff, contending with decreased demand for products and services, navigating through supply chain disruptions, and managing dwindling cash on hand more efficiently (Bartik et al., 2020). Thus, in addition to internal problems of agency, the broader environment presents challenges for the firm as well, and it should be noted that the terms firm and organization are used here interchangeably.

While the environment and agency both influence firm outcomes, there are more variables outside of the firm than within, and while some studies demonstrate the possibility of a firm's impact on the environment, it is very difficult for firms to influence external variables (Smith & Cao, 2007). Therefore, since the environment theoretically impacts all organizations indiscriminately, it is important to focus on the internal

variables that an organization may be able to assert some control over. These areas of focus include things such as the agency relationship and organizational culture.

Agency theory is based upon the premise that agents will have divergent interests from principals, and this divergence creates costs for the principal, referred to as agency costs (Jensen & Meckling, 1976). Although there has been much work on agency theory, some note that legal or formal ownership precedes heightened feelings of psychological ownership, and the general premise of agency is that when the principal employs an agent to perform a service, the principal experiences two problems associated with agency (Sieger et al., 2013). The first problem is that the principal and agent have different motivations and goals, and it may be challenging or costly for the principal to ensure the agent is acting in the best interest of the principal (Eisenhardt, 1989). The second problem is associated with divergences between how the agent and the principal view risk, as the risk tolerance of the principal may be lower than the agent (Eisenhardt, 1989). Even if the principal's interest may be aligned with the agent through granting the agent an equity stake in the company, their risk tolerances for investing in new ventures may still be different (Jensen & Meckling, 1976), because the principal likely invested personally accumulated capital into the firm, where the agent did not (Panda & Leepsa, 2017).

Agency problems can be categorized into three dimensions, Type I, Type II, and Type III. The Type I problem of agency centers around information asymmetry and non-mutual risk tolerance within the principal-agent relationship. A Type II problem is one between majority and minority stockholders. A Type III agency problem occurs between stockholders and creditors (Gilson & Gordon, 2003; Shao et al., 2013). The focus of this

study is the Type I agency problem, which is between the principals and agents. There are numerous identified causes for Type I agency problems such as separation of ownership and control, risk preference, duration of involvement of the agent, limited earnings, information asymmetry, and moral hazard (Panda & Leepsa, 2017). While the level of analysis for studies on agency theory have primarily focused on the owner's relationship with the chief executive, any relationship where there is a delegation of a task to another individual responsible for completing the task could be considered an agency relationship (Eisenhardt, 1989). This raises an important question: if principal and agent relationships exist throughout the organization, do the collective agency costs of these relationships matter? "Who plays the roles of principal and agent depends on the research question at hand, and opportunism directed toward the principal can be manifested in different ways, depending on the context" (Cruz et al., 2010, p. 72).

As the preceding section alludes, there is potential for agency theory to extend beyond the CEO and top management team or TMT, and this premise transitions the discussion to the first of two primary research questions. Does the cost associated with the entire set of principal-agent relationships in an organization matter to organizational performance? Although most studies have looked at the CEO or TMT, some studies have looked at senior managers, which were defined as functional area department heads (Sieger et al., 2013), and with the relatively broad concept of a principal delegating tasks for an agent to complete, this suggest that agency may apply to employees throughout all echelons to the lowest levels of the firm (Eisenhardt, 1989). Historically, it is understandable that the primary focus of the research has been to examine the top echelons of management, as decisions they make can have a meaningful and direct

influence on costs. However, if the agency relationship exists at the lowest levels of the organization, then employees aggregately may have a meaningful influence on agency cost.

In the literature, the key distinction between the principal and the agent is merely a matter of a formal or legal ownership interest (Jensen & Meckling, 1976). However, as alluded to earlier, legal ownership does not necessarily explore the psychological aspect of ownership (Sieger et al., 2013), and some argue that psychological ownership may exist in the absence of a formal ownership interest, which transitions the discussion to the second research question (Pierce et al., 2001). How does a firm minimize the problems associated with agency, in the absence of legal ownership interest? Researchers find that some well compensated executives preside over poorly performing firms, and some argue that granting formal ownership to the agent does not automatically initiate feelings of ownership on a psychological level (Pierce et al., 2001). Psychological Ownership (PO) is a feeling of ownership of a tangible or intangible object, and this individual feels as though this target of ownership is “mine” (Pierce et al., 2001). PO is examined at the collective or group level of analysis as well, and Pierce and Jussila (2010) introduce the construct of Collective Psychological Ownership (CPO). Agency theory and PO theory have been examined in tandem previously, but this analysis was performed at the individual, rather than the collective level (Sieger et al., 2013). Pierce and Jussilla (2010), in their seminal piece on CPO hypothesize the relationship between group learning and CPO, and for the learning to be ongoing, it is important to examine it through the more durable lens of culture.

Odor (2019) refers to organizational learning as “the change in an organization’s knowledge base that occurs due to past experience,” and she refers to a learning organization as a byproduct of organizational learning (p. 1). Schein (2017) identifies multiple distinctive elements of an organizational culture, and he defines culture in terms of an aggregated, collective learning process to solve both internal and external problems, which is based on the organization’s values. These artifacts, values, and assumptions of culture influence organization members’ thoughts, perceptions, feelings, and behavior. Combining the concepts of organizational learning, a learning organization, and culture, an Organizational Learning Culture (OLC) is defined as an organizational system of shared beliefs that places great emphasis on the value of learning, both conceptually and in practice, and these shared beliefs and values drive organizational behaviors towards continual learning. This culture of collective learning likely precedes these feelings of psychological ownership at the collective level.

CPO “is the collectively held sense (feeling) that this target of ownership (or a piece of that target) is collectively ‘ours’ ” (Pierce & Jussila, 2010, p. 812). This emergent state of ownership affect can be directed towards tangible objects, such as a conference room table, or the more abstract things such as ideas and organizations (Pierce & Jussila, 2010). Given that the problem of agency proposed above suggest an analysis at the collective level based upon the aggregate influence of individual employees on agency costs, the construct of psychological ownership should also be evaluated at the collective organization level.

1.1 Statement of the Problem

The motivation to study the magnitude of agency is driven by the potential collective impact of agency costs, extending throughout the organization, because while an employee's agency cost may be insignificant at the individual level, the aggregate influence may be meaningful. It is commonly accepted that the CEO and TMT have the most direct and meaningful influence on firm performance (Mackey, 2008), but there is also a need to examine the collective influence of employees on agency cost, throughout all levels of the organization. There are a few problems associated with the current literature on agency, CPO, and OLC.

The first problem is that firm employees could easily be inferred to be agents, who are individually delegated the completion of a task by a principal (Eisenhardt, 1989), albeit indirectly through a manager, but the agency literature has yet to examine these phenomena below the top management level fully. Stated differently, both first line managers and TMT members occupy both roles of principal and agent, and the only true agents in a firm are the line employees, with no supervisory responsibility. Examining agency theory throughout the organization, although more tedious than at the CEO and TMT level, should provide valuable insights about the extent of the problems associated with agency at all echelons of the organization. Additionally, by not examining these phenomena at the lowest employee level, it is posited that some of the variance in agency cost is potentially being left unexplained.

The second problem is that if line employees can aggregately influence agency costs, then it logically follows that agency may be present in organizations where a firm manager is also the sole owner, which some contend are mutually exclusive (Ang et al.,

2000). Stated differently, the authors argue that agency costs are not present when the sole owner is also the firm manager, because the interest of the dual hatted sole owner/manager must necessarily be aligned. While on the surface it seems as though there is merit to this argument, some researchers find that firms managed by the sole owner post inferior performance in relation to their separated owner/manager counterparts, at generating net income (Lauterbach & Vaninsky, 1999). One possible explanation for this is that there is perfect alignment between the interest of the individual serving as both agent and principal in firms where the manager is the sole owner, but the firm owner does not value maximizing the efficiency of the firm. However, the more likely explanation is that agency costs exist in all firms, regardless of whether the manager is also the sole owner.

The final problem with the literature is that while some researchers have identified PO as a potential method for overcoming the challenges associated with agency, there do not appear to be any that examine CPO (Sieger et al., 2013). Within this same vein, the literature does not specifically identify OLC as an antecedent of CPO, but some do note that the investment of time, energy, and attention towards a culture of learning is likely to incite an enhanced sense of CPO (Pierce & Jussila, 2010). Additionally, given that most firms are not publicly traded, the access to the various metrics for measuring agency costs (e.g., asset turnover ratio, expense ratio, Tobin's Q, and ROA) is limited, and there are few proximal measures for the above financial metrics (Panda & Leepsa, 2017). Having proximal measures for assessing the degree of agency cost may be helpful, especially in organizations without a profit motive. Even though PO is identified as a potential method for overcoming the challenges with agency, it is an

affective state, rather than a behavioral outcome (Sieger et al., 2013). Examining affective states in tandem with behavioral outcomes may provide greater insight into the relationship between CPO and agency, and Organizational Citizenship Behavior is shown to have a relationship with PO (Liu et al., 2012; Van Dyne & Pierce, 2004). However, both studies had cross-sectional designs, and it is difficult to ascertain the directionality or simultaneity of these relationships.

1.2 Contribution

In this study, I am setting out to make four contributions to theory. First, this study attempts to further integrate agency theory and PO theory by examining this relationship at the collective level, which has previously only been evaluated at the individual level (Sieger et al., 2013). The reason for examining these phenomena at the individual level is likely the limited number of participants available in each organization, as Sieger et al. (2013) utilized only department heads, and most other studies of Type I agency problem focus solely on the CEO or TMT (Panda & Leepsa, 2017). By examining this relationship at the collective level, I anticipate a greater richness of understanding of this relationship between CPO and agency.

Second, this study will attempt to extend prior work by applying agency theory to all organization members, because prior studies have primarily evaluated agency at the top management level (Sieger et al., 2013). Although researchers have alluded to the notion that agency is applicable below the CEO and TMT level (Cruz et al., 2010; Eisenhardt, 1989), the literature does not currently include employees at the lowest levels of the organization. If the aggregate influence on agency cost is meaningful as predicted,

then this will broaden the scope of how agency cost is assessed. Evaluating the cost of agency at the employee level is especially critical, given the COVID-19 pandemic, because approximately half of the workforce in the United States was granted the tremendous autonomy to temporarily telecommute to work daily (Brynjolfsson et al., 2020). The inability of managers to control the work environment of telecommuting employees likely has a material influence on agency costs.

Third, this study attempts to demonstrate the nascent relationship between OLC and CPO, as there are no current studies that examine this relationship directly. Pierce et al. (2018) empirically tested a measure of group learning in relation to CPO, and it was just above the threshold of statistical significance. However, by including the component of culture into the measure, I anticipate finding a statistically significant relationship between OLC and CPO. Moreover, an OLC may help a firm not only minimize agency costs but also potentially increase a firm's adaptability during changes in the broader environment.

Finally, this study attempts to extend prior work on the measurement of agency cost, by evaluating feelings of CPO and Organizational Citizenship Behaviors Organizational (OCB-O) as inverse proximal indicators of agency cost. While the affect of CPO may be an intense motivator, it is interesting to evaluate whether citizenship behaviors directed towards the organization will manifest in tandem those intense feelings. Not only are there numerous situations, where financial metrics on a privately held company will be unavailable, but there are other firms and organizations this may help pave the way for examination. If there is a meaningful inverse relationship between both CPO and OCB-O and the measure for agency cost, this may open the door to extend

the examining agency theory in organizations, where there may not be profit measure of performance (e.g., asset utilization, expense ratio, Tobin's Q, and ROA), and by using CPO and OCB-O researchers may be able to measure the degree of agency cost within a not-for-profit or governmental organization.

1.3 Summary of Remaining Chapters

This chapter introduces some of the challenges and opportunities in the agency, CPO, and OLC literature. This chapter has also brought to light the problems with the existing literature on agency theory, CPO, and OLC, and it identifies some of the contributions the study sets out to make. Specifically, the attempt is to further integrate agency theory and PO by examining this relationship at the collective level, endeavoring to extend prior work by going beyond the CEO and TMT in analyzing agency costs, examining the relationship between OLC and CPO, and attempting to extend prior work to evaluate inverse proximal measure for agency costs, which can extend the relevance beyond for-profit firms.

Chapter 2 Literature Review dives into the literature on agency theory and CPO, and it will further unpack the problems with the current state of the literature, as well as opportunities to address these problems. This chapter will also discuss the literature of the antecedents and mediator, which set favorable conditions for an OLC, CPO, and OCB-O to emerge. Chapter 3 Model and Hypotheses builds a conceptual model, which depicts the path that the antecedent variables flow through an OLC leading to the two proposed outcome variables above of CPO and OCB-O, which are inverse proxies for agency costs. This chapter also articulates the hypothesized relationships between and among the

variables in the model. Chapter 4 Methods articulates the characteristics of the sample, the measures used, sources of data, statistical analysis used, and Chapter 5 Results provides the details of the results of the hypothesized relationships laid out in Chapter 3. The final chapter, Chapter 6 Discussion and Conclusion, re-examines the problems identified in Chapter 1, and it provides an overview of the major findings from the study. Additionally, this chapter highlights the implications of the findings for both theory and practice.

CHAPTER 2

LITERATURE REVIEW

In the previous chapter, I enumerated four primary contributions this study sets out to make. First, this study attempts to further integrate agency theory and Psychological Ownership (PO) theory by examining this relationship at the collective level. Second, this study sets out to extend agency theory beyond the CEO and TMT to all members of the firm, and this is likely the cornerstone contribution of this work. Third, this study seeks to examine the novel relationship between an Organizational Learning Culture (OLC) and Collective Psychological Ownership (CPO), because CPO has only been studied in relation to group learning, which may be diluted without the additional component of organizational culture (Pierce et al., 2018). Finally, this study sets out to extend prior work on agency theory by attempting to establish inverse proximal measures for agency cost using the outcome variables of CPO and OCB-O. This should open new avenues to research agency costs in other organizations than solely for-profit firms.

The subsections below examine the theoretical underpinnings for this discussion and discuss the variables examined in a linear way. These following subsections attempt to build the foundation for the hypotheses presented in Chapter 3, and to present the

variables in a way that make it easy to visualize the conceptual model. To initiate this discussion, it is helpful to first gain a better understanding of agency theory.

2.1 Agency Theory

Jensen and Meckling (1976) argue that the agency relationship is a contract between the firm owner, or principal, and the agent, who the principal empowers with certain decision-making authority to fulfil a service on the principal's behalf. For the decade preceding this seminal work, the neoclassical model of the firm persisted, where the firm offers a single product in a perfectly competitive market, and the sole purpose of the firm is to maximize the profits within the same period, which is later revised in favor of maximization of the present value of the firm (Anderson, 1982). Regardless of whether the principal is more interested in maximizing the profits within the current period or maximizing the present value of the firm, the principal's interests are divergent from the agent, and there are costs to the principal to ensure the agent will act in the principal's best interest, which are referred to as agency costs (Jensen & Meckling, 1976). Panda and Leepsa (2017) maintain that agency costs are the result of the principal and the agent both engaging in self-interested pursuits, but there is a paradox in this relationship, as these "self-interested parties also know that their interests can only be satisfied if the firm exists" (p. 78-79).

Jensen and Meckling (1976) argue that there are three types of agency costs: monitoring cost, bonding costs, and residual loss. Monitoring cost is the primary concern, but bonding cost and residual loss are discussed as well for context. Monitoring costs are the expenditures for the purpose of ensuring that the agent is engaging in the activities

that align with the interest of the principal (Jensen & Meckling, 1976). A good example of monitoring cost is investing in an inventory management system, so the principal can ensure that resources are being used optimally by keeping lean stocks of inventory and turning inventory over regularly. On the other hand, bonding costs are expenditures to ensure that the agent is unable to take certain actions unfavorable to the principal, and an example of this is requiring a certified public accountant to audit the financial statements (Jensen & Meckling, 1976). Alternatively, Panda and Leepsa (2017) maintain that bonding costs are those associated with setting up and operating the firm. Finally, the residual loss is simply the cost of the inefficient decisions of the agent, outside of bonding costs and monitoring costs (Panda & Leepsa, 2017). However, as noted, the primary focus is on monitoring costs, but first it is important to discuss the motivations for the divergent interests between principal and agent.

These divergent interests between the principal and the agent arise for a variety of reasons, but I address a few: information asymmetry, differing degrees of risk tolerance, and limited earnings (Panda & Leepsa, 2017). Information asymmetry occurs when the agent has more timely and accurate information about the firm than the principal does, which makes the principal reliant upon the agent for firm information, and the imbalance may provide the opportunity for the agent to take actions unfavorable to the principal (Dierkens, 1991). Additionally, while the agent may commit firm resources to somewhat profitable projects, these projects may be suboptimal, because the agent may perceive the projects to be personally less risky than other more profitable ones (Anderson, 1982). Moreover, while the principal may seek profit maximization, the agent may seek to maximize personal compensation, since agents have limited control over earnings, and

both divergent motivations are self-interested (Panda & Leepsa, 2017). Another issue related to limited earnings is that the suboptimal investment decisions may also be the result of satisficing, and this is when an agent decides upon seeing the first acceptable option, rather than systematically looking for the most optimal solution (Bourgeois, 1981). The interest divergence between the executive and the firm owner generates agency cost, but the problems associated with agency likely extends beyond top management. It is important to point out here that the above discussion relates to Type I agency problems discussed in chapter one, and these problems are centered around both information asymmetry and non-mutual risk tolerance within the principal-agent relationship.

Some argue that there are not agency costs when the firm manager is also the sole firm owner (Ang et al., 2000), but even when there is perfect alignment of interest between the firm owner and manager, as with a sole owner/manager, this does not necessarily translate to maximum efficiency. Agency costs may even be present in these firms as well (Lauterbach & Vaninsky, 1999). Much of the work on agency theory relates specifically to the agent being a member of top management, but agency is also likely applicable to employees at all echelons of an organization (Eisenhardt, 1989). Many argue that the chief executive, as well as the top management team TMT, exert substantial influence on firm performance (Mackey, 2008), and when these executives are not firm owners, they serve as the focal point for studies about agency cost. While the TMT and CEO, in many firms, likely have a disproportionate influence on firm performance and agency cost, it is important to consider the potential collective influence firm employees can have on agency costs.

In many different roles within a firm, the employee is granted a certain degree of autonomy to make minor decisions that can influence agency cost. For example, consider a food service employee, working in the kitchen of a fast-food restaurant on the closing shift. If that employee prepares more food than will be ordered, the employee will most likely have to throw out the surplus food at closing. To put the magnitude of this one example into perspective, some have argued that the global level of waste in the food supply chain between 2010 and 2050 could feed as many as 9 billion people in one setting (Parfitt et al., 2010). While this projection is based upon total waste in the food supply chain a portion of this occurs in the restaurant by improper storage, careless processing, and overproduction. While the mindset of the closing shift employee may be to produce larger quantities of food in fewer batches, this overproduction translates to increased agency cost (Christ & Burritt, 2017). It is important to point out that it is probably not the owner or top manager making the routine decision of how much food to prepare before closing, and this limited decision-making authority, by kitchen employees, likely has a meaningful aggregate impact on the restaurant's profitability influencing both monitoring and residual agency costs (Panda & Leepsa, 2017).

