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Abstract

We study how "*contextual specialization*", the act of focusing workers' organizational tasks within a particular locational context, and "*contextual non-specialization*", the practice of diversifying workers' organizational tasks among multiple locational contexts, affects individual performance outcomes. Operations and strategy scholars have studied the effect of context on the performance of the firm, but the focus has been in a singular context. In this paper, we study the decision of a multi-location firm to deploy human capital across multiple contexts and identify a tradeoff between achieving immediate productivity gains through contextual specialization, and long-term productivity gains through contextual non-specialization. We exploit a natural experiment where individuals employed with the United States Army Corps of Engineers (USACE) in Europe are treated with an exogenous shock in HR policy related to how long they can be employed in Europe. We exploit this exogenous shock to study how *contextual non-specialization* and *contextual specialization* at the employee level affects project performance. We find that employees engaged in the *contextually-specialized* manner can initially be extremely productive; however, over the long-term these employees begin to plateau and eventually stagnate. We also find that employees working in the *contextually-non-specialization* environment, can initially be unproductive; however, over the long-term these employees become the most productive.

1. Introduction

There is a long-standing literature in strategy and international business that documents the phenomenon of intrafirm worker mobility, the assignment and movement of workers across multiple locations within the multinational firm (Edstrom and Galbraith, 1977; Singh 2005; Lahiri, 2010; Singh and Agrawal, 2011; Choudhury 2015, 2017). Such organizations often assign their employees to work at far-flung locations to exploit knowledge more efficiently within the firm rather than through external market mechanisms (Buckley and Casson, 1976; Hymer, 1960; Teece, 1977; Gupta and Govindarajan, 2000; Berry 2014). In addition, multinational organizations also employ intrafirm mobility of workers as a mechanism to augment human capital of workers (Tung, 1988). In fact, employees of multinational firms often have to simultaneously manage tasks across multiple locations, navigating more than one context (Holmstrom and Milgrom 1991; Alcácer and Zhao 2012). The field of strategy has produced a rich literature on the role of context in shaping innovative outcomes (Hambrick and MacMillan, 1985). Context has been defined as "the environment and broad milieu in which the innovative attempt is situated"(Hambrick and Macmillan 1985). We draw on this literature, and the literature on cross-national variation in context along cultural, linguistic, religious, and other dimensions (Ghemawat, 2001; Berry, Guillén, and Zhou, 2010).

However while there might be variation in the number of locational contexts employees of multinational firms might be exposed to, we know relatively little about how being exposed to a single context versus being exposed to multiple contexts simultaneously leads to differences in worker and firm performance. It is important for scholars to study this question, given the recent calls in the strategy and international business literature for research that sheds light on the determinants of "contextual intelligence" (Dhanaraj and Khanna, 2011; Khanna, 2015). Contextual intelligence could be an important managerial cognitive capability (Helfat and Peteraf, 2015), instrumental in determining both individual productivity and firm level outcomes. *We ask in this*

study: for workers within a multinational enterprise does simultaneous exposure to multiple locational contexts help or hurt productivity, relative to being exposed to a single locational context? In this paper, we introduce the idea of "*contextual specialization*", the act of focusing an individual's organizational tasks within a particular locational context, and "*contextual non-specialization*", the practice of diversifying an individual's organizational tasks among different locational contexts. We investigate the degree to which *contextual specialization* or *contextual non-specialization* affects an internally mobile employee's ability to contribute to organizational outcomes.

Theoretically, the answer to this question rests on the interplay of two important mechanisms: absorptive capacity and knowledge recombination. On one hand staying deeply embedded in a singular context builds deeper absorptive capacity for workers, which leads to specialization (Cohen and Levinthal 1990; Reagans, Argote, and Brooks 2005; Narayanan, Balasubramanian, and Swaminathan 2009) and possible productivity benefits. However, over time productivity might decline because of the lack of new learning (Levitt 1988; March 1991; Crossan and Berdrow 2003). On the other hand, being simultaneously exposed to more than one context requires the need for more cognitive resources to learn across contexts and the employee will need to build absorptive capacity in two or more different contexts. This might impose additional costs of time and productivity might decline in the short term. However, in the longer term, there are opportunities for knowledge recombination: the worker might be able to recombine ideas across different contexts (recombinant creation) or reuse ideas from one context to another (Zellmer-Bruhn and Gibson 2006; Gruber, Harhoff, and Hoisl 2013; Carnabuci and Operti, 2013). This might result in productivity gains in the long term.