The brief example above demonstrates how agency cost may not just be limited to the CEO and TMT, because minor decisions made by employees may collectively produce a noticeable influence on agency costs. Although a select few have been noted here, there are numerous other causes of agency costs, but there also may be some mitigating techniques that have alleviated these costs. One of the most powerful remedies offered to mitigate the agency problem is for managers to share in an ownership stake in the firm (Jensen & Meckling, 1976). However, it would likely be cost prohibitive for

every firm to restructure equity to an employee stock ownership plan, where every employee has a legal interest in the success of the firm. On the other hand, it may be possible to produce a context where employees feel an affective sense of collective ownership (Pierce & Jussila, 2010) and behave in a manner more consistent with those collective feelings of ownership (Lee & Allen, 2002). These feelings and behaviors may help close the gap between principal and agent. Pierce and Jussila (2010) argue that group learning is related to Collective Psychological Ownership (CPO) and even though the relationship between CPO and group learning is measured slightly above the 0.05 level of statistical significance (Pierce et al., 2018), adding the component of culture to organizational learning will likely create the favorable conditions for a meaningful relationship. In the following three sub-sections, I address the three proposed antecedents of an OLC: Organizational Identification (OID), an Innovation Climate (IC), and Team Empowerment (TE).

2.2 Organizational Identification

OID is rooted in social identity theory (Tajfel, 1978). It argues that people tend to associate their personal identities within the context of social groups (Trepte, 2006). Membership within a social group provides an individual a sense of belongingness, and these feelings of belonging often result in the development of a positive social identity, which enhances self-esteem (Trepte, 2006). A social identity is a combination of the self-awareness of membership in various groups and the subjective emotional value associated with those group memberships (Tajfel, 1978). However, this positive social

identity is not just limited to social group identification, as that person may seek to find an identity within the context of an organizational setting (Ashforth & Mael, 1989).

OID occurs when employees perceive an openness with the firm and feel a sense of belonging and based on the degree of the positive affect towards the firm, employees define themselves as members of the organization (He & Brown, 2013). He and Brown (2013) note numerous subjective organizational factors that may enhance employees' OID, and these factors may include the following: "attractiveness, distinctiveness, prestige," and "construed external image" (p. 14). For instance, the attractiveness dimension shows how employees view the firm from an orderliness perspective, (i.e., is the work environment always kept in a highly organized condition). Distinctiveness relates to how perceptibly different the firm may be in relation to other firms in the market or industry, from a service, selection, or price standpoint. Prestige relates to how employees feel about the perceived degree of exclusivity the status is of being an employee of the firm. Attractiveness, distinctiveness, and prestige may all be related to the external image the firm projects. The bottom line is that employees are more likely to identify with firms that help them enhance their individual self-image (He & Brown, 2013).

Employees also will identify with an organization when there is a perceived congruence of values and interests between the employee and employer. These shared values and interests can influence employees to feel a sense of shared investment in the success of the organization (Miller et al., 2000). With this shared sense of personal investment in the success of the firm, OID may also help reduce agency costs, because OID improves the probability that employees will act in the best interest of the

organization, whether or not supervision is present (Miller et al., 2000). Moreover, Cheney (1983) argues that OID also improves employee “motivation, job satisfaction, individual decision-making, role orientation and conflict, employee interaction, and length of service” (p. 343), and these outcomes point to improved employee relations, engagement, fulfillment, tenure, and decision-making, which are all likely aligned with the best interest of the organization.

While the outcomes listed above are generally favorable to the organization, it should be noted that they are all limited to in-role performance. However, some argue that OID can lead to employees going the extra mile and engaging in extra-role behaviors to the benefit of the firm, and these Organizational Citizenship Behaviors Organizational (OCB-O) are not required and not necessarily rewarded by the firm, even though they may be encouraged (Van Dick et al., 2006). OID is shown above to influence employees affect, in-role behavior, and extra-role behavior, but additionally, OID emerges when there is a perception of shared values between the employee and employer, which may pertain to learning behaviors associated with helping to solve organizational problems (Miller et al., 2000).

Edmondson (1999) argues that group learning is “an ongoing process of reflection and action, characterized by asking questions, seeking feedback, experimenting, reflecting on results, and discussing errors or unexpected outcomes of actions” (p. 353). There are a few things that need unpacking in this statement. First, the double use of the word reflection indicates that great value is placed upon examining the factors contributing to prior success. Second, asking questions and seeking feedback points to a desire to seek understanding, as well as a recognition that internal knowledge and

wisdom may be insufficient for future success. Finally, the willingness to discuss errors and expected outcomes acknowledges that there is a certain degree of tolerance for trying new ideas and processes, even when they do not yield the results anticipated.

Additionally, Chughtai and Buckley (2010) find that OID leads to the learning behaviors of feedback seeking and error communication, but these learning behaviors may be considered reactive. This transitions the discussion to an IC, which is more proactive and is the second proposed antecedent of an OLC.

2.3 Innovation Climate

Innovation can be a powerful tool in organizations, because it relates to the generation and implementation of new ideas or reconfiguration of both new and old ideas (Van de Ven, 1986). Innovation may be formulated around new processes, which consists of new techniques, approaches, or policies, but innovation may also be developed around new technology, which consists of new tools, new equipment, or new products (Van de Ven, 1986). Kanter (1988) maintains that there are four stages of innovation: idea generation, coalition building, idea implementation, and knowledge transfer.

First, idea generation is usually the byproduct of problem recognition, where someone acknowledges that there is an issue that needs to be resolved, and that individual attempts to provide an acceptable solution, whether the solution be previously established or completely new (Scott & Bruce, 1994). Second, oftentimes it is insufficient for the solution to be widely accepted based upon the one person's suggestion, and this involves building a coalition with acceptable legitimate and referent power to transform the solution from an idea into a concrete reality (Kanter, 1988). When implementing change

at the organizational level, the importance of building a coalition must not be understated, because resistance to change is very likely (Kotter, 1998). Third, when the coalition is formed around the new or improved idea, the next task is idea implementation, and this is indicative of the transformation of an abstract idea into something more concrete, like a prototype, plan, or a model (Kanter, 1988). Finally, knowledge transfer or diffusion is the final task, and this occurs when the knowledge is adopted and spread throughout the organization (Kanter, 1988). These four tasks noted above lay out the process of innovation, but what does innovation look like in the context of an organizational climate?

An organizational climate requires a referent (i.e., safety, service, or achievement), because there is not an omnibus climate within organizations (Schneider & Reichers, 1983). Climate is based upon collective perceptions, and at the individual level, climate is an individual interpretation of the situation within an organization (Scott & Bruce, 1994). The primary referent of concern here is innovation, and organizations that value innovation tend to encourage creativity, continuous improvement, and employee empowerment to pursue novel ideas (Kanter, 1988). With an IC, firm members are resourced, recognized, and rewarded for creativity, and an innovation climate is characterized by the encouragement of the following: flexibility, adaptability, and openness to change (Scott & Bruce, 1994). Additionally, an innovation climate sets conditions for many favorable organizational outcomes to emerge.

First, by encouraging flexibility, adaptability, idea generation, and openness to change (Scott & Bruce, 1994), an innovation climate sets the favorable conditions for an OLC to emerge. Second, when an organization signals to employees that they value

innovative behaviors, employees develop covenantal ties to the organization, and this drives employee behaviors towards creativity and innovation (Van Dyne & Pierce, 2004). This emotional connection with and associated behaviors towards the organization indicates a relationship between an IC and CPO. Finally, Qadeer and Jaffery (2014) argue that there is a positive relationship between an IC and OCB-O. It is now time to transition the discussion to the final proposed antecedent of an OLC, TE.

2.4 Team Empowerment

TE is the third antecedent of an OLC, which is a team level analysis, and OID and IC are at the individual and organizational level of analysis, respectively. When a firm empowers employees to self-manage work teams, the performance of the teams improves because these teams are responsible for assigning work tasks, scheduling, making some limited decisions, as well as resolving personnel, process, and customer issues (Kirkman & Shapiro, 1997). One key component of empowerment is delegating or relinquishing authority to the team level. This can create an enhanced sense of collective control over the workplace and processes (Kirkman & Rosen, 1999). However, Kirkman and Rosen (1999) maintain that there are three other dimensions of team empowerment: potency, meaningfulness, and impact.

First, potency is the general sense among the team members that the team possesses the capability to perform at a high level, and this relates to a collective sense of confidence in the skills, abilities, and productivity of the team (Kirkman et al., 2004). This confidence, however, is not based on hubris, rather it is based upon feelings of team productivity, effort, problem solving skills, and influence on other teams, which is often

grounded in historical performance (Guzzo et al., 1993). Chen and Kanfer (2006) argue that team efficacy, or the collective belief in the team's ability, is a critical motivational state for the team, because task accomplishment is more likely to be achieved when teams believe in the probability of success, rather than the mere possibility of success. However, additional motivators may be required, and this transitions the discussion to the next dimension of TE, meaningfulness.

Meaningfulness connotes a collective sense among team members that their work is intrinsically worthwhile, and empowerment creates a sense among workers that their work is valuable (Seibert et al., 2011). Meaningfulness is a powerful motivator, because it indicates a strong connection between the role at work and personal principles, values, and standards (Seibert et al., 2011). Meaningfulness acknowledges that the work is not only important to the individual team member, but it is important to the team as well. Closely related to meaningfulness, impact is the perception that the output of the work team is significant to the whole organization, but this is distinctive from meaningfulness, since impact looks to the importance of the team's work from the perspective of the total organization and not just from the perspective of the team (Kirkman & Rosen, 1999). The three dimensions of TE of potency, meaningfulness, and impact are all important, but as noted earlier, autonomy is perhaps the most important dimension of TE, which transitions the discussion to the final dimension of this construct.

Autonomy indicates the degree of freedom an organization grants a team to have discretion over the team's work, but it also indicates the degree of discretion the team has for decision-making. Rowlands (1995) argues that empowerment brings employees without decision-making authority into the decision-making process, and the key

decision-making component of empowerment indicates that in the absence of autonomy, it would be difficult for empowerment to exist. However, when the team is empowered, there are several favorable organizational outcomes that may emerge.

First, some have demonstrated the empirical relationship between TE and organizational learning by arguing that “empowerment is one of the important characteristics of learning organizations” (Ravangard et al., 2014, p. 2). Second, Kirkman and Rosen (1999) maintain that team empowerment leads to proactive behaviors, where teams scan the environment for opportunities by “showing initiative, taking action and solving problems, and persevering until changes are made,” (p. 62) and being proactive, taking initiative, solving problems, and persevering are all indicative of a collective sense of psychological ownership. Finally, empowerment at the individual level is shown to lead to OCB-O (Ackfeldt & Coote, 2005), but it should be noted that this level of analysis is individual empowerment leading to OCB-O, not testing TE leading to OCB-O. Now that proposed antecedents of OID, IC, and TE have been discussed above, it is now time to discuss the proposed mediator variable of OLC.

2.5 Organizational Learning Culture

Every organization learns – even if there is not a systematic process for doing so – but learning alone is not necessarily indicative of a high level of performance (Basten & Haamann, 2018). Consider how people learn about things they are afraid of, such as touching the burner of a hot stove, and this example demonstrates that learning can occur in a haphazard and experiential way. Intentional learning, at the organizational level, is directed at improving organizational effectiveness, and Huber (1991) discusses four

dimensions of organizational learning: knowledge acquisition, information distribution, information interpretation, and organizational memory.

The first dimension of organizational learning is knowledge acquisition, and this comes in a variety of forms, including learning through personal experience, through the experience of others, and through knowledge inherited over the life of an organization (Huber, 1991). Learning through the experiences of others is known as vicarious learning, but some are critical of this form of learning, as organizations may draw inaccurate inferences from the data (Denrell, 2003). Although experiential learning is often unsystematic and unplanned, some experiential learning is highly structured and deliberate, and organizational experiments provides this opportunity by analyzing feedback (Huber, 1991). Regardless of what means are utilized by the organization, Huber (1991) argues that “knowledge acquisition is the process by which knowledge is obtained” by the organization (p. 90). After the knowledge is acquired, the next dimension of organizational learning addresses how the information is distributed.

Information distribution is the dissemination of information throughout the organization, and information distribution precedes the interpretation of that information, which helps turn information into useful knowledge (Fauske & Raybould, 2005). Huber (1991) argues that information distribution is indicative of the degree of organizational learning, based upon both the incidents of information dissemination, as well as how widely the information is shared. In essence, the greater the degree of information distribution, the greater the degree of organizational learning in a firm. As alluded to earlier, the next dimension of organizational learning is information interpretation.

Information interpretation may be thought of in terms of sensemaking, and Weick (1993) articulates that sensemaking “is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs” (p. 636). This creation of order Weick describes above helps place the information into a context to provide a common or shared understanding among organization members (Huber, 1991). Without this shared understanding, information is likely not as useful to the organization, because different organization members, perhaps even departments, may draw different inferences from the same information based upon an incomplete vantage point. This transitions the discussion to organizational memory, which is the final dimension of organizational learning.

What good is it for a firm to acquire, distribute, and interpret information, if it is not captured and stored for future use? Organizational memory is a mechanism by which knowledge acquired from past experience is applied by the firm to current operations, and this memory bank helps reduce the time and resources required to tackle a present challenge (Stein & Zwass, 1995). Organizational memory may be stored in the personal memories of firm members, as well as on organizational information systems, and organizational memory may be incrementally reduced as a result of employee turnover (Huber, 1991). Now that the dimensions of organizational learning have been unpacked, it is now time to address the cultural component of an OLC.

Culture includes an organizations artifacts or observable characteristic, values or core organizational principles, and assumptions about how things should be done, and Schein (2017) articulates that culture is a collective learning process, based upon organizational values, to solve both internal and external problems. Therefore, culture

includes the organizational values and assumptions about what should be done and how, and it also includes the observable characteristics of organizational artifacts. Combining organizational learning with culture, it is proposed that an OLC is defined as an organizational system of shared beliefs that places great emphasis on the value of learning, both conceptually and in practice, and these shared beliefs and values drive organizational behaviors towards continual learning.

2.6 Collective Psychological Ownership

Agency costs arise due to divergent interest between the principal and the agent, and one method proposed to align the interest of the principal and agent is granting shares of stock to the agent, which makes the agent a principal as well (Jensen & Meckling, 1976). However, does granting shares of stock ownership automatically limit the divergent interest, given that the agent did not invest personal capital to purchase the shares of stock? There is a psychological component to ownership, beyond just a formal legal interest, and these feelings of possessiveness may surface, even when the agent has no legal ownership interest (Sieger et al., 2013). Agents who develop a sense of ownership, when no formal interest exists, are referred to as “psychological principals” (Pierce et al., 2003, p. 30), and there are three motivations that contribute to the concept of PO at the individual level: efficacy and effectance, self-identity, and having a place.

First, efficacy refers to the desire to attain power and control, because possessions can be instrumental in achieving or maintaining control of the environment, as well as people within the environment (Pierce et al., 2003). Second, self-identity is an important motivation, since possessions are symbolic extensions of the self, and identifying with

targets of ownership, provide individuals with a way to define their self-identity (Pierce et al., 2001). Finally, the concept of belongingness or having a place, which is briefly discussed above, is characteristic of the way employees feel about home, because they possess a need to have a place of refuge, a preferred space, or a home (Pierce et al., 2003). PO is an affective state in which an individual feels that a target of ownership belongs to the individual, and these feelings can be directed at the tangible, such as a person, place, or thing, or the intangible, such as an idea or an organization (Pierce et al., 2001). Just as an individual can experience feelings of ownership, without legal interest, so can groups experience collective feelings of ownership, and “collective psychological ownership is the collectively held sense (feeling) that this target of ownership (or a piece of that target) is collectively ‘ours’ ” (Pierce & Jussila, 2010, p. 812).

CPO is a shared sense of possessiveness among firm employees that they collectively own the firm, and the motivations at the collective level are very similar to that of the individual level: identification, belongingness, and desire for control (Ng & Su, 2018). Group identification is essentially viewing oneself as a member of the group, and this motive stems from social identity theory (Pierce et al., 2018). At the collective level, belongingness is articulated as a shared sense of hardship endurance, and this emphasizes not only having a home but also a shared commitment to the organization (Ng & Su, 2018). Finally, the desire for control is measured as the degree to which organization members are involved in decision-making for the firm (Ng & Su, 2018).

Pierce and Jussila (2010) argue in favor of the relationship between CPO and both group learning and psychological safety, but it should be noted that group learning and psychological safety only demonstrate a statistically significant relationship with CPO at

the 0.10 level (Pierce et al., 2018). Psychological safety indicates the degree of comfort an individual has for sharing ideas and taking risks within the organization, and this concept is very similar to an IC (Pierce et al., 2018). However, the authors used Edmondson's (1999) seven item scale to measure both group learning and psychological safety (Pierce et al., 2018), and measuring an IC and an OLC in a more comprehensive manner using two separate scales will likely improve the statistical significance (Scott & Bruce, 1994; Yang, 2003).

2.7 Organizational Citizenship Behaviors Organizational

Organizational Citizenship Behaviors (OCB) are actions taken outside of an employee's role, and Organ (1988), in the title of his book on OCB, aptly describes this phenomenon as the "good soldier syndrome." These behaviors are acts of helpfulness and kindness, but while the behaviors might be conflated with cooperation, the original dimensions include the following: punctuality, helpfulness, innovativeness, and efficiency (Smith et al., 1983). Organ (1988) further develops the concept of OCB by noting that the helpful behavior is discretionary for which no formal reward system provides acknowledgment, and these helpful behaviors encourage greater organizational efficiency and effectiveness. It should be noted that the early measures looked at both helpfulness towards individuals within the organization, as well as helpfulness and goodwill towards the organization itself, but these measures are now further delineated to Organizational Citizenship Behaviors Individual (OCB-I) and Organizational Citizenship Behaviors Organizational (OCB-O), respectively (Podsakoff et al., 2000).

Organ (1988) articulates five dimensions of OCB, and they are as follows: altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. Altruism is a general sense of goodwill towards the organization and coworkers, and this is manifested behaviorally by a general sense of helpfulness (Podsakoff et al., 2000). Courtesy is another dimension of helpfulness, and this involves proactively addressing issues, so that they do not cause problems for coworkers (Podsakoff et al., 2000). Conscientiousness is described in the vein of organizational compliance, and this may involve being at work on time, avoiding counterproductive activities, and generally following the organizational rules (Podsakoff et al., 2009).

On the other hand, civic virtue involves employees taking a keen interest in the life of the organization, and civic virtue includes staying abreast on the goings on within one's own department, as well as maintaining situational awareness about what is going on within the broader organization (Podsakoff et al., 2009). Finally, sportsmanship occurs when an employee is more likely to endure less than ideal conditions, without vocalizing complaints, and this falls in line with Organ's (1988) description of the good soldier. However, it is important to isolate citizenship behaviors specifically directed towards the organization.

There are numerous characteristics of OCB-O, and some include attending organizational functions and staying current on what is happening in the other functional areas within the organization (Lee & Allen, 2002). Additionally, this may involve showing pride in the organization and defending the organization, when others criticize the firm, and these behaviors are generally indicative of loyalty to the organization (Lee & Allen, 2002). Moreover, these behaviors may include offering unsolicited, innovative

solutions to organizational problems, as well as proactively attempting to address issues before they impact the organization, and these may also include feelings that demonstrate a generalized concern for the image of the organization (Lee & Allen, 2002). OCB-O is defined here as unrewarded behaviors that encourage the general welfare of the organization by promoting and defending the organization, as well as innovating and problem solving on behalf of the organization.