Further, the phenomenon of a mobile workforce operating in multiple context requires us to connect recombination and learning theory. Prior literature that explores organizational learning examines the benefits of prior experience to organizational success (Cohen and Levinthal

1990; Reagans, Argote, and Brooks 2005; Narayanan, Balasubramanian, and Swaminathan 2009). While prior literature on recombination illustrates how innovative results can be produced by leveraging prior knowledge (Allen 1977, Gruber et al 2013). Prior experience provides a reference point for employees to draw from when faced with new experiences. Prior research has not considered a multi-location firm that operates in multiple contexts, and organization and strategy scholars have not extensively studied the effect of experience and specialization on performance in multi-context settings that could extend innovation through recombination.

We leverage a unique dataset from the United States Army Corps of Engineers (USACE) Europe District and a natural experiment to study this question. The Europe District of the USACE has been operating for over 50 years and is currently responsible for conducting projects in 94 countries. Headquartered in Wiesbaden, Germany, the district provides engineering, construction, stability operations, and environmental management products and services to the Army, Air Force, and other United States (U.S.) government agencies and foreign governments throughout the U.S. European Command and U.S. Africa Command. Our sample is composed of 1,267 projects conducted at the USACE Europe District from January 2006 to December 2012. Our data includes 652 individual employees, and indicates the projects employees worked on in each month, as well as the countries within which those projects are located. Building on prior research, we posit that the context within which an employee operates varies by country (Miller 1992, 1993; Luo and Peng 1999), which constitutes our measure of context in this study. We exploit a natural experiment generated through turnover from the enforcement of a human resource policy called the five-year rule (that will be explained in detailed later). In a traditional setting, whether or not workers are exposed to a single context of multiple contexts simultaneously could be driven by self-selection or other confounding factors. To generate robust estimates, the econometrician would need an

exogenous variation in whether or not workers are assigned to one or multiple contexts. We are able to leverage our natural experiment; driven by bureaucratic rules to estimate results around the contributions of newly assigned employees vary based on the degree of *contextual specialization* or *contextual non-specialization* each employee experiences.

Our unique dataset enables us to isolate the effects of *contextual specialization* and *contextual non-specialization* from the effects of individual differences in status, experience, and education. Our results highlight a tradeoff wherein *contextual specialization* improves an individual's near-term contributions to organizational performance, at the expense of their long-term productivity. Employees who are assigned to a contextually-specialized set of projects, which are contained within a single country, are initially more likely to help their teams deliver on-time results to clients. However, over the long run, employees who are assigned to operate in a contextually non-specialized environment surpass the contextually-specialized employees in their ability to contribute to organizational outcomes. In summary, we find that workers with contextual specialization are 30% more productive at the five year point than workers who are non-specialized, but by the 11th year, workers with contextual specialization are 9% less productive than *non-specialized* employees.

Our findings contribute to several literatures: notably the literature on intrafirm mobility within multinational firms, the literature on specialization of workers and organizational outcomes, the literature on knowledge recombination and the literature on context in strategy and international business. We theorize and provide suggestive empirical evidence that dynamic intrafirm mobility within multinational firms creates an opportunity to extend the absorptive capacity of team members thus positively influencing organizational outcomes. Due to the limitations of the data we would not claim casualty. However, by raising the possibility that intrafirm mobility explains long-term sustained positive organizational outcomes, this study makes an important

contribution. Our findings contribute to the literature on specialization of workers and organizational outcomes by empirically supporting the near-term positive gains and expanding on the notion that the steep decline in organizational effectiveness could be mitigate through leveraging a different framework. Finally our findings also expand the literature on knowledge recombination on context. Although strategy and international business scholars have touched on this, we theorize that tacit knowledge elements of the routine is critical in increasing the context, which develops a higher order routine for absorption of tacit knowledge.

3. Hypothesis Development

3.1 Contextual Specialization

Contextual specialization may help the individual worker contribute to organizational performance more quickly, and to facilitate learning. In making this argument, we leverage on prior theoretical insights connecting absorptive capacity and specialization. In their seminal article on absorptive capacity, Cohen and Levinthal (1990) note an individual's prior related knowledge is key to their ability to absorb new knowledge. By extending this framework, as absorptive capacity increases, an employees ability to conduct task faster will increase resulting in the development of a specialty due to the repetitive nature of work (Staats, and Gino et al). Reagan, Argote, & Brooks (2005) highlight that the additive result of this increased learning which results in higher productivity is a form of specialization. When employees develop a special skill set they become more efficient by completing that task repeatedly. The specialization leads to increased overall productivity (Narayanan, Balasubramanian, and Swaminathan 2009; Huckman and Staats 2011; Staats and Gino 2012). Past research on specialization also suggests a positive correlation between human capital specialization and organizational performance. Although scholars have found that specialization can influence performance (Levitt 1988; Bunderson and Sutcliffe 2003; Narayanan, Balasubramanian, and Swaminathan 2009), the role of context has not been deeply explored in the literature on