In the next chapter, the hypotheses will be unpacked, enumerating the relationships among these variables. First, this study will explore CPO in an attempt to further integrate agency theory and PO theory. Second, this study will evaluate how agency theory is applicable to all members of the firm, rather than exclusively at the CEO and TMT level. Third, this study will evaluate the novel relationship between OLC and CPO, because this relationship has only been evaluated by looking at group learning, which is distinctive from an OLC (Pierce et al., 2018). Finally, this study attempts to extend prior work on agency theory by establishing inverse proximal measures for agency cost using the outcome variables of CPO and OCB-O.

CHAPTER 3

MODEL AND HYPOTHESES

The preceding chapter unpacked agency theory, Collective Psychological Ownership (CPO), Organizational Citizenship Behaviors Organizational (OCB-O), along with three antecedents and a mediator variable. This chapter presents a conceptual model and develops hypotheses for testing the proposed direct and indirect relationships among the variables. Below is a brief recap on agency theory, which can help a firm explain the behavior of agents, and the term agent is simply defined here as all non-owner employees of a firm, which is an expanded definition including managerial firm employees at all levels and non-managerial firm employees.

As previously highlighted, Jensen and Meckling (1976) discuss the agency relationship as one between the owner (principal) and firm manager (agent), and this relationship is a contract between the principal and agent, where the agent is granted certain decision-making authority to provide a service on behalf of the principal. This is the rudimentary Type I form of agency, and the problems associated with this form of agency primarily deal with information asymmetry and non-mutual risk tolerance within the principal-agent relationship (Panda & Leepsa, 2017). Although agency theory is evaluated primarily at the CEO or TMT level, it is proposed here that agency is applicable to employees at all echelons of an organization, and this is the primary reason

for the expanded definition of agent above (Eisenhardt, 1989). Referencing back to the first research question it is proposed that every supervisor in an organization is both a principal and an agent, and every employee of the firm is an agent. Looking back to the second research question in the absence of legal ownership interest, it is proposed that employees who develop a sense of CPO and engage in OCB-O will feel and behave like firm principals, which will reduce agency costs. The hypotheses below will be tested at all echelons of the firm from the TMT to the line employees.

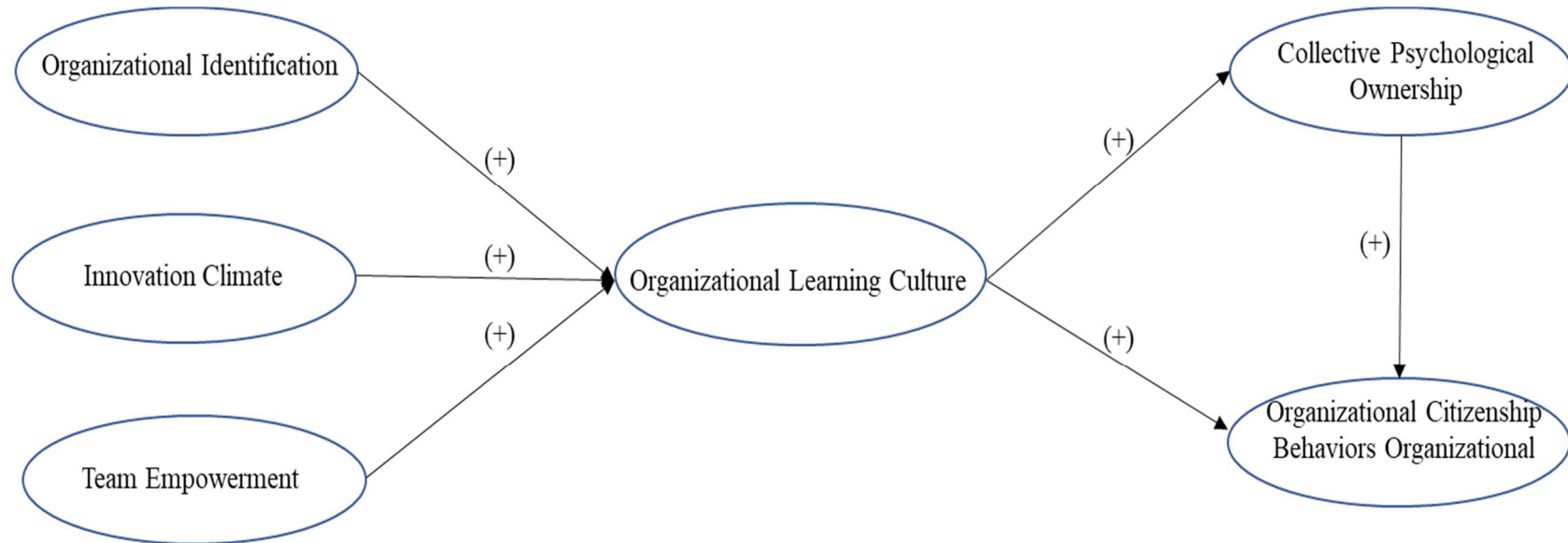


Figure 1. Structural Model Showing the Relationships of the Variables and Corresponding Hypotheses. This structural model displays the relationships among the variables. Organizational Learning Culture (OLC) mediates the positive relationships between the antecedent variables of Organizational Identification (OID), Innovation Climate (IC), and Team Empowerment (TE) with the favorable organizational outcomes of Collective Psychological Ownership (CPO) and Organizational Citizenship Behaviors Organizational (OCB-O).

3.1 Model and Hypotheses

This section discusses the relationships among the variables and the corresponding hypotheses, and Figure 1 depicts the conceptual model of these relationships. There are numerous empirical studies about Organizational Identification (OID), but these studies tend to focus on relationships with outcome variables associated with attitudes, behaviors, and organizational context (Riketta, 2005). Affective organizational commitment is often evaluated as an outcome variable in relation to OID, but only a few studies examine organizational learning or an OLC preceding the affective commitment outcome (Malik & Garg, 2017). An organization member demonstrates affective organizational commitment by working hard for the firm, buying into the firm's goals, and strongly desiring to continue working for the firm (Mowday et al., 1979). One meta-analysis notes that some OID scales do not demonstrate empirical distinction from affective organizational commitment (Riketta, 2005), but this study will use the Mael and Tetrick (1992), which demonstrates discriminant validity when compared with affective organizational commitment. Prior to the Riketta (2005) meta-analysis, Van Dyne and Pierce (2004) compare affective organizational commitment to Psychological Ownership (PO), because they note that the constructs are similar enough to merit discriminant validity analysis. Looking at the components of affective commitment above, it appears that CPO may be a more extreme version of affective commitment, and the relationship between OID and affective commitment may be mediated through learning or an OLC, as some have discussed learning as a determinant of OID.

One study links OID to behaviors associated with organizational learning, and these include monitoring and feedback seeking behaviors (Chughtai & Buckley, 2010).

Monitoring both the internal and external environment is indicative of organizational learning, as firms with an OLC stress the importance of acquiring information, and then turning that information into usable knowledge through accurate interpretation (Škerlavaj et al., 2007). Additionally, feedback seeking is related to the organizational learning characteristic of self-appraisal and double-loop learning, because when organizations seek to solve non-routine problems, they are required to engage in constant re-examination to ensure they remain on azimuth (Huber, 1991). Thus, I propose:

Hypothesis 1 – Organizational Identification is positively related to an Organizational Learning Culture.

In evaluating the antecedents of an OLC, it is helpful to also consider the climate for innovation in firms, because in the extensive work on organizational learning, Huber (1991) argues that adaptation and innovation are both crucial for organizations in a quickly evolving environment. Kanter (1988) argues in favor of four stages of innovation: idea generation, coalition building, idea implementation, and knowledge transfer. However, it is arguable that an organization may not ever get to the three final stages of coalition building, idea implementation, and knowledge transfer in the absence of an organizational climate fostering the generation of innovation and creativity.

Scott and Bruce (1994) maintain that innovation is related to “the production or adoption of useful ideas and idea implementation” (p. 581), and at the individual level, climate is a perception of an organizational situation with respect to a specific referent. In this situation, the referent is innovation, and when an Innovation Climate (IC) exists, organization members are recognized, rewarded, and resourced for creativity. Additionally, an IC is characterized by the encouragement of organizational flexibility,

adaptability, and openness to change (Scott & Bruce, 1994), and all three of these characteristics are indicative of learning. Both flexibility and adaptability signal a willingness to change course, because there are things beyond the scope of the firm's control, as the broader environment does have an influence. The firm's willingness to change and adapt to the environment or context indicates at least a limited tolerance to try new or different things, which is also indicative of learning, and it is posited that when creativity is recognized, resourced, and rewarded, favorable conditions exist for an OLC to emerge. Thus, I propose:

Hypothesis 2 – Innovation Climate is positively related to an Organizational Learning Culture.

There are a number of things to consider when evaluating antecedents of an OLC, and thus far this study has identified OID and an IC. However, another factor that merits consideration is the degree of autonomy or empowerment the firm grants to work teams. Kirkman and Shapiro (1997) find that autonomous or self-managed work teams perform at a high level, because the key component is the firm delegating or empowering the work team to exert limited control over the work environment. The organization granting work teams autonomy is the center of gravity for Team Empowerment (TE), but Kirkman and Rosen (1999) maintain there are three additional dimensions of TE: potency, meaningfulness, and impact. Potency refers to a collective belief in the team's ability to succeed, and meaningfulness and impact refer to the significance of the team work to the individuals on the work team and the organization, respectively (Kirkman & Rosen, 1999).

Empowerment and delegation both express the connotation of limited decision-making, and while a team may only be given minor discretion in decisions, decision-making tends to involve a trial-and-error learning process (Kirkman & Rosen, 1999). These decisions involve employee assignments, work schedules, service and production processes, and resolution of customer and employee issues (Kirkman & Rosen, 1999). While there may be historical data for these teams to base decisions upon, new personnel, contexts, and environments may force a team to engage in learning processes. Some have demonstrated the empirical relationship between TE and organizational learning by arguing that “empowerment is one of the important characteristics of learning organizations,” and it improves individual employee job performance, satisfaction, motivation, and productivity (Ravangard et al., 2014, p. 2). Thus, I propose:

Hypothesis 3 – Team Empowerment is positively related to an Organizational Learning Culture.

Organizational learning involves knowledge acquisition, information distribution, information interpretation, and organizational memory (Huber, 1991), and culture includes an organization’s artifacts or observable characteristic, values or core organizational principles, and assumptions about how things should be done (Schein, 2017). OLC is defined here as an organizational system of shared beliefs that places great emphasis on the value of learning, both conceptually and in practice, and these shared beliefs and values drive organizational behaviors towards continual learning. Although it appears logical that as an organization learns more, they will collectively assume greater responsibility and take ownership of the organizational systems, processes, and procedures, but there are no current studies that examine the relationship between OLC

and CPO. However, some have examined the relationship between group learning and CPO.

Pierce and Jussila (2010) first proposed the concept of CPO, and in this seminal work on CPO, they identified the relationship between CPO and group learning, as well as CPO and psychological safety. However, they later empirically tested these propositions, but the relationships were only statistically significant at the 0.10 level (Pierce et al., 2018). It should be noted that both group learning and psychological safety were measured using the Edmondson (1999) seven item scale, and while group learning and psychological safety are related, there are distinctions. However, if a more comprehensive scale for organizational learning is used, including a component of culture, then it is posited that OLC will demonstrate a meaningful relationship with CPO, both in magnitude and statistical significance. Thus, I propose:

Hypothesis 4 – An Organizational Learning Culture is positively related to Collective Psychological Ownership.

OID also demonstrates a relationship with an OLC, as well as CPO. There are three primary motives for Psychological Ownership (PO) at the individual level, which are efficacy, self-identity, and having a place (Pierce & Jussila, 2010). It is important to note that social identification is a crucial influence on CPO (Pierce & Jussila, 2010). In fact, CPO has been defined as “people’s perception that an object, place, or idea belongs to their own group,” and this suggests that identification with a group is a pre-requisite for CPO to emerge (Storz et al., 2020, p. 404). However, the proposed relationship between OID and CPO is not direct, and it must be mediated through an OLC.

Committing to culture of continuous learning in an organization is no small task, because inertia or the force to hold all variables constant is powerful (Becker, 1995). In addition to resistance to change, committing to an OLC requires tremendous personal and collective investment of time and energy, but some have noted that when individuals invest time and energy to contribute to the development of creative processes, they are more likely to both identify with the organization and feel a sense of ownership (Giordano et al., 2020). This indicates that an OLC facilitates the relationship between OID and CPO. Moreover, in some measurements of OID, items are included that indicate both organizational learning and CPO, such as “in general, I view [the company]’s problems as my problems” (Miller et al., 2000, p. 631). Thus, I propose:

Hypothesis 5 – An Organizational Learning Culture mediates the positive relationship between Organizational Identification and Collective Psychological Ownership.

In addition to OID, an innovation climate also shows an indirect relationship with CPO. Innovation relates to both the creation of new ideas and reconfiguration of existing ideas (Van de Ven, 1986), and as noted, there are four stages in innovation: idea generation, coalition building, idea implementation, and knowledge transfer (Kanter, 1988). However, in the absence of idea generation, it is hard to imagine the remaining stages of innovation occurring within the firm, and it is asserted here that idea generation is center of gravity for innovation. An organizational climate, on the other hand, is a collectively perceived interpretation of the situation within an organization (Scott & Bruce, 1994). An IC, in general terms, refers to a collectively perceived organizational situation, where team members feel as though they are recognized, resourced, and

rewarded to solve the organization's problems, and an innovation climate indicates that the organization is flexible, adaptable, and open to change (Scott & Bruce, 1994).

When an organization encourages flexibility, adaptability, idea generation, and openness to change, this IC establishes advantageous conditions for an OLC to develop (Scott & Bruce, 1994). By fostering a climate of innovation, the firm signals to team members that change is necessary and new ideas are welcome, and when the firm encourages idea generation, they are also encouraging knowledge acquisition, which is the first dimension of organizational learning (Huber, 1991). Through the continuous investment of time and energy to learn new ways of improving the firm with an OLC, a sense of CPO begins to emerge, because team members feel their investment is meaningful and valuable to the organization (Giordano et al., 2020). Thus, I propose:

Hypothesis 6 – An Organizational Learning Culture mediates the positive relationship between Innovation Climate and Collective Psychological Ownership.

It is hypothesized above that both OLC and an IC demonstrate an indirect relationship with CPO, as mediated through an OLC, but the third antecedent of an OLC, Team Empowerment (TE), is also proposed to have an indirect relationship with CPO. Empowerment is shown to lead employees to engage in proactive behaviors, by scanning the environment to solve problems, and this is indicative of PO (Kirkman & Rosen, 1999). In fact, Van Dyne and Pierce (2004) argue that “creating and maintaining work settings that empower individuals and enable them to exercise control over important aspects of their work arrangement should – we would argue – enhance their sense of ownership” (p. 529). Stated differently, when individuals are provided guidance on what

the desired end state looks like and are provided parameters of their left and right limits, these individuals are empowered in a meaningful way. This empowerment is likely to instill a durable sense of commitment or PO towards the organization. While the argument for this is at the individual employee level, it is posited to extend to the collective level of analysis, as mediated through an OLC.

As discussed, when a firm has an OLC, they display a system of shared beliefs that places great emphasis on the value of learning, both conceptually and in practice, these shared beliefs and values are posited to drive organizational behaviors towards continual learning. Kirkman and Rosen (1999) maintain that empowerment leads to the proactive behaviors for scanning the internal and external environment, which is indicative of PO, but these behaviors are also indicative of a culture of continuous learning. Although very few empirical tests have been performed, one research team find that there is a relationship between empowerment and organizational learning (Ravangard et al., 2014). Thus, I propose:

Hypothesis 7 – An Organizational Learning Culture mediates the positive relationship between Team Empowerment and Collective Psychological Ownership.

Transitioning from effect of CPO to behavior, an OLC is also posited to have a direct relationship with OCB-O. OCB were originally conceptualized as employees exhibiting the behaviors of punctuality, helpfulness, innovativeness, and efficiency (Smith et al., 1983), and in the title of his book, Organ (1988) provides an analogy of an employee exhibiting OCB as having the “good soldier syndrome.” These helpful behaviors are completely discretionary, in that they are not part of the official duty

requirements, but Podsakoff et al. (2000) delineates the difference between OCB directed towards individuals (OCB-I) or towards the organization OCB-O, which is of particular interest here.

A firm with an OLC values learning by encouraging and rewarding the learning process, and one of the items measuring OCB-O is that employees “offer ideas to improve the functioning of the organization” (Lee & Allen, 2002, p. 142). This is broad enough to encompass both the innovation to improve existing processes or the encouragement of developing new systems, processes, services, and products. Additionally, Somech and Drach-Zahavy (2004) empirically tested the relationship between an organizational learning mechanisms and OCB-O, and they found that organizational learning mechanisms predict OCB-O. Even though the aspect of culture is not included in the measure, it is proposed that the positive directional relationship exists from an OLC to OCB-O. Thus, I propose:

Hypothesis 8 – An Organizational Learning Culture is positively related to Organizational Citizenship Behavior Organizational.

In addition to the direct relationship between OLC and OCB-O, indirect relationships are proposed between each of the antecedent variables and OCB-O, as mediated through an OLC. He and Brown (2013) argue that OID can lead to numerous favorable organizational outcomes, including OCB-O, and the degree of OID influences the eagerness of team members to apply additional effort towards improving work tasks and the organization as a whole. The relationship between OID and OCB-O appears to be indirect, because an OLC encourages employees to improve the organization by

promoting “openness, creativity, and experimentation among members” (Odor, 2019, p. 4). Thus, I propose:

Hypothesis 9 – An Organizational Learning Culture mediates the positive relationship between Organizational Identification and Organizational Citizenship Behavior Organizational.

There is also proposed to be an indirect relationship between an IC and OCB-O, as mediated through an OLC. Qadeer and Jeffery (2014) maintain that there is a relationship between IC and OCB-O, and they argue that this relationship may be indirect. An IC, as noted above, is characterized by the encouragement of organizational flexibility, adaptability, and openness to change (Scott & Bruce, 1994), and all three of these characteristics are indicative of learning, which indicates a direct relationship with an OLC. Moreover, Somech and Drach-Zahavy (2004) find that there is a direct relationship between organizational learning mechanisms and OCB-O. Thus, I propose:

Hypothesis 10 – An Organizational Learning Culture mediates the positive relationship between Innovation Climate and Organizational Citizenship Behavior Organizational.

TE is the final proposed antecedent of an OLC, and TE is also proposed to have an indirect relationship with OCB-O, as mediated through and OLC. Ackfeldt and Coote (2005) contend that empowerment is perhaps the most important predictor of citizenship behaviors, and of all the predictors of citizenship behaviors they studied, empowerment is the most meaningful. Employees are also more likely to engage in OCB-O when the firm provides avenues for growth and learning opportunities, which is indicative of an OLC (Ackfeldt & Coote, 2005). Finally, the direct relationship between CPO and OCB has

been empirically tested (Pierce et al., 2018), and there is a partially mediated relationship between an OLC and OCB-O through CPO, as the direct relationship is enumerated in

Hypothesis 8. Thus, I propose:

Hypothesis 11 – An Organizational Learning Culture mediates the positive relationship between Team Empowerment and Organizational Citizenship Behavior Organizational.

Hypothesis 12 – Collective Psychological Ownership is positively related to Organizational Citizenship Behaviors Organizational.

Hypothesis 13 – Collective Psychological Ownership mediates the relationship between an Organizational Learning Culture and Organizational Citizenship Behaviors Organizational.

CHAPTER 4

METHODS

The content of this chapter includes the process and actions used for testing the hypotheses presented in the prior chapter, and there are multiple sections to this chapter. The first section outlines the sources of the data for this study, as well as the sample size required for analysis. The second section addresses the intent for collecting data, as well as the instruments used in the survey. The third section details the sample collected in the study. The fourth section includes how the data are coded for analysis. The fifth section articulates the methods used to analyze the measurement of the variables, including determining reliability and validity, but this section also analyzes the testing of hypotheses.

4.1 Sample Criteria and Data Sources

Several research design considerations are needed to perform this study. The initial consideration is the access needed to gather data from individuals representing these firms. First, the sample needs to include both sole owner/managed firms, as well as firms with separated ownership and management. If agency problems do in fact exist in firms with a sole owner/manager, then agency may be applicable to every tier of management, since every manager may wear both hats of principal and agent, and this

may be due to the fact that agents demonstrate the ability to act as though they have a formal ownership interest in the firm and behave as a psychological principal (Sieger et al., 2013). Second, the sample needs to include firms where the top manager is accessible for data collection regarding the presence or absence of agency costs in the firm. It is estimated that the accessibility of the top manager may be proportionate to the size of the firm, with the managers of smaller firms being more accessible, but it is noted that some argue that larger firm have better response rates among top management than smaller firms (Bartholomew & Smith, 2006). Third, the sample respondents need to have a small to moderate degree of decision-making autonomy, which has the potential to generate agency costs to the firm. For this reason, the sample focuses on the businesses with direct interaction with customers in general and food service, because the minimal autonomy of individual team members characteristic of the service businesses is posited to have a meaningful influence on agency costs in aggregate. Although training is identified as a potential mitigant to unnecessary product costs in restaurants, employee decisions can influence these costs (Ramdeen et al., 2007). Finally, it is essential to be able to access the employee population of both managers, at all levels, and team members, because this will provide insight on whether agency exists within every manager-subordinate relationship. Given the criteria above, the sample of firms likely needs to be smaller businesses having direct interaction with customers, because they are relatively small in number of employees and/or small in revenue size, even as some note that firm size characteristics are not consistent predictors of responsiveness (Gupta et al., 2000).

4.1.1 Data Sources

The firm data collection period took place between October 2021 through February 2022 in two, time-separated survey waves. The sample consists of six for-profit firms in the central Alabama area. These firms are considered small businesses, most with revenue less than \$10 million annually and most without a formal or informal board of directors or collection of advisors. Firms with social ties to the researcher are also shown to positively influence the survey response rate, and it should be noted that all firm principals are familiar to the researcher in either a social or professional sense (Bartholomew & Smith, 2006). Many of these firms have a sole owner/manager, who will provide empirical testing for the presence of agency costs within this type of firm. Additionally, when discussing the data sources, it is also important to consider the size of the sample.

4.1.2 Sample Size

It is crucial to begin the process with the estimated end result in mind, and it is important to determine significance criteria, desired effect size, and power required prior to the data being collected (Cohen, 1992). The significance criteria or α is indicative of the acceptable likelihood that the analyzed coefficient is different than zero when it is not, and stated differently, it “denotes the chance the researcher is willing to take of being wrong about whether the estimated coefficient is different from zero,” which indicates a Type I error (Hair et al., 2019, p. 301). Most commonly researchers use the 0.05 level of significance, while it is not uncommon to see the more stringent 0.01 level, but in exploratory studies, it has been acceptable to use the more liberal 0.10 level (Cohen, 1992). This study will analyze the data at the more flexible 0.10 level of significance,

given the exploratory nature of this study, and this transitions the discussion to the desired effect size.

The symbol f^2 is referred to as the effect size, and this represents the change in R^2 , which is the correlation coefficient squared or the coefficient of determination (Hair et al., 2019). R^2 is perhaps the most highly utilized metric to evaluate structural models, and the coefficient of determination demonstrates the predictive power within the model, indicating the likelihood that the independent variables will predict the dependent variable (Hair et al., 2017). Finally, power indicates the likelihood of rejecting the null hypothesis, when it is in fact false, and failure to reject a false null hypothesis is Type II error (Cohen, 1992). Given the three independent variables leading to the mediator variable in the proposed model, assuming a significance level of 0.10, a moderate R^2 of .25, and a statistical power of .80, the minimum acceptable sample size in PLS SEM is 30 (Hair et al., 2017, p. 26).

The for-profit firms listed in the data sources above have an employee population of approximately 216, and it is estimated that a sample size of 108 participants is attainable. Although a 50% response rate is very ambitious, there are three actions which will be used to influence the response rate: owner's endorsement, pre-notification, and follow up (Sheehan, 2001; Yammarino et al., 1991). First, as part of the pre-notification, the owner or firm manager will provide the employees a notification that they will receive an email requesting participation in a research project, and the owner or firm manager will encourage the participation in the survey. Second, the researcher will send out a pre-notification to the employees detailing the timeline of the survey waves, providing estimated participation time investment, and providing the justification for why

the subject is very important, as this speaks to the salience of the subject matter at hand (Sheehan, 2001). Finally, the researcher will send out follow up emails to encourage employees to participate in the study, because follow up appeals are shown to improve the response rates for both mail and electronic surveys (Sheehan, 2001; Yammarino et al., 1991).

Surveys were sent to twenty businesses, and of the six businesses that participated in both survey waves, the final sample size was 39 respondents or $N = 39$. Within those six organizations, there were 216 potential respondents, and the survey participation rate was 18%. Among these participants 33.3% were in supervisory roles, and 66.7% of the respondents were non-supervisory in nature. It was anticipated to have a higher participation rate within service businesses, but 72% of respondents came from the more heavily regulated banking industry, with less than 15% coming from service businesses. Most of the respondents, 84.6% work full-time, meaning they work at least 40 hours weekly, and only 10.4% of respondents work less than 40 hours weekly. Of the respondents, 50% have worked at the company for 11 years or fewer years, and the remainder have 12 to 39 years of tenure at their respective firms. The sample consists of 59% female participants and 41% male participants, and respondent racial demographics are as follows: 89.7% White, 7.7% Black or African American, and 2.6% Asian.

Table 1. *Demographic Information of the Survey Respondents*

Sample Demographics					
Industry	Percentage	Education	Percentage	Hours Worked	Percentage
Banking/Insurance/Finance	71.8%	Some High School	2.6%	20 or Fewer	5.2%
Government Contracting	10.3%	High School	17.9%	21 to 39	5.2%
Manufacturing	5.1%	Trade School	5.1%	40	56.4%
Legal/Accounting/Professional Services	5.1%	Some College	20.5%	41 to 50	25.6%
Hospitality/Restaurant	5.1%	Associate Degree	41.0%	Greater Than 50	2.6%
Convenience Stores	2.6%	Bachelor's Degree	12.8%	Other	5.0%
Tenure Years					
Tenure Years	Percentage	Race	Percentage		
11 or Fewer	50.0%	White	89.7%		
12 to 20	33.6%	Black or African American	7.7%		
21 to 39	15.6%	Asian	2.6%		
Sex					
Sex	Percentage	Supervisory Role	Percentage		
Male	41.0%	Supervisory Role	33.3%		
Female	59.0%	Non-Supervisory Role	66.7%		

4.2 Data Collection Strategy

The data collection was proposed to take place in two survey waves to firm employees, time-separated by 1 month for both conceptual and methodological reasons. The third survey wave was solely for firm principals, top managers, or non-owner financial employees, and these were sent following the close of the second survey wave to employees. It should be noted that there was not a time period between the observations of the proposed antecedent variables and proposed mediator variable of Organizational Identification (OID), Innovation Climate (IC), Team Empowerment (TE), and Organizational Learning Culture (OLC). Additionally, the literature does not establish a clear estimate for the length of time after an OLC forms for employees to gain a sense of Collective Psychological Ownership or CPO, as well as for employees to begin engaging in Organizational Citizenship Behaviors Organizational (OCB-O) (Ployhart & Ward, 2011). These relationships are exploratory in nature. The progression from the

antecedents and the mediator towards a CPO and OCB-O may occur at varying rates among different organizations, but it was posited that the relationship between the mediator variable and dependent variables are likely to manifest within one month of collecting data on the antecedents and mediator variables. Additionally, from a methodological standpoint, the employees responding to the surveys about the antecedents and mediator were the same employees responding to the surveys about outcome variables and given that the information on both will be coming from common sources, it is important to mitigate the impact of common methods bias by time-separating the measurements (Podsakoff et al., 2003).

The first phase of data collection involved contacting decision makers in for-profit companies, and it is noted that the sample was comprised of a combination approach of both a purposive and convenience sample, which may limit the generalizability of the results due to selection bias (Hair et al., 2015). However, this sampling approach has been shown to have comparable results with population-based sampling (Mullinix, et al., 2015). In the second phase, the emails of employees were requested from the employers, but for firms whose owner/manager prefers to serve as the intermediary, the surveys are sent through the owner/manager to be relayed to employees. It should be highlighted that while some of the employers provided email addresses for their employees, the highest response rate of 47% came from a community bank, where the CEO made multiple appeals to employees to participate. The third phase involved sending out a pre-notification email a week prior to sending the first survey, which provided the employees of the firm with an alert to the upcoming survey. This pre-

notification email also included a general discussion about the importance of the firm's culture and how their participation will be very important to the research project.

A week after the pre-notification email, the fourth phase began with sending out the first wave of surveys, and this first wave measured the antecedent variables of OID, IC, TE, and the mediator variable OLC. The link to participate in the survey remained active for one month, and two follow up email notifications were sent during the month in the attempt to maximize participation in the first survey wave. Upon completion of the survey, the participants were asked to generate a unique reference code for the survey, so that their individual second wave responses could be matched with the first, without compromising anonymity. This first survey wave collection period occurred between October 31 and November 30, 2021. There was an approximately 30-day interval between the completion of phase four, and the beginning of phase five.

Phase five began with the submission of the pre-notification email to all firm owner/managers and participants, and this pre-notification email was sent out 48 hours prior to the second wave of surveys to employees. Phase six began when the second wave of surveys was sent out to participants, which included the measures of CPO and OCB-O, and as with phase four, the participants were sent two follow up email notifications in order to maximize participation in the second wave of survey. Phase six ended one month after the second wave of surveys were sent. This was the last phase for employee participation in the study, which shifted the focus towards the firm principal, top manager, or non-owner financial employee. The second survey wave to employees occurred between January 01 and February 01, 2022.

Phase seven began with the submission of a third survey wave, exclusively to the principal, top manager, or non-owner financial employee. This survey attempted to gather general information about the firm's performance assessment in relation to firm peers, and these more objective performance measures were to assess firm performance over time. Firm performance, specifically return on assets, has been historically used to indicate the presence of agency costs, and it is proposed that using performance measures will serve as a proximal indicator of agency (Panda & Leepsa, 2017). Given the assertion that both CPO and OCB-O are inverse proximal indicators of Agency Costs, it was anticipated that this phase would demonstrate that relationship. Where agency costs were lower, as indicated by a measure of firm performance, the corresponding measures of CPO and OCB-O were assumed to be higher, and vice versa.

4.2.1 Survey Instruments

There were several survey instruments proposed for use in this study, and there were three waves of surveys as indicated above, with two being sent to employees and one to the principal, top manager, or non-owner financial employee. The first wave to firm employees included measures for OID, IC, TE, and OLC, and the second wave to firm employees included measures for an CPO, and OCB-O. The third and final survey wave was sent to the principal or top manager to gather information about firm performance, and this survey was particularly interested in the firm's general performance and return on assets over time, which is an indicator of agency costs (Panda & Leepsa, 2017).

In the first survey wave to firm employees, OID was measured by a 10-item scale, and among other things, this scale measures an employee's feeling of identification with

and membership of the subject firm (Mael & Tetrick, 1992). These 10 items are rated by the employees on a scale between 1 – *Strongly Disagree* to 5 – *Strongly Agree*, as used by Prati and Zani (2013). There were no modifications to the original scale, and the numeric values between 1 and 5 remained the same as the previously validated scale. This scale was used in place of the OID Questionnaire over concerns with empirical distinctions between Affective Organizational Commitment, and Ricketta (2005) recommends using the scale above.

The second scale used in the first survey wave was the 22-item scale for measuring an IC, and these items address the behavioral manifestations for how much a firm values innovativeness (Scott & Bruce, 1994). There are three overarching behavioral themes in the survey items, and these are concerned with whether a firm resources, recognizes, and rewards innovative behaviors. The items were not modified from the originally validated measure, and they are on a scale from 1 – *Not At All* to 5 – *To An Exceptional Degree* (Scott & Bruce, 1994).

The third scale used in the first survey wave was the 12-item scale for measuring TE, and these items relate to the perception of the team or workgroup's sense of potency, meaningfulness, autonomy, and impact (Kirkman et al., 2004). These items were originally constructed on a Likert type scale between 1 – *To No Extent* and 5 – *To a Great Extent* (Guzzo et al., 1993), but the measures were re-validated to a Likert type scale from 1 – *Strongly Disagree* to 7 – *Strongly Agree* by Kirkman et al. (2004). The referent was modified in the scale to team/workgroup from team, to collect individual perceptions of either a team or workgroup, because it is noted that some employees may work somewhat independently and not have an immediate team. In this case, it was

asserted that having the option of workgroup, in addition to team, would provide individuals in this category an opportunity to interpret the concept more broadly, and respondents, who might otherwise have omitted the questions regarding the team, were more likely to respond.

The fourth scale used in the first survey wave was an OLC, which is the mediator variable, and this scale is comprised of 21 items (Yang, 2003). This scale measures items relating to the firm's value of learning behaviors, and these include behaviors from the lower levels of the firm to the management level. The original Dimensions of the Learning Organization Questionnaire scale includes 43 items enumerated by Marsick and Watkins (2003), and 21 of the items are identified as a shortened form of the survey. The items in the scale were not modified, and they were based upon a Likert type scale from 1 – *Almost Never* to 6 – *Almost Always*.

The first and second scales used in the second survey wave measured both individual Psychological Ownership (PO) and CPO, and the PO scale consisted of seven items, while the CPO scale consisted of four items (Pierce et al., 2018; Van Dyne & Pierce, 2004). The PO scale primarily evaluates psychological ownership at the individual level, except for two collectively worded items, but the CPO scale solely measures psychological ownership at the collective level. Although PO is not in the conceptual model or hypotheses, it was of interest to determine whether or not there are differences in feelings of ownership at the individual or collective level, which provides the opportunity for analyzing an alternative model. None of the items in either scale were modified from the originally validated version, and the responses on both were based upon a Likert type scale from 1 – *Strongly Disagree* to 7 – *Strongly Agree*.

The third scale used in the second survey wave measured OCB-O, which is the second outcome variable, and this scale consists of eight items (Lee & Allen, 2002). These eight items measure an employee's willingness to perform extra-role behaviors to benefit the organization, and these behaviors include a variety of actions from attending functions that help the firm's image, as well publicly advocating on behalf of the firm and defending the firm from negative remarks. The survey items were not modified from the originally validated measure, and the responses were based upon a Likert type scale from 1 – *Strongly Disagree* to 7 – *Strongly Agree*.

Phase seven began with the submission of a third survey wave, to the principal, top manager, or non-owner financial employee, and in this survey, company demographic information and historical performance comparison information was collected. Specifically, return on assets is a measure used to calculate the degree of agency cost, and Dess and Robinson (1984) developed a scale for business owners to accurately rate firm performance around sales growth, return on assets, and overall performance in relation to firm peers, when financial data are not readily available. The measure asked the principal/top manager to rate the firm performance from 1 – *Lowest 20%* to 5 – *Top 20%* to other firms with similar volume in the same industry and/or region, and instead of asking about an unspecified period of sales growth, return on assets, and overall performance, the items have been modified to discuss those metrics in relation to firm peers within the past five years. These surveys were emailed directly to the firm principal, top manager, or non-owner financial employee to be completed, but the researcher reached out directly to make a follow up appeal, when the surveys were not completed within the first week of being sent. Also included in the third wave survey is a

15-item scale on general firm performance, and this Delaney and Huselid (1996) scale is used in addition to the Dess and Robinson (1984) performance measures above.

4.3 Data Coding

The data were collected from the employees of six different firms in two different waves, and the data from all organizations were consolidated into one file and coded for analysis. Additionally, the financial performance metrics from the third wave surveys needed to be added to each of the employee responses, to run the analyses, and this was done to ensure that employee responses were linked back to the firm performance feedback provided by the firm owner, top manager, or non-owner financial employee.

The scales above are all reflectively measured constructs for the three proposed antecedents, the mediator, and the outcome variables, but there are a few scales with reverse coded items. The results were imported into the IBM SPSS Version 27 software package in order to reverse code the negatively worded measurement items. In the first survey wave, there were a total of twelve items among the antecedents and mediator variable that needed to be recoded, and they included one item in the OID scale and eleven items from the IC scale (Mael & Tetrick, 1992; Scott & Bruce, 1994). While the proposed outcome variables of CPO and OCB-O do not have any reverse coded items, the PO scale had one item, and this item was reverse coded as well.

4.4 Measurement of Variables

Although the small sample size of 39 is a limitation, the SmartPLS software package is capable of performing robust analyses to determine the internal consistency,

reliability, convergent validity, discriminant validity, R^2 , f^2 , statistical significance, and hypothesis testing for this sample. Certain guidelines were followed to ensure this robust analysis. First, internal consistency was determined by the construct Cronbach's Alpha, and this measure of internal consistency for each construct in SmartPLS met a minimum threshold of 0.70 (Hair et al., 2017). Second, the measure to determine construct reliability is Composite Reliability, which essentially ensures there is a tight shot group of the items measured. This measure of reliability needed to be greater than 0.70, with consideration to the indicator loadings discussed later (Hair et al., 2017). Third, the measure of convergent validity used for this analysis is the average variance extracted (AVE), which evaluates the correlation of the measured items with alternative items of the same construct, and for the construct to demonstrate convergent validity, the AVE must exceed a threshold of 0.50 (Hair et al., 2017). The assessment of the measurement models followed the confirmatory composite analysis (CCA) procedure (Hair et al., 2020).

As noted above, the indicators of each construct needed to be assessed in tandem with the measures of internal consistency, reliability, and convergent validity, and in the next section, each indicator below a value of 0.708 is quantitatively and qualitatively assessed for retention in the model (Hair et al., 2017). The quantitative assessment included evaluating the Cronbach's Alpha, Composite Reliability, and AVE, ensuring values exceed 0.70, 0.70, and 0.50 respectively. The qualitative assessment evaluated whether or not the measured items possess face validity or qualitatively appear to measure the construct (Hair et al., 2017; Hair et al., 2019).

Once the measures of internal consistency, reliability, and convergent validity have been assessed, it becomes important to assess discriminant validity or how distinctive the measured constructs are in relation to other constructs in the model (Henseler et al., 2015). The Fornell-Larker Criterion was used to measure the construct AVE with the squared correlations of the other constructs in the model to determine empirical distinctiveness, and the cross loadings of the construct will be assessed to determine if items load highly on multiple constructs (Henseler et al., 2015). These two approaches are the more traditional means of assessing differences among constructs, but the heterotrait-monotrait ratio (HTMT) is shown to determine empirical distinction more accurately; though it should be noted that there are three versions of HTMT listed from most conservative to most liberal: HTMT₈₅, HTMT₉₀, and HTMT_{inference} (Henseler et al., 2015). Given the smaller sample size of 39, the moderately conservative measure of discriminant validity of HTMT₉₀ was used for the analysis.