specialization. In a multi-location firm for example, the environment or organizational milieu may vary among countries, with the operating environment in each country considered a separate context (Hambrick and Macmillan 1985). Additionally, if the new location crosses a state border within a nation or a national boundary, there are regulations and laws that exist in the new locale (Nachum, Zaheer, and Gross 2008; Ghemawat 2001; Choudhury and Khanna 2014; Choudhury 2014; Perkins 2014). Finally, there are economic differences among locations. For example, there is consideration for how currency exchange rates between countries impacts how business is done (Ghemawat 2001). There are also institutional factors that vary among contexts, including legal systems (Coase 1992), resource munificence (Klein 1990), and a plethora of types of employee diversity (Ang, Slaughter, and Yee Ng 2002).

As *contextual specialization*, the act of focusing an individual's organizational tasks within a particular context, increases for employees, their increased absorptive capacity contributes to increased organizational productivity performance may initially rise over time (Kalnins and Mayer 2004). To the extent that familiarity with local norms and cultures facilitate interactions, and an understanding of local policies enhances an individual's ability to operate, we posit that a contextually specialized individual's productivity will increase with their experience. This illustrates that while operating in a single context routinely, increases absorptive capacity resulting in greater specialization. Furthermore, contextually-specialized employees may be better positioned to integrate new team members into the organizational context. In high turnover environments, such as the setting we study, sharing experiences with newly integrated team members may reinforce the routines, practices, and norms of the organization within the context (Grant 1996; Huckman and Staats 2013).

While the individual workers' familiarity with a context can result in benefits for the firm, *contextual specialization* may have unintended negative long-term effects for a firm's performance.

First, specialized employees may become complacent if they are engaged in the same routine for extended periods of time (Im 2008). When complacency occurs there are potential residual effects in the form of an under utilized workforce leading to less productivity (Bothner, Kim, and Smith 2012). The same logic may apply beyond routines, to employees who are contextually specialized. Second, contextually-specialized employees may be less flexible, leveraging a narrower set of prior experiences when they encounter a new set of challenges (Fong Boh, Slaughter, and Espinosa 2007; Huckman, Staats, and Upton 2009; Kalnins and Mayer 2004; Madsen, Mosakowski, and Zaheer 2003). Organizations that have employees who operate within highly-specified routines tend to experience high levels of productivity. However, these employees often become rigid and resistant to new learning, exhibiting difficulty adapting to the operating procedures in a new environment (Szulanski 1996). The knowledge that employees gain from contextually-specialized environments may become "sticky" (Szulanski 1996).

Based on the arguments presented above, we hypothesize that employees who have a higher degree of *contextual specialization* within a firm will have an increasing absorptive capacity which leads to greater specialization contribute to increased organizational productivity outcomes in the near term, but that the benefits of *contextual specialization* will diminish over time due to slowing if the rate of learning.

Hypothesis #1: In a contextually specialized environment, experience has an inverted U-shaped relationship with performance.

3.2 Contextual Non-specialization

Despite the near-term benefits of contextual specialization that we hypothesize, there are several reasons that organizations may choose to pursue the opposite strategy. Employees at multinational organizations might be simultaneously exposed to more than one context. . Using the lens of intrafirm mobility, employees rotate through the organizations, not only through function, but also by location, and such employees might gain a much more diverse perspective of the

organization (Cappelli 2008). On one hand, the employee exposed to the rotational experience might not increase their absorptive capacity in one specific area. While on the other hand the employee exposed to the rotational experience has a menu of knowledge, skills, and attributes that can be recombined to innovate in future role (Sikora and Ferris 2014; Von Krogh, Ichijo, and Nonaka 2000). But recombination is hard and can lead to failure. It also is hard for the worker given need to build absorptive capacity in multiple contexts and needs higher investments in time and cognitive resources. This is the tradeoff that drives our theorizing on how contextual non-specialization drives productivity.

Contextual non-specialization, the practice of spreading an individual's organizational tasks among different contexts, may, for example, promote increased employee exposure throughout the organization (Huckman and Staats 2011). It may also allow a firm to allocate its employees more efficiently and distribute their experiences more broadly (Schilling et al. 2003).

However, there are numerous reasons to believe that contextual specialization may have near-term costs. For instance, if a highly-skilled employee is tasked with multiple projects that are located in different countries, the employee must become familiar with each separate context while working to contribute to the outcomes of each project. Operating in multiple contexts requires constant switching (Ethiraj et al. 2005; Teece 2007) and exhausts cognitive capacity (Cohen and Levinthal 1990; Paas and Van Merriënboer 1994), which may impede performance while employees are becoming accustomed to the varied contexts within which they are operating. Even if the tasks that they are engaged in are similar, the norms and practices of the contexts may be dissimilar enough to limit the transferability of experiences.

However, the negative effect of contextual non-specialization on performance may diminish over time. Through experience, the employee may become more familiar with the routines, norms, and practices within a set of dissimilar contexts and become better able to connect the similarities

and identify the differences among them (Staats 2011). Relatedly, exposure to multiple contexts may help employees to potentially anticipate and avoid problems, due in part to the diversity of their experiences (Fong Boh, Slaughter, and Espinosa 2007). It has been argued that learning is transferred between related domains through deep cognitive structures (Schilling et al. 2003), which may emerge over time. Consistently, *contextual non-specialization* might be helpful in the long-term because being situated in two or more diverse context creates opportunities for a manager to recombine ideas from the two contexts and create new knowledge (Eisenhardt and Santos 2002; Gruber, Harhoff, and Hoisl 2013; Perkins 2014). Finally, increased job variety, which is consistent with contextual non-specialization, has been associated with higher long-term employee motivation and higher productivity (Boudreau et al. 2003).

Consistent with the arguments presented above, we hypothesize that the capacity of contextually non-specialized employees to contribute to team performance will initially diminish as employees adjust to multiple contexts. However, we further predict that over the long run, this negative effect will be attenuated, such that contextually-specialized employees will ultimately contribute more to team performance.

Hypothesis #2: In a contextually non-specialized environment, experience has a U-shaped relationship with performance.

4. Setting

To study our research question, we require a field site with at least four features: (1) an organization where all employees are new to the context; (2) a project-based organization; (3) project staffing that includes employees with varying attributes; and, (4) detailed tracking of individual and project variables. The United States Army Corps of Engineers (USACE) provides just such a setting. The USACE, headquartered in Washington, D.C., has approximately 37,000 civilian employees delivering engineering services to customers in more than 130 countries worldwide. The USACE is a key player in an 8.7 trillion dollar global project-based construction enterprise, which makes it

important in its own right, but it shares features with many project-based organizations, thereby increasing the generalizability of this research. The operations of the USACE are very similar to those of for-profit construction services companies, like Bechtal, For example, the USACE bids for contracts, must meet client expectations, and is affected by the market in the sense that if it does not secure projects, it cannot support its employee base.

The USACE builds and manages large-scale construction projects around the world, such as the United States (U.S.) Army's military construction program, which has had a budget of over $44.6 billion over the past seven years. It is organized into nine separate divisions, each of which is further parsed into a series of districts. We targeted the Europe District, which is one of six districts located outside of the continental United States. This district is an ideal venue to study the effect of context on organizational performance due to its global nature, and the high relative volume of projects completed within it.

The Europe District of the USACE has been operating for over 50 years and is currently responsible for conducting projects in 94 countries. Headquartered in Wiesbaden, Germany, the district provides engineering, construction, stability operations, and environmental management products and services to the Army, Air Force, and other U.S. government agencies and foreign governments throughout the U.S. European Command and U.S. Africa Command. Within this global context, the Europe District engages in over 2,000 projects annually. Pertinent to our analysis, the diversity of contexts within which it operates creates unique operational challenges, since there are country-specific regulations and human resource policies with which its employees (both contextually specialized and contextually non-specialized) must comply.

4.1 Natural Experiment: *The Five-Year Rule*

Since the USACE Europe District operates outside the continental U.S. it is subject to a personnel policy that comes from the US Code, Title 10, US Code 156–"ROTATION OF

CAREER-CONDITIONAL AND CAREER EMPLOYEES ASSIGNED TO DUTY OUTSIDE THE UNITED STATES ". The Five-Year Rule mandates that no employee may remain in an assignment outside the continental U.S. longer than five years. The rule was put in place to allow for global assignment opportunities for the workforce. Without the enforcement of the five-year rule, most USACE employees would choose to stay in Europe for longer than five-years, because of the additional pay and opportunity to live abroad it presents (Roncoli 2013). The five-year rule forces employees to move despite their personal preferences, or the preferences of their direct supervisors. However, the five-year rule has only been intermittently enforced since its publication in 1960.