A few metrics were used to measure the amount of variance explained within the model, including the coefficient of determination or R^2 , the effect size or f^2 , and PLSpredict (Manley et al., 2021; Shmueli, et al., 2019). The R^2 measure is perhaps the most commonly used item to measure structural models, and it measures the predictive power of the model in sample (Hair et al., 2017). On the other hand, the effect size or f^2 represents the change in R^2 , which is the correlation coefficient squared or the coefficient of determination, and the effect sizes of 0.02, 0.15, and 0.35 signal a small, medium, or large effect on the outcome variable (Hair et al., 2019). Finally, as noted earlier, due to the smaller sample size an exploratory 0.10 level of significance was used to test the

relationships among the variables within the model, and these hypotheses measured the direct and indirect effects of these relationships.

The third prediction metric evaluated for the structural model is out-of-sample prediction based on PLSpredict error results. While PLS-SEM maximizes the explained variance of endogenous constructs within a structural model, it also provides the tools for evaluating the out-of-sample predictive power, and this is performed with PLSpredict (Shmueli et al., 2016; 2019). The results can be assessed by evaluating two prediction statistics: root mean squared error (RMSE) and mean absolute error (MAE; Shmueli et al., 2019). The RMSE assesses the squared differences between the measured observations and predictions, by calculating the square root of the mean of these differences (Shmueli et al., 2019). The MAE takes the average of errors within the set of predictions, regardless of directionality, and assuming equal weights, it expresses the absolute differences between the measured observations and predictions (Shmueli et al., 2019). These metrics are then compared with the linear regression model (LM) Benchmark, and if the indicators display lower RMSE and MAE values compared to the LM Benchmark, then the model has high predictive power (Shmueli et al., 2019).

CHAPTER 5

RESULTS

The content of this chapter provides an overview of the results of testing the hypotheses proposed in Chapter 4. First, this chapter describes the model estimation of the constructs within the proposed measurement model, evaluating the loadings of the observations on these constructs. Second, this chapter includes the assessment of the internal consistency, reliability, and convergent validity of the constructs within the model. Third, this chapter assesses the discriminant validity among the constructs within the model. Fourth, this chapter discusses the hypothesized structural model. Finally, post hoc analyses are performed by evaluating moderation in the hypothesized structural model, assessing an alternative model, and testing the relationships of the outcome variables with firm performance measures.

5.1 Model Estimation

There are a total of six constructs that are measured within this hypothesized model: Organizational Identification (OID), Innovation Climate (IC), Team Empowerment (TE), Organizational Learning Culture (OLC), Collective Psychological Ownership (CPO), and Organizational Citizenship Behaviors Organizational (OCB-O) (Kirkman et al., 2004; Lee & Allen, 2002; Mael & Tetrick, 1992; Pierce et al., 2018;

Scott & Bruce, 1994; Yang, 2003). Additionally, employee respondents were asked to provide information on Psychological Ownership (PO), and the firm principal, top manager, or non-owner financial employee was asked to provide information on financial performance, indicating the presence or absence of agency costs (Delaney & Huselid, 1996; Dess & Robinson, 1984; Van Dyne & Pierce, 2004). Once all the employee responses to the two survey waves were consolidated, they were imported into SmartPLS to perform model estimation analysis. The intent was to remove all items not approaching the recommended indicator reliability threshold of 0.708 (Hair et al., 2017). However, it should be noted that upon quantitative analysis of composite reliability and average variance extracted (AVE), as well as content validity qualitative analysis, some items above 0.60 but below 0.708 were retained. Assessment of the measurement models followed the confirmatory composite analysis (CCA) procedure (Hair et al., 2020).

Table 2 depicts the reliabilities of the observed variables on the latent constructs, and the loadings in green indicate that items are above the recommended loading threshold of 0.708. Indicators not meeting recommended guidelines were removed from the measurement model one at a time, with the model being re-run after each iteration. The first antecedent construct OID presented only minor issues within the model, as Item 8 exhibits a loading of 0.196. Since the indicator loading is well below the 0.708 recommended threshold, this item was removed. The second antecedent construct IC required the removal of eleven of the twenty-two items from the construct. The last of the antecedent variables TE required removal of three of the eleven indicators.

The mediator variable, OLC, was measured with the Yang (2003) scale, and this scale contains twenty-one items. Item 7 exhibited a loading of 0.497 on the OLC

construct, and item 8 exhibited a loading of 0.536 on the OLC construct. Both of these items were below the recommended loading threshold of 0.708, and these two items were removed sequentially from the model. Once the indicator variables were removed, the model was subsequently rerun.

The first outcome construct of CPO has four indicator variables, all of which exhibited loadings above the 0.708 level, and two of the eight indicator variables from the outcome construct OCB-O were removed. The Delaney and Huselid (1996) measure for the post-analysis test assessing the presence or absence of agency cost, needed six indicators removed. The interesting thing to note about this scale is that items 5, 10, and 13 all had negative loadings, but the questions in the scale were not worded negatively or supposed to be reverse coded. The Dess and Robinson (1984) three item scale would run in SmartPLS with any of the single items or any two items, but the model would not run with all three items, even with the removal of the Delaney and Huselid (1996) construct.

The item within the Dess and Robinson (1984) scale of particular interest is the return on assets (ROA), which has previously been used as an inverse indicator of agency costs (Panda & Leepsa, 2017). Thus, the analysis includes evaluating firm general performance with the Delaney and Huselid (1996) measure and the single item ROA measure within the Dess and Robinson (1984) scale to evaluate agency costs.

Table 2. Loadings of Indicators on the Constructs within the Conceptual Model. These are the loadings of all the indicators on the constructs within the conceptual model: Collective Psychological Ownership (CPO), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Team Empowerment (TE), the Delaney and Huselid (1996) measure of Firm Performance, Organizational Learning Culture (OLC), and Innovation Climate (IC).

Collective Psychological Ownership (Indicator Reliability)			
CPO 1	CPO 2	CPO 3	CPO 4
0.977	0.990	0.989	0.824

Organizational Citizenship Behaviors Organizational (Indicator Reliability)							
OCB 1	OCB 2	OCB 3	OCB 4	OCB 5	OCB 6	OCB 7	OCB 8
0.708	0.775	0.860	0.762	0.475	0.811	0.656	0.878

Organizational Identification (Indicator Reliability)									
OID 1	OID 2	OID 3	OID 4	OID 5	OID 6	OID 7	OID 8	OID 9	OID 10
0.793	0.718	0.799	0.781	0.777	0.744	0.670	0.196	0.652	0.601

Team Empowerment (Indicator Reliability)											
TE 1	TE 2	TE 3	TE 4	TE 5	TE 6	TE 7	TE 8	TE 9	TE 10	TE 11	TE 12
0.781	0.206	0.602	0.879	0.859	0.858	0.689	0.678	0.707	0.444	0.473	0.659

Delaney and Huselid - Firm Performance (Indicator Reliability)														
DH 1	DH 2	DH 3	DH 4	DH 5	DH 6	DH 7	DH 8	DH 9	DH 10	DH 11	DH 12	DH 13	DH 14	DH 15
0.703	0.712	0.638	0.618	-0.317	0.417	0.334	0.317	0.285	-0.179	0.327	0.699	-0.205	0.659	0.870

Organizational Learning Culture (Indicator Reliability)																				
OLC 1	OLC 2	OLC 3	OLC 4	OLC 5	OLC 6	OLC 7	OLC 8	OLC 9	OLC 10	OLC 11	OLC 12	OLC 13	OLC 14	OLC 15	OLC 16	OLC 17	OLC 18	OLC 19	OLC 20	OLC 21
0.728	0.729	0.754	0.741	0.656	0.726	0.497	0.536	0.772	0.746	0.707	0.736	0.845	0.750	0.797	0.747	0.663	0.716	0.851	0.842	0.674

Innovation Climate (Indicator Reliability)																					
IC 1	IC 2	IC 3	IC 4	IC 5	IC 6	IC 7	IC 8	IC 9	IC 10	IC 11	IC 12	IC 13	IC 14	IC 15	IC 16	IC 17	IC 18	IC 19	IC 20	IC 21	IC 22
0.809	0.835	0.742	0.031	0.523	0.808	0.344	0.356	0.009	0.826	0.183	0.124	0.587	0.849	0.826	0.736	0.443	0.451	0.670	0.766	0.717	0.413

5.2 Consistency, Reliability, and Validity

Instead of arbitrarily removing indicator variables with loadings falling below the recommended threshold of 0.708, there was a particular focus on increasing the composite reliability as well as the AVE of the constructs (Hair et al., 2017, p. 122; Hair et al., 2020). Additionally, qualitative analysis was performed to ensure the items remaining continued to demonstrate content or face validity. Following the removal of these indicators, Table 3 shows the measures for internal consistency, reliability, and convergent validity.

Table 3. *Construct Consistency, Reliability, and Validity Measures. Displays the construct consistency measure of Cronbach's Alpha, reliability measure of Composite Reliability, and the validity measure of Average Variance Extracted (AVE).*

Consistency, Reliability, and Validity				
	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
OID	0.892	0.892	0.913	0.540
IC	0.942	0.948	0.950	0.633
TE	0.908	0.927	0.924	0.577
OLC	0.956	0.960	0.960	0.562
CPO	0.964	0.952	0.966	0.877
OCB-O	0.908	0.981	0.927	0.681
PERF	0.907	0.936	0.915	0.552

All of the above constructs exhibit internal consistency, with Cronbach's Alpha values above the minimum threshold of 0.70, and OID exhibited the lowest value of 0.892. Additionally, the constructs have acceptable reliability, with composite reliability values above the minimum threshold of 0.70, and OID has the lowest value of 0.913. Moreover, convergent validity is measured by assessing AVE values above the 0.50

minimum threshold, and all the above constructs exceed that minimum threshold, with OID at 0.540 having the lowest value. Discriminant validity is the final test of validity to be reported, and this measure analyzes the empirical distinctiveness of the constructs.

5.3 Discriminant Validity

Discriminant validity analysis evaluates how different the constructs are from each other quantitatively, and there are a few techniques used below to determine this difference. First, the most traditional method is the Fornell-Larcker Criterion, which compared the square root of the AVE with the squared correlations of all of the other constructs in the model. Second, the evaluations of cross loadings, which assessed each indicator within all constructs to ensure that indicators do not load strongly on multiple constructs (Henseler et al., 2015). Finally, the heterotrait-monotrait ratio (HTMT) was performed, and due to the smaller sample size, the less conservative threshold of HTMT₉₀ was used.

Table 4. *Fornell-Larcker Criterion for Establishing Discriminant Validity. The Fornell-Larcker Criterion establishes discriminant validity among the variables in the model: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Organizational Learning Culture (OLC), Performance (PERF), and Team Empowerment (TE).*

Fornell-Larcker Criterion (Discriminant Validity)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
CPO	0.936						
IC	0.175	0.795					
OCBO	0.227	0.374	0.825				
OID	-0.093	0.375	0.568	0.735			
OLC	0.066	0.843	0.400	0.578	0.749		
PERF	0.180	0.119	0.257	0.277	0.136	0.743	
TE	0.618	0.366	0.317	0.031	0.358	0.095	0.759

Table 4 displays the first evaluation of discriminant validity. The Fornell-Larcker criterion evaluation of empirical distinctiveness demonstrates that all but one of the constructs are distinctively different from one another, but the square root of the AVE of OLC exhibits a lower value of 0.749 than the squared correlation value of 0.843 with the construct of IC. This indicates there may be some overlap between the constructs of OLC and IC, but additional analysis with cross-loadings and the HTMT ratio are required.

Table 5. *Cross Loadings of Organizational Identification Construct. Displays the cross loadings of Organizational Identification (OID) on the other constructs: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Learning Culture (OLC), Performance (PERF), and Team Empowerment (TE).*

Organizational Identification (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
OID_1	0.124	0.292	0.520	0.802	0.435	0.185	0.023
OID_2	-0.074	0.129	0.537	0.733	0.307	0.137	-0.085
OID_3	-0.188	0.202	0.396	0.804	0.422	0.134	-0.143
OID_4	0.002	0.126	0.321	0.793	0.377	0.198	-0.015
OID_5	-0.216	0.308	0.439	0.780	0.461	0.265	-0.009
OID_6	-0.172	0.280	0.485	0.750	0.415	0.264	-0.067
OID_7	0.223	0.311	0.679	0.692	0.349	0.329	0.236
OID_9	-0.195	0.382	0.252	0.625	0.459	0.217	0.060
OID_10	-0.044	0.352	0.210	0.602	0.497	0.103	0.177

Table 6. *Cross Loadings of Innovation Climate Construct. Displays cross loadings of Innovation Climate (IC) on the other constructs: Collective Psychological Ownership (CPO), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Organizational Learning Culture (OLC), Performance (PERF), and Team Empowerment (TE).*

Innovation Climate (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
IC_1	0.239	0.839	0.495	0.520	0.813	0.198	0.332
IC_2	0.325	0.858	0.572	0.502	0.787	0.185	0.419
IC_3	0.205	0.752	0.228	0.103	0.603	-0.009	0.511
IC_6	0.148	0.825	0.298	0.288	0.652	0.302	0.256
IC_10	0.004	0.818	0.308	0.297	0.721	0.268	0.147
IC_14	0.094	0.833	0.238	0.227	0.684	0.070	0.281
IC_15	0.000	0.846	0.221	0.399	0.657	0.263	0.117
IC_16	0.002	0.774	0.133	0.133	0.569	-0.084	0.119
IC_19	0.196	0.700	0.119	0.029	0.447	-0.202	0.289
IC_20	0.152	0.769	0.278	0.346	0.702	-0.017	0.337
IC_21	0.134	0.716	0.215	0.235	0.625	-0.117	0.384

Table 5 displays the indicators of OID. All items all load strongly on the OID construct, but it should be pointed out that OID 7 does load nearly as strongly on the OCB-O construct. Table 6 evaluates the indicators of IC with all the other constructs, and while these items loadings are all higher on the IC construct, a number of items reveal strong loadings on the OLC construct. As with the Fornell-Larcker criterion test above, these two constructs appear to have some difficulty demonstrating empirical distinction, but further analysis is required.

Table 7. *Cross Loadings of Team Empowerment Construct. Displays the cross loadings of Team Empowerment (TE) on the other constructs: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Organizational Learning Culture (OLC), and Performance (PERF).*

Team Empowerment (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
TE_1	0.416	0.325	0.122	-0.007	0.335	-0.002	0.794
TE_3	0.233	0.147	0.161	-0.025	0.057	-0.053	0.649
TE_4	0.534	0.253	0.400	0.050	0.313	0.244	0.889
TE_5	0.521	0.256	0.402	0.101	0.288	0.216	0.867
TE_6	0.601	0.281	0.293	0.050	0.288	0.097	0.870
TE_7	0.512	0.356	0.067	0.031	0.349	-0.156	0.674
TE_8	0.520	0.309	0.283	-0.098	0.201	0.091	0.672
TE_9	0.357	0.270	0.191	0.048	0.209	0.069	0.690
TE_12	0.314	0.171	0.288	-0.034	0.130	0.139	0.677

Table 8. *Cross Loadings of Organizational Learning Culture Construct. Displays the cross loadings of Organizational Learning Culture (OLC) on other constructs: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Performance (PERF), and Team Empowerment (TE).*

Organizational Learning Culture (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
OLC_1	0.038	0.496	0.363	0.548	0.728	0.061	0.348
OLC_2	0.058	0.502	0.237	0.349	0.724	0.110	0.206
OLC_3	-0.090	0.475	0.211	0.319	0.745	-0.015	0.235
OLC_4	-0.071	0.662	0.118	0.413	0.733	-0.096	0.214
OLC_5	0.009	0.556	0.186	0.327	0.642	-0.041	0.140
OLC_6	-0.038	0.559	0.211	0.424	0.718	0.089	0.342
OLC_9	0.061	0.589	0.241	0.559	0.761	0.110	0.239
OLC_10	0.074	0.660	0.519	0.606	0.756	0.248	0.303
OLC_11	0.069	0.544	0.233	0.400	0.707	0.138	0.254
OLC_12	-0.041	0.574	0.215	0.341	0.751	0.038	0.233
OLC_13	-0.091	0.688	0.224	0.427	0.846	0.222	0.203
OLC_14	-0.031	0.777	0.275	0.494	0.739	0.284	0.114
OLC_15	0.129	0.704	0.395	0.544	0.801	0.151	0.376
OLC_16	0.089	0.754	0.460	0.440	0.758	0.044	0.266
OLC_17	0.104	0.619	0.334	0.362	0.683	0.087	0.123
OLC_18	0.088	0.575	0.263	0.316	0.721	-0.012	0.373
OLC_19	0.016	0.726	0.364	0.451	0.861	-0.058	0.333
OLC_20	0.194	0.736	0.386	0.513	0.855	0.131	0.345
OLC_21	0.281	0.639	0.234	0.228	0.664	0.333	0.394

Table 7 displays the indicators of TE with all of the other constructs, and all the indicator variables have higher loadings on the TE construct than any others within the model. Table 8 displays the OLC indicators, and as with the IC indicators, many of the indicators exhibit high loadings on the IC construct, with the OLC 14 indicator having a higher loading on the IC construct. However, the OLC 14 item was retained in the model after qualitatively assessing content or face validity.

Table 9. *Cross Loadings of Collective Psychological Ownership Construct. Displays the cross loadings of Collective Psychological Ownership (CPO) on the other constructs: Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Organizational Learning Culture (OLC), Performance (PERF), and Team Empowerment (TE).*

Collective Psychological Ownership (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
CPO_1	0.986	0.201	0.233	-0.095	0.092	0.222	0.620
CPO_2	0.990	0.169	0.208	-0.098	0.052	0.137	0.606
CPO_3	0.985	0.136	0.201	-0.088	0.042	0.135	0.601
CPO_4	0.765	0.082	-0.035	-0.120	0.017	-0.075	0.470

Table 10. *Cross Loadings of Organizational Citizenship Behaviors Organizational Construct. Displays the cross loadings of Organizational Citizenship Behaviors Organizational (OCB-O) on the other constructs: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Identification (OID), Organizational Learning Culture (OLC), Performance (PERF), and Team Empowerment (TE).*

Organizational Citizenship Behaviors Organizational (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
OCB_1	0.160	0.170	0.731	0.300	0.259	0.040	0.333
OCB_2	0.174	0.167	0.693	0.265	0.165	0.015	0.284
OCB_3	0.243	0.302	0.930	0.561	0.292	0.273	0.297
OCB_4	0.011	0.271	0.775	0.566	0.270	-0.006	0.139
OCB_6	0.161	0.454	0.860	0.626	0.499	0.259	0.144
OCB_8	0.266	0.348	0.932	0.435	0.354	0.366	0.374

Table 11. *Cross Loadings of the Delaney and Huselid Firm Performance Construct. Displays the cross loadings of the Delaney and Huselid measure of Firm Performance on the other constructs: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Organizational Learning Culture (OLC), and Team Empowerment (TE).*

Delaney and Huselid - Firm Performance (Cross Loadings)							
	CPO	IC	OCBO	OID	OLC	PERF	TE
DH_1	0.339	-0.093	0.215	0.164	-0.077	0.791	0.070
DH_2	0.082	0.030	0.195	0.195	0.069	0.915	0.091
DH_4	0.261	0.166	0.155	0.251	0.246	0.686	0.187
DH_6	-0.060	0.267	0.090	0.156	0.291	0.583	0.181
DH_7	-0.042	0.213	0.059	0.091	0.239	0.556	0.225
DH_9	0.225	-0.119	0.037	-0.098	-0.087	0.683	0.341
DH_12	0.391	0.121	0.202	0.194	0.123	0.762	0.211
DH_14	0.054	-0.047	0.196	0.114	-0.065	0.877	0.048
DH_15	-0.068	0.250	0.291	0.405	0.228	0.752	-0.175

Table 9 displays the indicator loadings of CPO on all constructs in the model, and these indicators demonstrate discriminant validity with the other constructs, as these items loadings are stronger on the CPO construct than any others. Table 10 showcases OCB-O, and all the indicator loadings are stronger on the OCB-O construct than the others within the model, indicating discriminant validity. Finally, Table 11 looks at the Delaney and Huselid (1996) construct of general firm performance and measures the loadings of these indicators on the other constructs within the model, and the cross loadings test demonstrates discriminant validity with the other constructs in the model.