The sole prerogative over how the five-year rule is enforced belongs to the Command General of USACE, who is the chief executive of the organization. Due to the regular changes in military leadership, the individual USACE districts cannot anticipate when the five-year rule will be enforced. Hence, its historically-infrequent enforcement is effectively an exogenous event to the managers and the project teams in the Europe District. Accordingly, we are able to leverage its enforcement as an exogenous shock that creates variation in the degree of contextual specialization and contextual diversity project teams exhibit in the Europe District during the time of our analysis. Because of the swift enforcement of decisions within the organization, there is no opportunity for project managers to prepare their teams for the enforcement of the five-year rule. The data we use for this study spans from January 2006 through December 2012. For the first seven months of this window, the five-year rule was not in effect. In May 2005 a new leader assumed the position of deputy commander of the USACE, and in August 2006, he announced that the five-year rule would be immediately enforced. In discussions with the commander who made the decision to implement the policy, he chose to enact the rule when he was informed, a year into his tenure, that it was not being enforced. There was no advanced notice given to the organization prior to the rule's implementation. Thus, it is possible to use the enforcement of the five-year rule as an instrument to

break the potentially endogenous assignment of employees to contextually specialized and contextually non-specialized sets of projects. We note that when the five-year rule was implemented, the policy significantly affected the organization at all levels of tenure, experience, and education, requiring individuals with more than five years of experience in the Europe District to depart immediately, and their replacements, who were selected on a first-come-first-served basis, were randomly assigned to fill project team vacancies. Discussions with the managers revealed that there was *no science to the assembly of an individual project delivery team.*

5. Data and Empirical Approach

The data used to explore our research question was provided by the USACE. Due to one of the author's affiliation as an officer in the U.S. Army, with appropriate clearances, we were allowed access to the organization and project performance outcome data on military construction projects. Our sample is composed of 1,267 projects conducted by the USACE Europe District from January 2006 to December 2012. Our data includes 652 individual employees, and indicates the projects they worked on in each month. These data can be used to calculate how many simultaneous projects each employee participated in each month. We combine these data with project outcome data, with the outcome defined by the on-time delivery of the project. Although the outcome is project-level, all variables are at the individual level, which allows for the analysis of 336,137 observations at the employee, project, month-level. Through in depth dialogue with senior officials, we secured detailed human resource information on individual employees who participated in the projects in this dataset. Because of the sensitivity of the data, it can only be access through government servers for analysis. Through numerous detailed discussions with the organization, we were able to identify the appropriate variables for analysis, which we detail below.

5.1 On-Time Delivery

On-time Delivery: The primary objective measures of performance in the project management space have been well established (Gaddis 1959; Roman 1964; Dumond and Mabert 1988). For

projects to be deemed successful they must be on-time or under budget, and often both (Conlon and Garland 1993). Unfortunately, budget data was not available for this study. However, we were able to obtain data describing the on-time delivery status of each project. This indicator variable serves as the dependent measure in all of our analyses.

5.2 Contextual Specialization and Contextual Non-Specialization

We operationalize contextual specialization and contextual non-specialization by identifying the country within which each employee has conducted the most project months during her tenure in the Europe District. For each employee, we then divide the number of project months completed in this country by the total number of project months the employee has completed in the Europe District to date, thereby creating a proportion variable bounded by 0 and 1. An employee with a contextual specialization measure of 1 would be completely contextually specialized (i.e., all of that employee's projects have been conducted in the same country). By contrast, as this metric falls, the employee becomes less contextually specialized. The median employee in our dataset conducted 61% of her projects in the same country. For our analysis, we split the sample at the median, characterizing employees with an above-median degree of contextual specialization as *contextually specialized,* and employees with a below-median degree of contextual specialization as *contextually non-specialized.*

5.3 Policy Impact

As described above, the five-year rule serves as a source of exogenous variation that we exploit as an instrument in our analysis. The policy impact variable is an indicator variable that identifies individuals within our dataset who were required to leave under the five-year rule. The affected population is defined as any employee who has at least 48 months in the organization as of July 2006, the month prior to the notification of the policy enforcement, or any month after. Discussions with senior managers in the Europe District revealed that employees could not

immediately depart the organization when the five-year rule was enforced. Instead, it often took up to 12 months to transition an employee out of Europe, because employees could not be transferred until a position in the continental U.S. becomes available for them. Hence, any employee with 48 or more months of experience in the Europe District was subject to the five-year rule policy. This variable serves as a critical input to the Heckman Selection Model we use in our analysis, which is described in detail in the next section.

5.3 Control Variables

To avoid biased estimators, we also accounted for numerous individual and project characteristics that may covary with on-time performance and an employee's degree of contextual specialization or non-specialization.

Individual Characteristics. We control for each employee's local tenure, status, education, and prior military experience, as well as the number of tasks and projects an employee has been assigned to in a given month.

We define *local tenure* as the number of consecutive months an employee has worked in the European District. Employees are more likely to have experience with a project's tasks and team members when they have experience in that project's geographic region (Huckman, Staats, and Upton 2009; Staats 2011), and local knowledge may increase productivity (Staats and Gino 2012). *Status* is defined by the employee's general schedule level (GS). The GS is the pay scale within the U.S. Civil Service. The jobs associated with GS are primarily professional, technical, administrative, and clerical. The GS levels span from GS-1 to GS-15. The higher the GS-level the more responsibility and influence an employee has.

We codify *education* as the number of years of education an employee has on record with human resources. Employees with more education may be better able to operate on task with minimal external guidance (Tushman 1979; Cummings and Haas 2012) and may have a better ability

to prioritize based on the organization's needs (Gannon 1994). We further classify whether an individual has *prior military experience*. Employees are given an ordinal category from 0-5, based on the number of years they served in the military, with 0 meaning an employee did not serve in the military, and 5 meaning and the employee retired from the military after 20 years of service. Using data from the project scheduling system, we also count the *number of tasks* and the *number of projects* to which an employee has been assigned during a given month.

Project Characteristics. We additionally capture and control for differences among projects, including differences in cost and employee turnover. As a measure of project scale, we introduce an indicator variable that identifies projects that have budgets over $500,000. Such projects have a longer duration and are more complex than less costly projects.

Furthermore, similar to Hom et al. (2008), we define *project turnover* as personnel movement onto or off of a project. We construct a measure for overall project turnover by first identifying the employees who worked on a project team in the preceding month and calculating the percentage who are no longer present in the current month.

5.5 Empirical Approach

We wish to estimate models that capture the magnitude of the effect of individual attributes on on-time delivery. Because our data is a complete history of each project over six years, but we are limited to a binary dependent variable, we need to ensure we select a model that accounts for autocorrelations and heteroscedasticity. We thus chose to use a Heckman selection regression model. The Heckman selection model accounts for the potential selection bias that may occur in staffing projects because of turnover, meaning that managers may place employees on projects based on attempts to keep certain employees on specific projects (Heckman 1979; Evenson and Joseph 1999).

This model is a two-stage procedure that first estimates the likelihood of success with an event history for the full sample and then incorporates estimates of parameters from that model into the

second-stage probit model to predict measures of changes in employee characteristics on performance (Westphal and Fredrickson 2001). In order to use the Heckman selection model there must be an instrument. Because of the exogenous shock to the organization induced by the five-year rule, we have the required instrument. The five-year rule solely influences turnover, and only influences on-time delivery through turnover. This allows us to derive unbiased stimulates of the parameter coefficients while controlling for sample selection. Our analysis is akin to previous uses of the Heckman Selection Model in the literature on corporate governance, wherein for example, firm-level performance was modeled as a function of board composition and board member characteristics (Westphal and Bednar 2005; Clarysse, Knockaert, and Lockett 2007; Dastidar 2009). We note that all specifications are clustered at the project level to ensure appropriate standard errors.

5.5 Empirical Specification

To test our hypotheses, we used Heckman probit regression models for all specifications. Specifically, we estimate the policy impact on turnover in the first-stage to explore the effect of *contextual specialization* (in Model 1) and *contextual non-specialization* (in Model 2) in the second-stage as follows:

Model 1:

First-Stage

$$Turnover_i = \beta_1(Policy\,\mathrm{Im}\,pact_i) + \beta_2(Status_i) + \beta_3(Education_i) + \beta_4(LocalTenure_i) + \beta_5(Contextual\_Specialization_i) + \beta_6(Status_i^2) + \beta_7(Education_i^2) + \beta_8(LocalTenure_i^2) + \beta_9(Education_i^3) + \beta_{10}(Contextual\_Specialization * LocalTenure_i) + \beta_{11}(Contextual\_Specialization * LocalTenure_i^2) + \beta_{11}(Controls_i)$$

Second-Stage

$$Heckprobit(On\_Time\_Delivery_i) = \beta_1(Status_i) + \beta_2(Education_i) + \beta_3(LocalTenure_i) + \beta_4(Contextual\_Specialization_i) + \beta_5(Status_i^2) + \beta_6(Education_i^2) + \beta_7(LocalTenure_i^2) + \beta_8(Education_i^3) + \beta_9(Contextual\_Specialization * LocalTenure_i) + \beta_{10}(Contextual\_Specialization * LocalTenure_i^2) + \beta_{12}(Controls_i)$$

Hypothesis 1, predicts that when *contextual specialization* is high early in an employee's tenure with the organization, on-time delivery will improve in the near-term and moderate over time. Thus,

we expect that the interaction of *contextual specialization* and *local tenure* will be positive for the linear term and negative for the non-linear term in Model 1.