Table 12. *Heterotrait-Monotrait Ratio Test for Discriminant Validity. Displays the Heterotrait-Monotrait Ratio (HTMT) Test for Discriminant Validity among all of the constructs: Collective Psychological Ownership (CPO), Innovation Climate (IC), Organizational Citizenship Behaviors Organizational (OCB-O), Organizational Identification (OID), Organizational Learning Culture (OLC), Performance (PERF1), Team Empowerment (TE) and Return on Assets (ROA).*

Heterotrait-Monotrait Ratio (Discriminant Validity)							
	CPO	IC	OCBO	OID	OLC	PERF1	ROA
IC	0.182						
OCBO	0.200	0.356					
OID	0.201	0.405	0.631				
OLC	0.119	0.865	0.385	0.600			
PERF1	0.226	0.277	0.235	0.303	0.282		
ROA	0.183	0.289	0.180	0.157	0.282	0.712	
TE	0.613	0.384	0.359	0.182	0.359	0.290	0.257

Table 12 displays the most robust discriminant validity test performed, and this assesses the HTMT ratio. As noted earlier, given the smaller sample size and conceptual similarity of the two constructs of IC and OLC, this analysis was performed at the HTMT₉₀ level, which is a more flexible threshold than the most conservative HTMT₈₅ (Henseler et al., 2015). Consistently with the other tests, all constructs demonstrate conceptual distinctiveness with the other constructs in the measurement model, with the exception of IC and OLC. However, at the 0.865 level, this is below the 0.90 threshold, and this demonstrates an acceptable level of discriminant validity to move forward with testing the relationships within the structural model.

5.4 Structural Model

The structural model in Figure 2 reflects the conceptual model proposed in Chapter 3. Assessment of the structural model also follows the CCA procedure (Hair et al., 2020). The antecedents of OID, IC, and TE precede the mediator of an OLC, with the

outcome variables being CPO and OCB-O. At first glance the structural model has a few issues. First, there are likely a few relationships with statistically insignificant results, given the small path coefficients. The path coefficient of 0.09, rounded to 0.10, reflecting the relationship between TE and an OLC, as well as the path coefficient of 0.07 reflecting the relationship between an OLC and CPO are both likely non-significant. Moreover, the coefficient of determination or R^2 for the outcome variable of CPO is 0.00, which indicates that construct of CPO does not explain any of the variance within the model (Hair et al., 2017).

At the same time, there also appear to be some promising signs from the results of the structural model, with the mediator variable of an OLC and the outcome variable of OCB-O. The R^2 of 0.80 for the mediator variable of OLC, points to the fact that the mediator variable explains eighty percent of the variance within the first half of the model. Additionally, the R^2 of 0.19 for the outcome variable of OCB-O indicates that this construct explains nineteen percent of the variance within the model. Although not listed in the charts below, there is a medium effect size or f^2 of 0.184, which is only slightly lower than the R^2 (Hair et al., 2019).

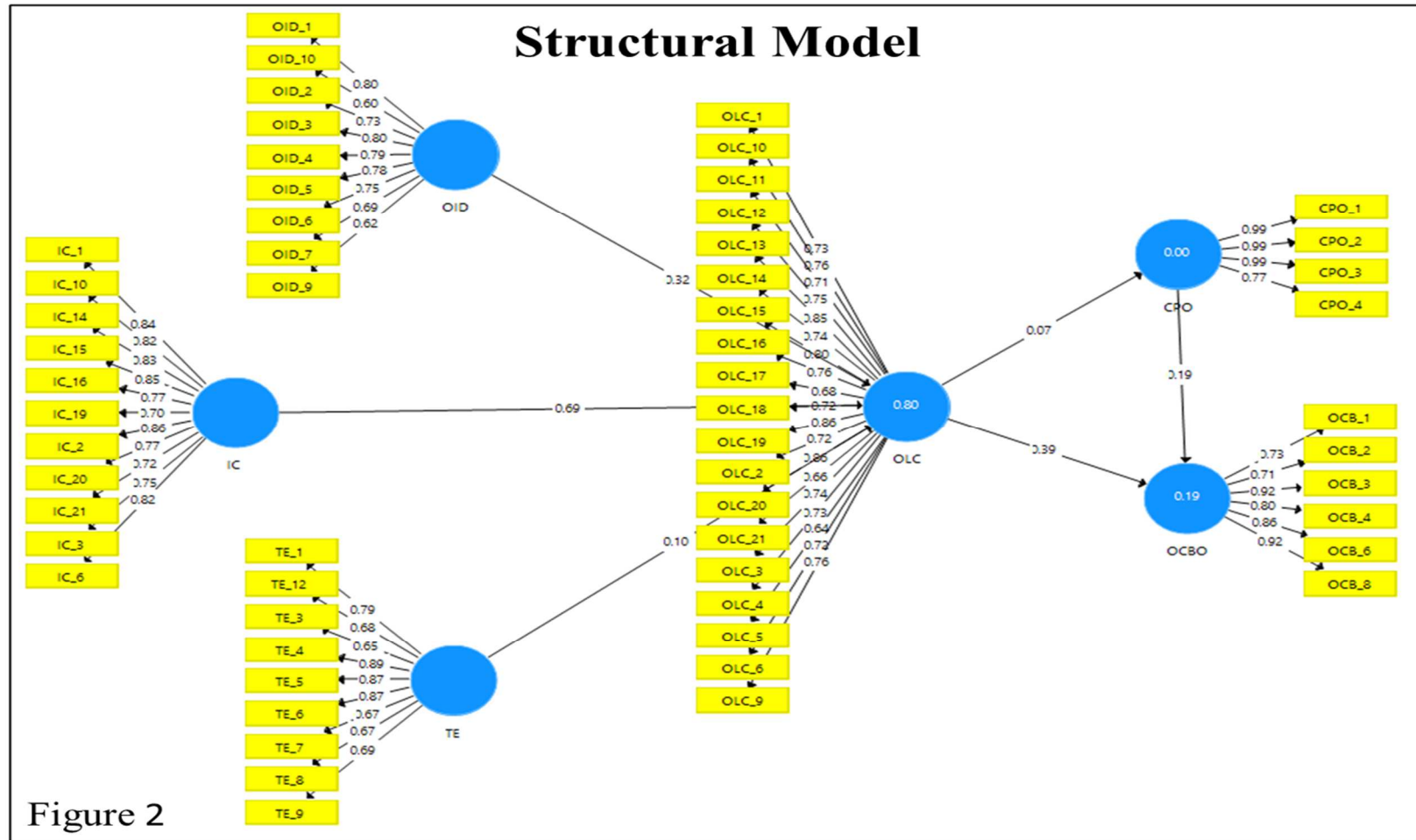


Figure 2. Structural Model of Relationship Outcome Coefficient of Hypotheses and Variables. Displays the structural model of the relationship outcome coefficient of hypotheses and variables. This model evaluates the relationship of the antecedents of Innovation Climate (IC), Organizational Identification (OID), Team Empowerment (TE), with the mediator variable of Organizational Learning Culture (OLC), and with the outcome variables of Collective Psychological Ownership (CPO) and Organizational Citizenship Behaviors Organizational (OCB-O).

Finally, the model was evaluated for out-of-sample predictive power, by using the PLSpredict calculation tool in SmartPLS. The calculation was performed using the recommended settings of ten folds over ten repetitions, with a path weighting scheme, a maximum of three hundred iterations, stop criterion of seven, and mean replacement of missing values (Shmueli et al., 2019). Table 13 compares the performance of the hypothesized model to a regression model alternative for the root mean squared error (RMSE) and the mean absolute error (MAE). This compares the actual observations within the sample against a linear regression model baseline (LM Baseline), which is indicative of out of sample observations (Hair et al., 2019). The RMSE and the MAE are lower than the linear regression benchmark (LM Benchmark) for all indicators, and this demonstrates this model has high predictive power out-of-sample (Shmueli et al., 2019).

Table 13. *Out-Of-Sample Predictive Power of the Hypothesized Model. This is the test for out-of-sample predictive power of the hypothesized model, which evaluates the outcome variables of Collective Psychological Ownership (CPO) and Organizational Citizenship Behaviors Organizational (OCB-O) with the root mean squared error (RMSE), the mean absolute error (MAE), and the linear regression model baseline (LM Baseline).*

	RMSE	LM Benchmark	Difference	MAE	LM Benchmark	Difference
CPO_4	1.520	2.909	-1.389	1.147	2.079	-0.932
CPO_2	1.601	2.634	-1.033	1.112	1.936	-0.824
CPO_3	1.623	3.090	-1.467	1.165	2.288	-1.123
CPO_1	1.500	2.230	-0.730	1.082	1.572	-0.490
OCB_2	1.168	3.916	-2.748	0.991	2.917	-1.926
OCB_8	1.208	2.459	-1.251	0.872	1.785	-0.913
OCB_3	1.299	2.832	-1.533	0.977	2.060	-1.083
OCB_6	1.142	1.701	-0.559	0.821	1.317	-0.496
OCB_1	1.474	5.037	-3.563	1.227	3.617	-2.390
OCB_4	0.945	2.804	-1.859	0.760	2.033	-1.273

5.5 Hypothesis Testing

The hypothesized model was initially tested with the bootstrapping technique, creating 500 subsamples within the original sample, and the model is analyzed at the 0.10 level of significance. Table 14 displays the tests for the direct and indirect path coefficients of the hypothesized relationships, and these direct and indirect relationships are evaluated for statistical significance at the 0.10 level.

Table 14. *Hypotheses Tested for each Relationship in the Structural Model. Displays the hypotheses tested for each relationship in the structural model: Organizational Identification (OID), Innovation Climate (IC), Team Empowerment (TE), Organizational Learning Culture (OLC), Collective Psychological Ownership (CPO), and Organizational Citizenship Behaviors Organizational (OCB-O).*

Hypothesis Tests						
Hypotheses	Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
H1	OID --> OLC	0.317	0.322	0.105	3.026	0.003
H2	IC --> OLC	0.689	0.676	0.094	7.319	0.000
H3	TE --> OLC	0.096	0.098	0.092	1.040	0.299
H4	OLC --> CPO	0.066	0.070	0.192	0.343	0.732
H5	OLC (MED) OID--> CPO	0.021	0.018	0.063	0.329	0.742
H6	OLC (MED) IC--> CPO	0.045	0.049	0.131	0.345	0.730
H7	OLC (MED) TE--> CPO	0.006	0.010	0.026	0.241	0.810
H8	OLC --> OCB-O	0.398	0.395	0.177	2.253	0.025
H9	OLC (MED) OID--> OCB-O	0.126	0.130	0.075	1.674	0.095
H10	OLC (MED) IC--> OCB-O	0.274	0.266	0.123	2.224	0.027
H11	OLC (MED) TE--> OCB-O	0.038	0.038	0.044	0.873	0.383
H12	CPO -->OCB-O	0.188	0.189	0.229	0.821	0.412
H13	CPO (MED) OLC-->OCB-O	0.012	0.033	0.057	0.216	0.829

H1 states that OID is positively related to an OLC, and with a path coefficient of 0.317 and a significance level of 0.003, this hypothesis is supported. H2 states that an IC is positively related to an OLC, and with a path coefficient of 0.689 and a significance level of 0.000, this hypothesis is supported. H3 states that TE is positively related to an OLC, but with a path coefficient of 0.096 and a significance level of 0.299, this

hypothesis is not supported. H4 states that an OLC is positively related to CPO, but with a path coefficient of 0.066 and a significance level of 0.732, this hypothesis is not supported. H5 states that an OLC mediates the positive relationship between OID and CPO, but with an indirect path coefficient of 0.021 and a significance level of 0.742, this hypothesis is not supported. H6 states that an OLC mediates the positive relationship between IC and CPO, but with an indirect path coefficient of 0.045 and a significance level of 0.730, this hypothesis is not supported.

H7 states that an OLC mediates the positive relationship between TE and CPO, but with an indirect path coefficient of 0.006 and a significance level of 0.810, this hypothesis is not supported. H8 states that an OLC is positively related to OCB-O, and with a meaningful path coefficient of 0.398 and a significance level of 0.025, this hypothesis is supported. H9 states that an OLC mediates the positive relationship between OID and OCB-O, and with an indirect path coefficient of 0.126 and a significance level of 0.095, this hypothesis is supported. H10 states that an OLC mediates the positive relationship between IC and OCB-O, and with an indirect path coefficient of 0.274 and a significance level of 0.027, this hypothesis is supported.

H11 states that an OLC mediates the positive relationship between TE and OCB-O, but with an indirect path coefficient of 0.038 and a statistical significance of 0.383, this hypothesis is not supported. H12 states that CPO is positively related to OCB-O, but with a path coefficient of 0.188 and a significance level of 0.412, this hypothesis is not supported. Finally, H13 states that CPO mediates the positive relationship between an OLC and OCB-O, but with an indirect path coefficient of 0.012 and a statistical significance of 0.829, this hypothesis is not supported.

Table 15. *Direct Relationship Tests Between Antecedent and Outcome Variables.*
Displays the direct relationship tests between antecedent and outcome variables:
Organizational Identification (OID), Innovation Climate (IC), Team Empowerment (TE),
Collective Psychological Ownership (CPO), and Organizational Citizenship Behaviors
Organizational (OCB-O).

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
OID->CPO	0.019	0.034	0.200	0.095	0.924
IC->CPO	0.258	0.250	0.228	1.132	0.258
TE->CPO	0.638	0.637	0.121	5.288	0.000
OID->OCBO	0.704	0.677	0.220	3.194	0.001
IC->OCBO	0.341	0.289	0.256	1.330	0.184
TE->OCBO	0.325	0.360	0.209	1.552	0.121

In addition to testing the hypotheses, it is also important to evaluate the potential for partial mediation by testing the direct relationships between the antecedents and outcome variables, and this is especially critical to evaluate the relationships between both OID and OCB-O and IC and OCB-O, which were statistically significant at the 0.05 and 0.10 levels respectively. Additionally, while TE did not demonstrate meaningful relationships with any of the constructs in the hypothesized relationships, there is a meaningful relationship with CPO given the path coefficient of 0.64, and this relationship is statistically significant at the 0.01 level. OID also exhibited a direct relationship with OCB-O, in addition to the hypothesized mediated relationship above, and the path coefficient of 0.704 and statistical significance at the 0.01 level indicates that an OLC only partially mediates this relationship. On the other hand, IC did not exhibit a direct relationship with OCB-O, given the path coefficient of 0.34 and the statistical significance well above the 0.10 level at 0.18, and this relationship is fully mediated through an OLC. None of the other direct relationships tested exhibited statistical significance at the 0.10 level, and the only non-hypothesized relationship approaching

that threshold is TE and OCB-O, with a path coefficient of 0.33 and statistical significance of 0.12. While many of the tests of the hypothesized relationships were not as anticipated, there are several interesting findings to discuss in the post hoc analyses.

5.6 Post Hoc Analyses

Although the analysis of the structural model provides insight into the relationship among the variables, there are a few post hoc analyses performed to evaluate potential moderation. Additionally, some researchers note the difficulty in measuring CPO within western culture samples of respondents (Su & Ng, 2019), and the PO scale developed in part by Jon Pierce was used in the second employee survey wave in addition to the CPO scale developed in part by Jon Pierce, which as noted earlier was also used in the second employee survey wave (Pierce et al., 2018; Van Dyne & Pierce, 2004). Collecting information on both constructs permitted the analysis of psychological ownership at both the individual and collective levels, in the event that this sample did not produce meaningful results at the collective level. The first series of post hoc analyses will involve testing for moderation, and the most influential variable evaluated for moderation involves the employee's supervisory status.

This study sought to understand the principal and agent relationship between the owner and top manager, as well as every supervisory-employee relationship throughout the organization. While the supervisory status of employees did not have a meaningful influence on any other relationship within the model, Figure 3 and Figure 4 demonstrate the positive effect an employee's supervisory status has on the relationship between an OLC and OCB-O. Recall in Figure 2 that the R^2 of the hypothesized structural model was

0.19, but when the supervisory status of the employee is evaluated as a moderator, the R^2 improves to .30, as displayed in Figure 3. Supervisory status as a moderator helps explain more variance within the hypothesized structural model, but only when moderating the relationship between an OLC and OCB-O.

Figure 4 provides a graphic depiction of the influence supervisory status has on the interaction between OCB-O and OLC. OCB-O is the dependent variable along the y axis of the graph, and OLC is the independent variable along the x axis of the graph. As indicated in Figure 3, supervisory status positively influences this relationship, and this interaction occurs in the top right quadrant of the graph. This suggests that an OLC is more likely to lead to the behaviors of ownership or OCB-O when the employee is in a supervisory position.

Supervisory Moderation

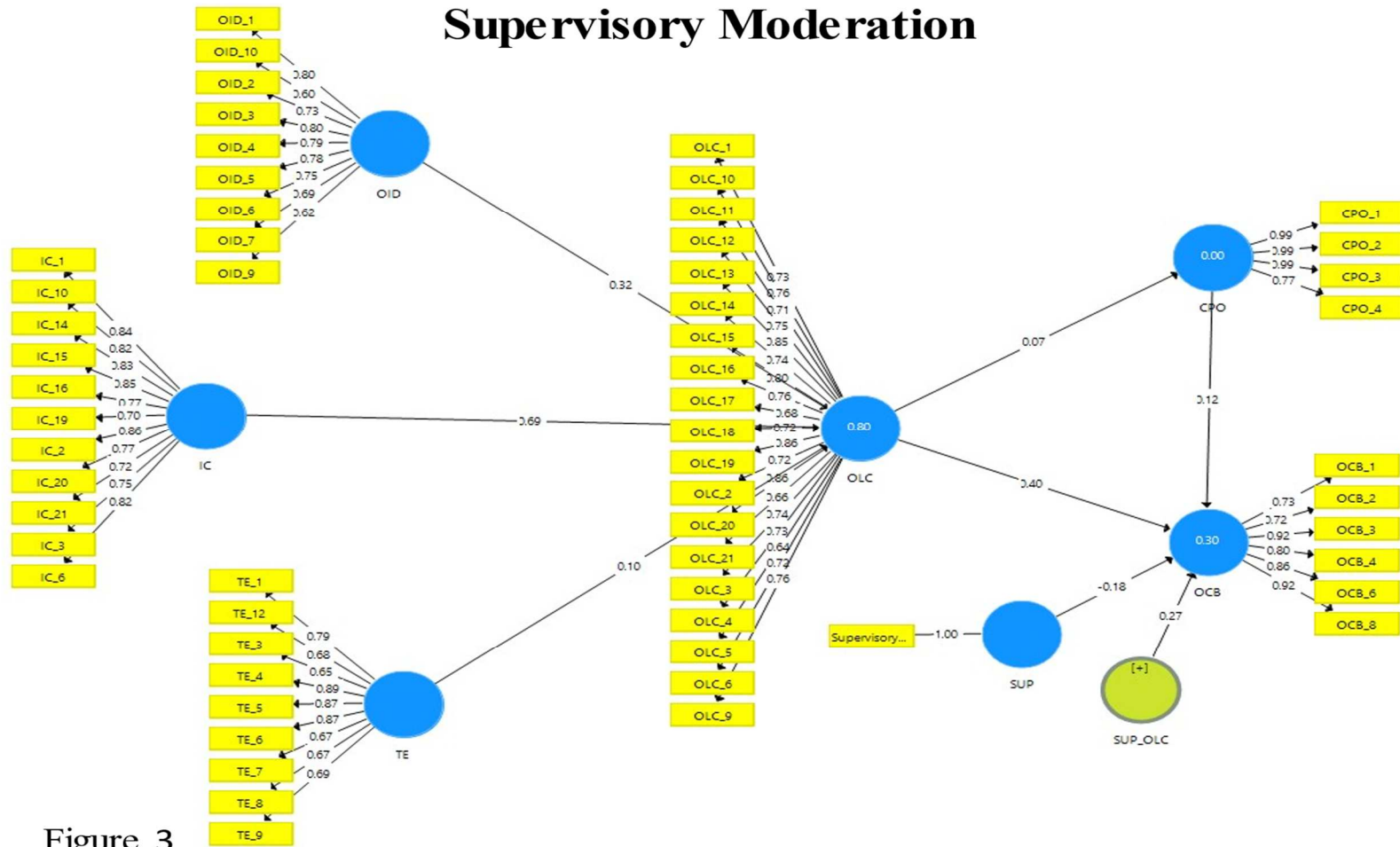


Figure 3

Figure 3. Effect of Supervisory Status of Employee When Evaluated as Moderator.

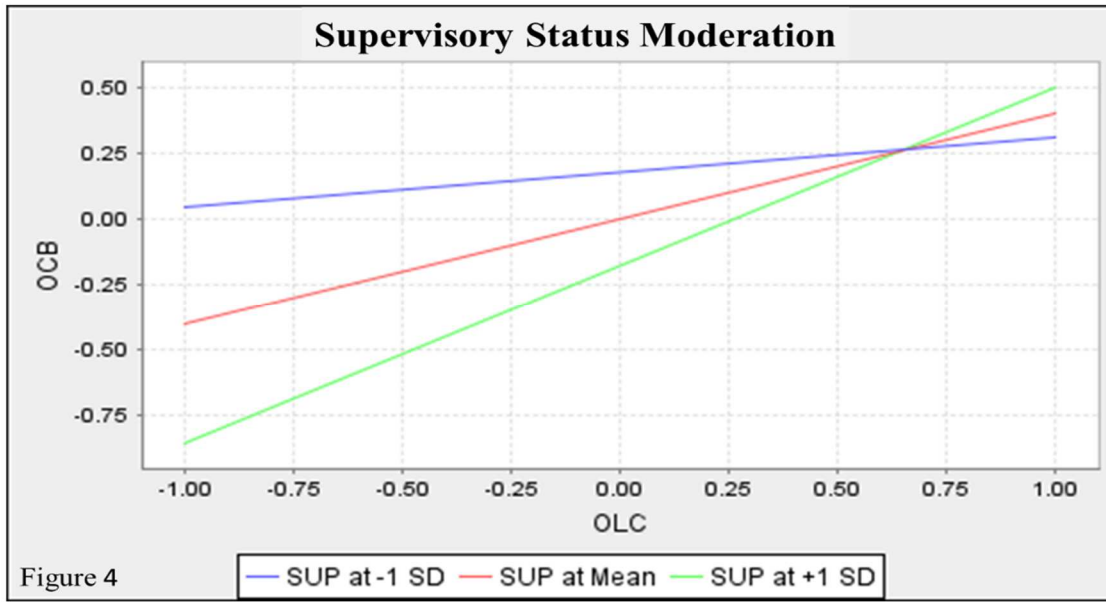


Figure 4. Influence of Supervisory Status on Interaction Between Organizational Citizenship Behaviors Organizational (OCB-O) and Organizational Learning Culture (OLC).

Although not enumerated in the hypotheses, a key issue this research attempts to examine is the problem of agency; namely, does CPO and OCB-O have an inverse relationship with agency costs? Stated differently, is there a positive relationship of CPO and OCB-O with general organizational performance and ROA? The OCB-O measure was tested for direct relationships with the proposed inverse indicators of agency costs, the Delaney and Huselid (1996) general firm performance scale and the Dess and Robinson (1984) ROA measure. In Table 16, OCB-O is not related in a statistically significant way to either the general firm performance measure or ROA. Additionally, CPO does not have a statistically significant indirect relationship with either measure. Moreover, it is important to note that none of these relationships approach statistical significance at the 0.10 level.

Table 16. *Relationship Test of CPO and OCB-O with Firm Performance. Displays the relationship test of Collective Psychological Ownership (CPO) and Organizational Citizenship Behaviors Organizational (OCB-O) with Firm Performance (PERF) and Return on Assets (ROA).*

Performance Test					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
CPO -> OCB-O	0.202	0.177	0.233	0.867	0.386
CPO -> PERF	0.052	0.075	0.126	0.413	0.680
CPO -> ROA	0.015	0.059	0.100	0.151	0.880
OCB-O -> PERF	0.257	0.173	0.407	0.632	0.528
OCB-O -> ROA	0.075	0.036	0.322	0.232	0.816

The proposed antecedent of TE did not approach a meaningful path coefficient or statistically significant result with any of the hypothesized relationships in the model, and this was also the case with CPO. Although it should be noted that the non-hypothesized direct relationship between TE and CPO exhibited statistically significant and meaningful results at the 0.01 level, but neither of these constructs demonstrated a statistically significant and meaningful relationship with any other constructs within the model, either directly or indirectly. In addition to CPO, participants were also asked to provide responses on PO at the individual level, and the PO items were requested in the event that relationships at the collective level did not produce meaningful results. The analysis below tested this by removing the CPO construct and replacing it with the PO construct, and this analysis yielded different results.

In the structural model in Figure 5, the output exhibits superior results after replacing CPO with PO. While the PO R² is only slightly higher than it was with CPO at 0.08, the path coefficients with OLC and OCB-O are statistically significant at the 0.10 level and more meaningful at 0.28 and 0.56, respectively. Additionally, the OCB-O R² of

0.44 indicates more variance is explained with this alternative theoretical model than in the hypothesized structural model, and although not displayed, the f^2 indicates a large effect size of 0.52 (Hair et al., 2019). Table 17 displays the out-of-sample predictive power comparing both the PO and OCB-O constructs to the LM Benchmarks. As with the hypothesized structural model, the RMSE and the MAE are lower than the linear regression benchmark (LM Benchmark) for all indicators of both constructs, and this signifies the alternative model has high predictive power out-of-sample (Shmueli et al., 2019).

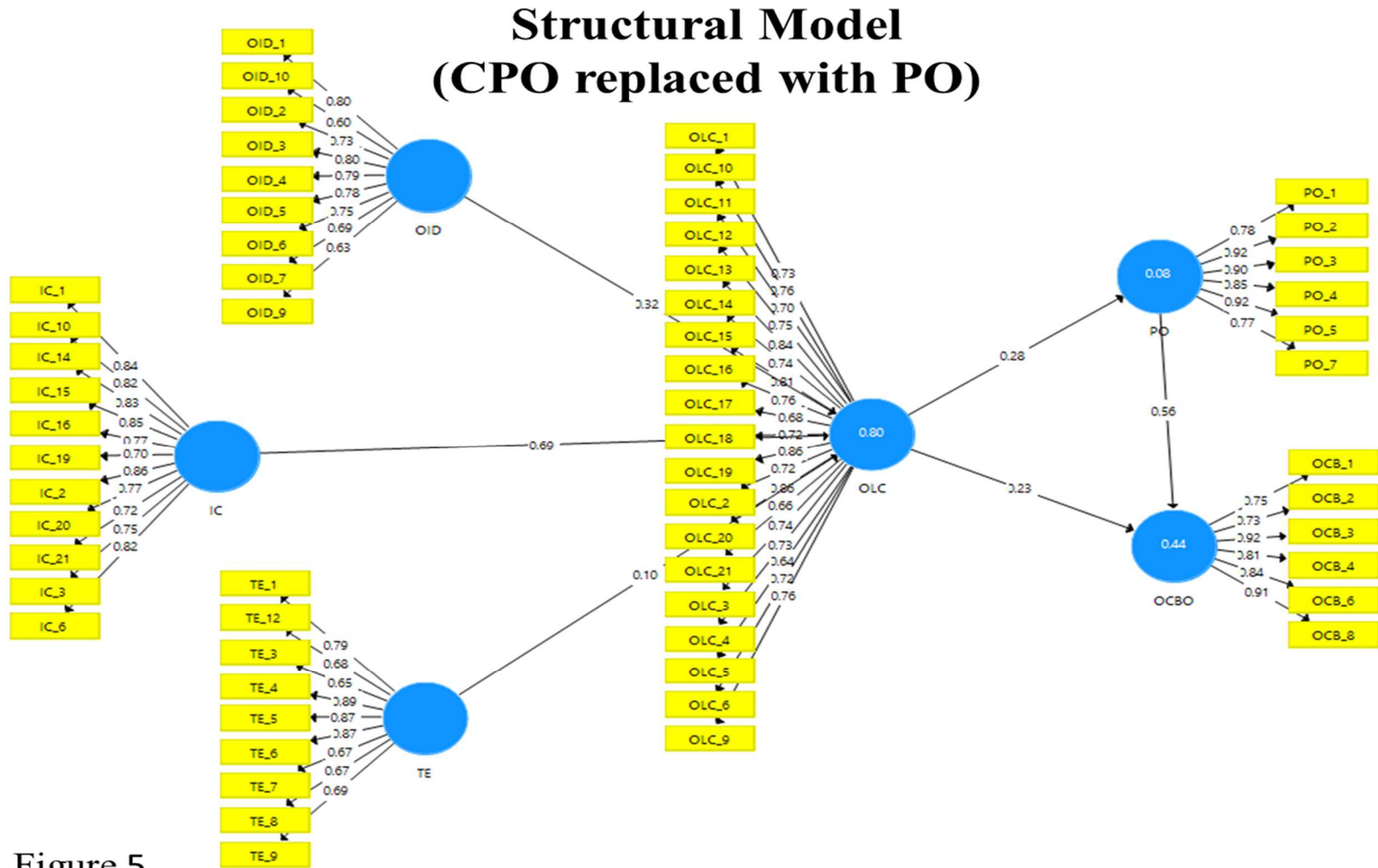


Figure 5

Figure 5. Relationship Change After CPO is Replaced with Psychological Ownership (PO). Displays the relationship change after Collective Psychological Ownership (CPO) is replaced with Psychological Ownership (PO) in the alternative model.

Table 17. *Out-Of-Sample Predictive Power of the Alternative Model. This is the test for out-of-sample predictive power of the alternative model, which evaluates the outcome variables of Psychological Ownership (PO) and Organizational Citizenship Behaviors Organizational (OCB-O) with the root mean squared error (RMSE), the mean absolute error (MAE), and the linear regression model baseline (LM Baseline).*

	RMSE	LM Benchmark	Difference	MAE	LM Benchmark	Difference
OCB_8	1.227	2.551	-1.324	0.879	1.915	-1.036
OCB_3	1.333	3.48	-2.147	0.999	2.442	-1.443
OCB_2	1.172	5.053	-3.881	0.992	3.649	-2.657
OCB_6	1.188	2.149	-0.961	0.85	1.597	-0.747
OCB_4	0.952	2.386	-1.434	0.763	1.838	-1.075
OCB_1	1.456	3.623	-2.167	1.21	2.872	-1.662
PO_5	1.717	5.053	-3.336	1.403	3.713	-2.31
PO_7	1.668	5.115	-3.447	1.367	3.917	-2.55
PO_4	1.972	7.152	-5.18	1.603	5.165	-3.562
PO_2	1.579	4.991	-3.412	1.3	3.667	-2.367
PO_3	1.735	4.939	-3.204	1.408	3.676	-2.268
PO_1	1.802	6.104	-4.302	1.372	4.574	-3.202

Table 18. *Hypotheses Tested for Relationships in the Alternative Structural Model. Displays the hypotheses tested for relationships in the alternative model among the variables: Organizational Identification (OID), Innovation Climate (IC), Team Empowerment (TE), Organizational Learning Culture (OLC), Collective Psychological Ownership (CPO), and Organizational Citizenship Behaviors Organizational (OCB-O).*

Alternative Model Hypothesis Tests (Replacing CPO with PO)						
Hypotheses	Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
H1	OID --> OLC	0.319	0.311	0.112	2.835	0.005
H2	IC --> OLC	0.690	0.689	0.102	6.778	0.000
H3	TE --> OLC	0.097	0.094	0.089	1.092	0.275
H4	OLC --> PO	0.277	0.306	0.141	1.959	0.051
H5	OLC (MED) OID--> PO	0.088	0.098	0.062	1.432	0.153
H6	OLC (MED) IC--> PO	0.191	0.208	0.098	1.954	0.051
H7	OLC (MED) TE--> PO	0.027	0.031	0.032	0.833	0.405
H8	OLC --> OCBO	0.382	0.382	0.167	2.288	0.023
H9	OLC (MED) OID--> OCB-O	0.122	0.121	0.072	1.697	0.090
H10	OLC (MED) IC--> OCB-O	0.264	0.262	0.121	2.180	0.030
H11	OLC (MED) TE--> OCB-O	0.037	0.036	0.039	0.951	0.342
H12	PO -->OCB-O	0.561	0.579	0.111	5.067	0.000
H13	PO (MED) OLC-->OCB-O	0.155	0.174	0.087	1.786	0.075

Table 18 displays the results for the original hypotheses with the alternative theoretical model, replacing the construct of CPO with the construct of PO, and the results are markedly different. While the relationship between the construct of TE and all

other variables in the model remain statistically insignificant, nearly all other relationships display statistically significant results at the 0.10 level of significance, but this also does exclude the indirect relationship between OID and PO, which is not statistically significant at the 0.10 level. It is now time to transition to discussion of the implications of these results.

CHAPTER 6

DISCUSSION AND CONCLUSION

The content of this chapter includes the discussion of the results of the study and conclusions drawn. The first section addresses a recap of the study and hypothesized relationships, as well as provides general inferences about the meaning of these relationships. The second section addresses the limitations of the study. The third section discusses the theoretical implications. The fourth section addresses the practical implications for managers. The fifth section outlines avenues of potential future research, and the final section provides a general conclusion for the study.

6.1 Discussion

This study set out to examine the questions of whether the cost associated with the entire set of principal-agent relationships within a firm matters to organizational performance, and to examine how a firm minimizes the costs associated with agency in the absence of legal ownership interests. The intent was to determine if there is a way to create favorable conditions for non-owner employees to feel a sense of Collective Psychological Ownership (CPO) for the firm and exhibit the Organizational Citizenship Behaviors Organizational (OCB-O) towards the firm that one would expect from an owner, rather than non-owner employees. At the individual level, these feelings and

behaviors are the result of Psychological Ownership (PO), and when employees feel a sense of ownership, they may be more likely to exhibit a greater sense of efficacy, identity, and having a place (Pierce et al., 2003). In the same way individuals experience feelings of ownership, groups can also experience a sense of collective ownership, and “collective psychological ownership is the collectively held sense (feeling) that this target of ownership (or a piece of that target) is collectively ‘ours’ ” (Pierce & Jussila, 2010, p. 812). However, these feelings and behaviors do not develop in a vacuum.

Structural Model with Resultant Paths

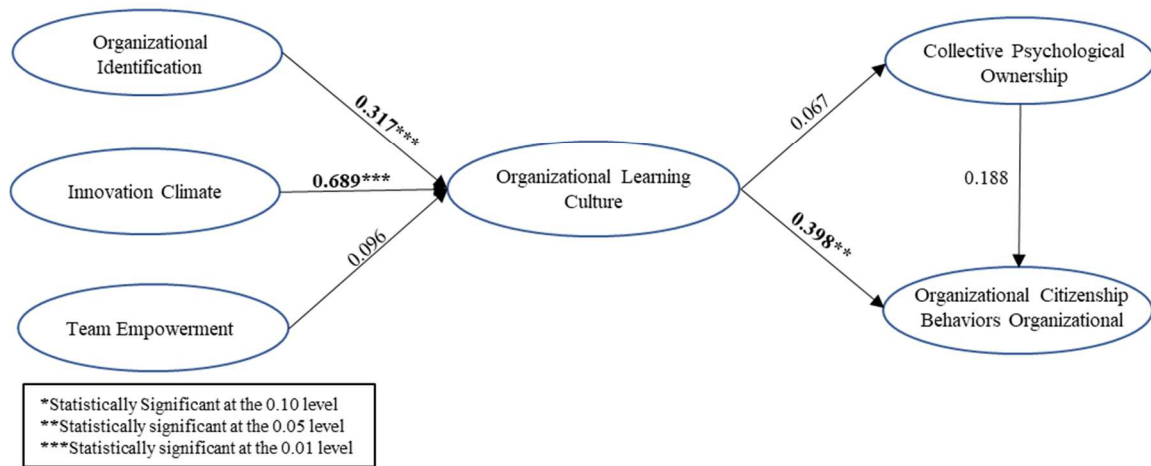


Figure 6. Structural Model of Organizational Learning Culture with Resultant Paths.

Pierce and Jussila (2010) argue that group learning will precede these collective feelings of ownership, and building a culture around learning, was proposed here to make that relationship more durable. However, this does not appear to be the case with the present study, because Figure 6 above demonstrates that the path coefficient between

Organizational Learning Culture (OLC) and CPO is not meaningful nor statistically significant at the 0.10 level. While it is noted that an OLC maintains a component of culture, these results mirror the Pierce et al. (2018) study, where the relationship between group learning and CPO did not exhibit a statistically significant relationship below the 0.05 level.

On the other hand, developing an OLC within the firm does appear to set the favorable conditions for some behaviors of ownership to emerge. Figure 6 displays that the direct relationship between an OLC and OCB-O exhibits a meaningful path coefficient of 0.398, which is statistically significant at the 0.05 level. However, the direct path coefficient of 0.188 between CPO and OCB-O is not statistically significant at the 0.10 level. The focus thus far has only evaluated the direct relationships between the mediator and outcome variables.

The three constructs proposed to set the favorable conditions for an OLC to emerge are as follows: Organizational Identification (OID), Innovation Climate (IC), and Team Empowerment (TE). The antecedents listed above and the OLC mediator variable were measured in the first survey wave. As individuals identify with organizations, Chughtai and Buckley (2010) maintain that these individuals are more likely to engage in the vital organizational learning behaviors of monitoring and feedback seeking. Consistent with the assertion, OID maintains a meaningful path coefficient of 0.317 with an OLC, as this path is statistically significant at the 0.01 level. Additionally, Huber (1991) argues that adaptation and innovation are both crucial for organizations in a quickly evolving environment, and by encouraging flexibility, adaptability, idea generation, and openness to change, an IC set the favorable conditions for an OLC to

emerge (Scott & Bruce, 1994). Also consistent with the assertion, the construct of IC exhibits a meaningful path coefficient of 0.689 with and OLC, which is statistically significant at the 0.01 level. Some have argued that “Empowerment is one of the important characteristics of learning organizations” (Ravangard et al., 2014, p. 2), but TE did not exhibit a meaningful direct path coefficient with an OLC of 0.096, nor was it statistically significant at the 0.10 level.