Model 2:

First-Stage

$$Turnover_i = \beta_1(Policy\,\mathrm{Im}\,pact_i) + \beta_2(Status_i) + \beta_3(Education_i) + \beta_4(LocalTenure_i) + \beta_5(Contextual\_Non-Specialization_i) + \beta_6(Status_i^2) + \beta_7(Education_i^2) + \beta_8(LocalTenure_i^2) + \beta_9(Education_i^3) + \beta_{10}(Contextual\_Non-Specialization * LocalTenure_i) + \beta_{11}(Contextual\_Non-Specialization * LocalTenure_i^2) + \beta_{11}(Controls_i)$$

Second-Stage

$$Heckprobit(On\_Time\_Delivery_i) = \beta_1(Status_i) + \beta_2(Education_i) + \beta_3(LocalTenure_i) + \beta_4(Contextual\_Non-Specialization_i) + \beta_5(Status_i^2) + \beta_6(Education_i^2) + \beta_7(LocalTenure_i^2) + \beta_8(Education_i^3) + \beta_9(Contextual\_Non-Specialization * LocalTenure_i) + \beta_{10}(Contextual\_Non-Specialization * LocalTenure_i^2) + \beta_{12}(Controls_i)$$

Hypothesis 2 predicts that *contextual non-specialization* diminishes on-time delivery performance in the short-run and improves on-time delivery performance over time. Thus we expect that the interaction of *contextual non-specialization* and *local tenure* will be negative for the linear term and positive for the non-linear term in Model 2.

Our hypotheses predicts the near-term and long-term productivity tradeoffs between *contextual specialization* and *contextual non-specialization*. We expect that it may be more beneficial to specialize employees when immediate gains are required. On the other hand, we predict that exposing employees to a variety of contexts simultaneously may improve their long-term performance.

6. Results

We present our primary results in Table 4. In particular, Column (2) and Column (4) report the results from the second-stage Heckman probit regressions of *contextual specialization* and *contextual non-specialization* on on-time delivery performance, respectively.

Column (2) demonstrates that the effect of contextual specialization on on-time performance is moderated by local tenure. As local tenure increases, the effect of contextual specialization on on-time delivery is initially positive (coefficient=0.213; $p<0.001$ two-tailed). However, as local tenure continues to increase, the effect is attenuated by the quadratic term (coefficient=-0.018; $p<0.001$ two-tailed). These results offer support for the inverted-U shaped relationship between contextual

specialization and on-time performance hypothesized in H1. We find that the stationary point for the average contextually specialized employee in our dataset occurs after 11 months of experience, after which point, the individual's predicted performance begins to plateau.

Column (4) demonstrates that the effect of contextual non-specialization on on-time performance is also moderated by local tenure, but in the opposite direction. As local tenure increases, the effect of contextual non-specialization on on-time delivery is initially negative (coefficient = -0.324; $p<0.001$ two-tailed). However, as local tenure continues to rise, the negative effect is arrested by the quadratic term, such that the effect of contextual non-specialization eventually becomes positive (coefficient = 0.026; $p<0.001$ two-tailed). These results offer support for the U-shaped relationship between contextual non-specialization and on-time performance hypothesized in H2. We find that the stationary point for the average contextually non-specialized employee in our dataset occurs after 5 months of experience, after which point the individual's predicted performance begins to improve.

It is also interesting to directly consider the tradeoff between contextual specialization and contextual non-specialization in our dataset. We find that the point of equivalence from an on-time performance perspective occurs after 14 months of local experience. Individuals staffed for less than 14 months would end as more productive employees if they were contextually specialized during their tenure. On the other hand, after approximately 38 months, the performance of contextually non-specialized employees is predicted to perpetually outperform the performance of their contextually-specialized colleagues.