This study demonstrated that there are meaningful relationships between both the antecedents of OID and IC with the proposed mediator variable of an OLC. It should be noted that while IC and OLC demonstrated discriminant validity at the HTMT₉₀ level, discriminant validity was not established between these constructs using the Fornell-Larker test or cross loading analysis. However, the HTMT ratio is the most robust discriminant validity assessment performed. Additionally, the third proposed antecedent of an OLC presented challenges. Not only did the construct of TE exhibit a statistically insignificant relationship directly with an OLC, but it also did not exhibit meaningful or statistically significant indirect relationships with either outcome variable. One interesting thing to note is that TE exhibited a meaningful path coefficient of 0.64 and statistical significance at the 0.01 level with CPO, when testing for partial mediation by evaluating the direct relationships between antecedents and outcome variables. However, both TE and CPO were unable to establish direct or indirect relationships with any other constructs within the model. Alternatively, OCB-O displayed both statistically significant and meaningful indirect relationships with the antecedents of OID and IC, as well as the noted direct relationship with the mediator variable of an OLC. The comparison of the results of the hypothesized structural model with the actual results gives insight into the

broader meaning, and the key is that feelings of ownership are not collective in nature, even though the citizenship behaviors are directed towards the organization.

When testing the alternative model, by replacing CPO with PO, nearly every other relationship was statistically significant at the exploratory 0.10 level, apart from TE. What this means is that by replacing the collective level feelings of ownership with individual level feelings of ownership, except for relationships with TE, nearly every other relationship is meaningful in the alternate model. One other thing to point out is that the indirect relationship between OID and PO mediated through an OLC did not exhibit statistical significance above the exploratory 0.10 level. While it is curious how the measures for CPO and PO produced such different outcomes, there may be a plausible explanation. The differences between CPO and PO may be the result of the cultural background of the respondents within the sample. The sample respondents are all employed by firms located in the United States, and their culture may not value collectivist ideals. Su and Ng (2019) note that they were only able to validate another version of a scale measuring CPO within the “collectivism-dominated culture” of China, and it may be difficult to demonstrate CPO in an individualist society like the United States (p. 11).

One thing of interest to highlight is that even when employees display actions consistent with that of firm owners, such as OCB-O, there is not a statistically significant relationship with general firm performance or return on assets (ROA). As noted earlier, a relationship was not established between CPO and OCB-O, but even when replacing CPO with PO in the alternative model, there was not a statistically significant indirect relationship with firm performance or ROA. There are many potential reasons for this

apparent disconnect. One such plausible explanation is that when an employee feels a sense of ownership and behaves as such, what an employee views as the right thing to do may not be aligned with what produces financially favorable outcomes for the firm. For instance, an employee may feel the right thing to do is resolve every issue for every customer but spending a great deal of time resolving an issue for an unprofitable customer may not be in the best financial interest of the firm, which transitions the discussion towards agency.

The principal and agent relationship does appear to be present at both the firm owner and TMT level, as well as at lower supervisory relationships down the organizational hierarchy. While supervisory status does not influence general firm performance, the employee's supervisory status positively influences the relationship between an OLC and OCB-O. In essence, if an OLC exists, a supervisory employee is more likely to engage in extra-role behaviors to the benefit of the firm than a non-supervisory employee. Interestingly, the supervisory status does not meaningfully influence any other relationship within the model. The results of this study provide implications for both theory and practice, but there are a few limitations to discuss.

6.2 Limitations

Every study has limitations, and this one is no different. First, in measuring the antecedent variables and the mediator variable simultaneously during the first employee survey wave, there is potential for common methods bias (Podsakoff et al., 2003). Attrition in multi-wave surveys is always a concern, which is primarily why there were two waves instead of three, but it should be noted that common methods bias was

mitigated by time separating the measurement of the antecedents and mediator from the measurement of the outcome variables. A second limitation is that the study only included responses from six firms, with a total of thirty-nine employee responses to both waves of the survey, and all of the respondents were employed in the geographically concentrated area of Central Alabama. The third limitation of this study is that the majority of the respondents came from the heavily regulated banking industry, where there may be less opportunity for routine employee decisions aggregating into larger amounts of agency cost. It should also be highlighted that building an OLC in the heavily regulated banking industry is likely more challenging than in services businesses. The fourth limitation is that this study only analyzed whether the employee was in a supervisory role, rather than further delineating the level of supervisory responsibility from first line manager to the top management team. The final limitation is that the Delaney and Huselid (1996) and the Dess and Robinson (1984) measures were helpful in gathering firm performance metrics to analyze the proposed inverse proximal measures for agency costs, but these costs can only be calculated accurately with access to actual financial performance records over time.

6.3 Theoretical Implications

This study initially set out to make a number of contributions to theory. First, this study attempted to further integrate agency theory and PO by examining this relationship at the collective level. Previously, this relationship has only been studied at the individual level (Sieger et al., 2013). There were, however, challenges in establishing direct and indirect relationships with CPO, likely given the western culture sampling of respondents

(Ng & Su, 2018). On the other hand, this study does provide additional support for the statistically significant and meaningful relationships established with PO at the individual level. Given that it is impractical or impossible for agents to participate in the benefits of legal ownership, understanding how to create favorable conditions for PO to emerge is all the more important to examine. Even though CPO ultimately did not prove to be meaningful, this exploratory study did further integrate agency theory and PO, and there is a need for future studies of employee affect to be analyzed in tandem with actual firm performance.

Second, this study attempted to apply agency theory to all organizational members, where it has primarily been evaluated at the TMT level (Sieger et al., 2013). Even with the sampling limitations above, this exploratory study does lay the foundation to examine the potential influence of the level of management, from first line manager to the top management team, on individual level PO and agency cost. Given that employees in a supervisory position are more likely to engage in extra-role behaviors to the benefit of the firm, as evidenced by OCB-O, there is likely to be some variance between the first line managers and members of the TMT. The potential cascading effect of agency, whereby every employee-supervisory relationship represents a principal-agent relationship, should be explored further.

Third, this study attempted to explore the nascent relationship between an OLC and CPO, given that other studies have not taken culture into consideration when evaluating learning within organizations and teams (Pierce et al., 2018). While this relationship was not established at the collective level, this study demonstrates a meaningful relationship between an OLC and PO, which has not previously been

established. Pierce et al. (2010) argues that group learning and psychological safety are related to CPO, but these relationships have not been consistently demonstrated empirically (Pierce et al., 2018). Even with an OLC, a group of employees may not develop a sense of collective ownership for their respective employer's firm, but this study demonstrates that individually, employees tend to develop PO. PO makes a tremendous difference in organizations, as it leads to both organizational commitment and OCB-O, and these are favorable outcomes for a firm, even in the absence of tangible financial performance metrics (Vandewalle et al., 1995). Thus, understanding more about this relationship between OLC and PO merits further research. In addition to the theoretical implications, this study has a number of practical implications for firm managers.

6.4 Practical Implications

First, OLC and an IC are solid predictors of an OLC within firms, and this can provide a roadmap for firm managers to develop an OLC in their respective firms. Traditional metrics of firm performance aside, an OLC can improve a firm's ability to adapt to change, as there are inertial forces within an organization highly resistant to change that an OLC can help overcome (Becker, 1995). While many don't enjoy the discomfort of the unknown, change is inevitable, whether induced by internal or external pressures. An OLC allows the firm not only to combat resistance to change, but the investment of time and energy into an OLC also contributes to employees feeling a sense of ownership in the firm (Giordano et al., 2020). This transitions the discussion towards PO.

Second, an OLC leads to employees feeling a greater sense of ownership towards the firm and a willingness to perform actions perceived to be to the benefit of the firm, as evidenced by the direct relationships between an OLC and PO, as well as between OLC and OCB-O. Even though this study did not establish an indirect relationship between an OLC and the inverse proximal indicators of agency costs, building an OLC still has great value to management. This is especially true in firms undergoing rapid change. Employee turnover is a tremendous problem in firms managing through radical transition, such as mergers or acquisitions, and employees with a greater sense of PO are more likely to remain with a firm, which directly influences the costs associated with turnover (Degbey et al., 2021). Building an OLC sets the favorable conditions for PO to develop among employees, which may also positively influence turnover costs. In addition to battling the internal change, an OLC may also help dealing with external pressures.

Finally, there is a utilitarian value of learning within organizations, given the ever-present prospect of environmental turbulence. With the COVID-19 shutdowns in recent memory, nimble firms were able to overcome the adverse impacts of the broader environment and adapt business models in a variety of ways to enable firms to survive (Trentmann & Maurer, 2020). Additionally, organizational learning can also lead to a number of positive outcomes for a firm such as improving products, processes, and technology, as well as achieving enhanced competitiveness among peers and sustained growth and success (Odor, 2019). Although there are some meaningful implications listed above for theory and practice, there are a number of avenues available for future research.

6.5 Future Research

First, future research should examine a larger number of antecedents of an OLC, and these antecedents should be collected at a separate time than OLC, to limit the possibility of common methods bias (Podsakoff et al., 2003). Second, in order to ensure broad generalizability, future research should evaluate a larger sample of individuals and firms from a broader geographic area, perhaps from a regional, national, or an international pool. Third, future research should test these relationships to a greater extent in businesses where employees may have more autonomy to make routine decisions, aggregating in higher potential agency costs. Fourth, future research should further specify the level of management (i.e., first line manager, middle manager, senior manager, and top manager), as this will permit the researcher to analyze these groups separately to determine the degree of difference among the various tiers of management within a firm. Finally, future research should test these relationships with publicly traded firms or privately held firms, who provide financial statements over time, and this will allow researchers to accurately measure agency cost, rather than relying on the inverse proximal measures.

6.6 Conclusion

This study set out to examine the questions of whether the cost associated with the entire set of principal-agent relationships within a firm matters to organizational performance, and to examine how a firm minimizes the costs associated with agency, in the absence of legal ownership interests. While the favorable firm outcomes of PO and OCB-O are established with an OLC, these outcomes do not demonstrate a positive

relationship with the proposed inverse proximal measures of agency costs. Stated differently, higher levels of PO and OCB-O do not necessarily indicate lower levels of agency costs. Even without a direct link reducing agency costs, there is tremendous value in an OLC for the pragmatic purpose of assisting a firm to adapt to internal changes, as well as changes in the environment. However, building this culture also creates favorable conditions for employees to feel and behave as firm owners, as evidenced by the presence of PO and OCB-O. Regardless, the influence of supervisory status on the outcome of OCB-O indicates that agency may exist in relationships between supervisor and manager at all echelons within an organization, and when examining agency, there is a need to continue to look beyond the top management teams.

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APPENDICES

Appendix A

IRB Approval Certificate

irb@southalabama.edu



TELEPHONE: (251) 460-6308
AD 240 · MOBILE, AL. 36688-0002

INSTITUTIONAL REVIEW BOARD February 2, 2021

Principal Investigator: Giles Stephen, Ph.D.
IRB # and Title: IRB PROTOCOL: 21-026
[1638956-1] A Study of Culture in the Work Environment, Antecedents, and Outcomes

Status: APPROVED Review Type: Exempt Review
Approval Date: February 2, 2021 Submission Type: New Project
Initial Approval: February 2, 2021 Expiration Date:
Review Category: 45 CFR 46.104 (d)(2): Research that only includes interaction involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior (including visual or auditory recording):

ii. Any disclosure of the human subjects' responses outside of the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation

This panel, operating under the authority of the DHHS Office for Human Research and Protection, assurance number FWA 00001602, and IRB Database #00000286 or #00011574, has reviewed the submitted materials for the following:

- 1. Protection of the rights and the welfare of human subjects involved.*
- 2. The methods used to secure and the appropriateness of informed consent.*
- 3. The risk and potential benefits to the subject.*

The regulations require that the investigator not initiate any changes in the research without prior IRB approval, except where necessary to eliminate immediate hazards to the human subjects, and that **all problems involving risks and adverse events be reported to the IRB immediately!**

Subsequent supporting documents that have been approved will be stamped with an IRB approval and expiration date (if applicable) on every page. Copies of the supporting documents must be utilized with the current IRB approval stamp unless consent has been waived.

Notes:

Appendix B

Survey Scales and Disclosure Statement

Disclosure Statement

You are invited to voluntarily participate in a research project examining of the culture in your work environment.

The purpose of the study is to evaluate the current work environment culture, and subsequent outcomes. This survey should take no longer than 15 minutes to complete. Participation will remain anonymous, and no identifying data will be collected. You will be asked as series of questions in this survey to understand your perception of the culture in your work environment.

You have the right to refuse to answer any questions that you do not wish to complete and/or answer. Although there is no direct individual benefit for participation in this study, the findings may prove to be highly valuable to management in improving the culture in the work environment, as well as improving best practices across other industries.

There are no risks identified for participation in this study. No incentives will be provided for completing the surveys. All responses will be destroyed 180 days after all data has been collected and the research project is completed. All information will be used for research purposes only.

You can withdraw at any time without consequence. Please contact me at scg1823@jagmail.southalabama.edu or the Institutional Review Board at the University

of South Alabama at (251) 460-6308 if you have questions about your rights as a research subject.

By selecting *I Agree*, you are acknowledging that you would like to participate in the survey, and that you are employed and over 17 years of age.

Survey Scales

Time 1

Organizational Identification (Mael & Tetrick, 1992)

1. When someone criticizes (this organization), it feels like a personal insult.
2. I'm very interested in what others think about (this organization).
3. When I talk about this organization, I usually say "we" rather than they.
4. This organization's successes are my successes.
5. When someone praises this organization, it feels like a personal compliment.
6. I act like (name of organization) person to a great extent.
7. If a story in the media criticized the organization, I would feel embarrassed.
8. I don't act like a typical (name of organization) person. (R)
9. I have a number of qualities typical of (name of organization) people.
10. The limitation associated with (name of organization) people apply to me also.

Innovation Climate (Scott & Bruce, 1994)

1. Creativity is encouraged here.
2. Our ability to function creatively is respected by the leadership.
3. Around here, people are allowed to try to solve the same problems in different ways.
4. The main function of members in this organization is to follow orders which come down through channels. (R)
5. Around here, a person can get in a lot of trouble by being different. (R)
6. This organization can be described as flexible and continually adapting to change.
7. A person cannot do things that are too different around here without provoking anger. (R)
8. The best way to get along in this organization is to think the way the rest of the group does. (R)
9. People around here are expected to deal with problems in the same way. (R)
10. This organization is open and responsive to change.
11. The people in charge around here usually get credit for others' ideas. (R)
12. In this organization, we tend to stick to tried and true ways. (R)
13. This place seems to be more concerned with the status quo than with change. (R)
14. Assistance in developing new ideas is readily available.
15. There are adequate resources devoted to innovation in this organization.

16. There is adequate time available to pursue creative ideas in this organization.
17. Lack of funding to investigate creative ideas is a problem in this organization. (R)
18. Personnel shortages inhibit innovation in this organization. (R)
19. This organization gives me free time to pursue creative ideas during the workday.
20. The reward system here encourages innovation.
21. This organization publicly recognizes those who are innovative.
22. The reward system here benefits mainly those who don't rock the boat. (R)

Team Empowerment (Kirkman et al., 2004)

1. My team/work group has confidence in itself.
2. My team/work group can get a lot done when it works hard.
3. My team/work group believes it can be very productive.
4. My team/work group believes its projects are significant.
5. My team/work group feels its tasks are worthwhile.
6. My team/work group feels its work is meaningful.
7. My team/work group can select different ways to do the team's work.
8. My team/work group determines as a team how things are done in the team.
9. My team/work group makes its own choices without being told by management.
10. My team/work group has a positive impact on this company's customers.
11. My team/work group performs tasks that matter to this company.
12. My team/work group makes a difference in this organization.

Organizational Learning Culture (Yang, 2003)

1. In my organization, people help each other learn.
2. In my organization, people are given time to support learning.
3. In my organization, people are rewarded for learning.
4. In my organization, people give open and honest feedback to each other.
5. In my organization, whenever people state their view, they also ask what others think.
6. In my organization, people spend time building trust with each other.
7. In my organization, teams/work groups have the freedom to adapt their goals as needed.
8. In my organization, teams/work groups revise their thinking as a result of group discussions or information collected.
9. In my organization, teams/work groups are confident that the organization will act on their recommendations.
10. My organization creates systems to measure gaps between current and expected performance.
11. My organization makes its lessons learned available to all employees.
12. My organization measures the results of the time and resources spent on training.
13. My organization recognizes people for taking initiative.
14. My organization gives people control over the resources they need to accomplish their work.
15. My organization supports employees who take calculated risks.
16. My organization encourages people to think from a global perspective.

17. My organization works together with the outside community to meet mutual needs.
18. My organization encourages people to get answers from across the organization when solving problems.
19. In my organization, leaders mentor and coach those they lead.
20. In my organization, leaders continually look for opportunities to learn.
21. In my organization, leaders ensure the organization's actions are consistent with its values.

Time 2

Psychological Ownership (Van Dyne & Pierce, 2004)

1. This is MY organization.
2. I sense that this organization is OUR company.
3. I feel a very high degree of personal ownership for this organization.
4. I sense that this is MY company.
5. This is OUR company.
6. Most of the people that work for this organization feel as though they own the company.
7. It is hard for me to think about this organization as MINE. (R)

Collective Psychological Ownership (Pierce et al., 2018)

1. We (my team members and I) collectively agree that this is OUR job.
2. We (my team members and I) collectively feel that this job belongs to US together.
3. We (my team members and I) feel a very high degree of collective (team) ownership for this job.
4. All of the members of my work team feel as though we own this job collectively.

Organizational Citizenship Behaviors Organizational (Lee & Allen, 2002)

1. Attend functions that are not required but that help the organizational image.
2. Keep up with developments in the organization.
3. Defend the organization when other employees criticize it.
4. Show pride when representing the organization in public.
5. Offer ideas to improve the functioning of the organization.
6. Express loyalty toward the organization.
7. Take action to protect the organization from potential problems.
8. Demonstrate concern about the image of the organization.

Time 3

General Firm Performance (Delaney & Huselid, 1996)

1. How would you compare the organization's performance over the past 3 years to that of other organizations that do the same kind of work?
 - a. Quality of Products?
 - b. Quality of Services?
 - c. Quality of Programs?
 - d. Development of new Products?
 - e. Development of new Services?
 - f. Development of new Programs?
 - g. Ability to attract essential employees?
 - h. Ability to retain essential employees?
 - i. Satisfaction of customers or clients?
 - j. Relations between management and other employees?
 - k. Relations among employees in general?
2. Compared to other organizations that do the same kind of work, how would you compare the organization's performance over the last 3 years in terms of Marketing?
 - a. Growth in sales?
 - b. Profitability?
 - c. Market share?

Return on Assets (Dess & Robinson, 1984)

1. Based on a scale from 1 – *Lowest 20%* to 5 – *Top 20%*, rate the approximate performance of your business in comparison to other firms of similar sales volume in your industry and region.
 - a. Firm total sales growth in the past 5 years.
 - b. Firm after-tax return on total assets in the past 5 years.
 - c. Overall firm performance/success in the past 5 years.

BIOGRAPHICAL SKETCH

BIOGRAPHICAL SKETCH

Name of Author: Stephen C. Giles

Place of Birth: Montgomery, Alabama

Graduate and Undergraduate Schools Attended:

University of South Alabama, Mobile, Alabama

Troy University, Montgomery, Alabama

Degrees Awarded:

Doctor of Philosophy in Business Administration, 2022, University of South Alabama

Master of Business Administration, 2015, Troy University

Bachelor of Science in History, 2006, Troy University