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7. Discussion and Conclusion

In this paper, we attempt to shed light on the important phenomenon of intrafirm mobility of workers in multinational organizations and ask the question of whether being exposed to a single context or being simultaneously exposed to multiple contexts leads to higher productivity. In

thinking through this question, while prior scholarship highlights the importance of specialization (Harrison and Klein 2007; Narayanan, Balasubramanian, and Swaminathan 2009; Staats and Gino 2012) and building deep absorptive capacity, complementary scholarship also argues that productivity gains stem from diversity of experiences, performing variety of tasks and through knowledge recombination (Gardner, Gino, and Staats 2012; Narayanan, Balasubramanian, and Swaminathan 2009; Staats and Gino 2012). Our findings suggest that the answer to this question involves an interesting tradeoff: while *contextual specialization* of the worker leads to higher (firm/team) performance outcomes in the near term, performance outcomes in the long-term decline in the long term with contextual specialization. On the other hand, if the worker experiences *contextual non-specialization* in the near-term the (firm/team) experiences lower performance outcomes, but the (firm/team) will experience sustained positive performance outcomes over the long-term.

Using six years of data from the USACE Europe District and exploiting a unique natural experiment, we find that *contextual specialization* has an inverted U-shaped relationship with the probability of projects being delivered on-time. Our findings are consistent with prior work that highlighted a theoretical argument that when employees are specialized performance outcomes improve and as employees learn more their performance improves and then plateaus (Slocum et al. 1985; Staats and Gino 2012; KC 2013). We suggest that operating in a singular context provides initial gains for organizations, but as time passes employee performance may wane due to lack of variety.

Our evidence also suggests that *contextual non-specialization* is a U-shaped relationship with the probability of projects being deliver on-time. We observe that although initially performance outcomes decrease, overtime the exposure to variety is more beneficial as the literature would suggest (Staats and Gino 2012). If the organization can absorb lower initial productivity from its newer employees, the sustained long-term positive productivity is a managerial industry dependent

tradeoff.

7.1 Contributions

By examining the tradeoff of contextual specialization as it applies to multi-location workers in multinational firms, our results further contribute to the **nascent literature on intra-firm mobility within multinational firms**. Although intra-firm mobility has historically received little attention, our studies further supports the impact of intra-firm organizations and have a greater potential for organizational outcomes or innovation with a greater understanding of the impact of multi-location workers. Madsen et al. (2003), Karim and Williams (2012) and Choudhury (2017) have explored intra-firm mobility and its organizational linkages and have discussed that intra-firm mobility allows for an environment that promotes the transfer of tacit knowledge and the ability to recombine ideas thus adding greater value to organizational or innovative outcomes. Our study provides empirically evidence of the sustained implication of intra-firm mobility and highlights the importance of multi-location workers at the middle-manager level through proposing the implication of the tradeoffs of human capital placement.

Additionally, our results **contribute to the literature on specialization of workers and organizational outcomes**. The literature that examines the links between learning and specialization encompasses work on organizational learning, imprinting, and specialization and has been studied by both operations and strategy scholars. In this paper, we extend the notion of specialization from task, project, and team to the dimension of "context", which we operationalize as differences in location. Strategy and international business scholars have explored the relationship between geographical location and performance, but studies of worker productivity have mostly focused on a single location within a multi-location firm (Ghemawat 2001; Makino, Isobe, and Chan 2004; Choudhury 2014; Perkins 2014). We further analyze organizational performance when employees are involved in projects across many locations or contexts. Also, most of the past scholarship in the specialization literature has focused on the benefits of prior experience to

organizational success (Levitt 1988; Argote and Epple 1990; Cohen and Levinthal 1990; Reagans, Argote, and Brooks 2005; Narayanan, Balasubramanian, and Swaminathan 2009). We argue that there are some limits to prior experience. For instance, employees may anchor on their prior experience and be ineffective in a new environment due to their inability to adapt (Winter and Szulanski 2001; Perkins 2014). We draw on the literature from strategy and operations that outlines how employee experience contributes to organizational outcomes and argue that the perceived benefit of experience may be diminished when an employee's context changes. We consider how specialization can mitigate the negative effects caused by an employee's need to make contextual adjustments.

We further contribute to the **literature on context in strategy and international business.** The literature examines context from multiple perspectives. One perspective is focusing on demography of top-management teams on firm performance {Carpenter, 2002}. While another is how geographical location and distance within multinational corporations impacts firm performance {Ghemawat, 2001; Berry, 2010,;Berry, 2014}. Our study extends the research on context by further exposing the importance of tacit knowledge transfer between locations. It is well established that prior knowledge may provide a competitive advantage for senior leaders in organization {Karim, 2012 }. However, we theorize that even in highly structured organizations where institutional knowledge is essential that even mid-level employees also benefit from tacit knowledge acquired from operating in multiple locations. This phenomenon is further amplified when operating in an environment where one would expect skills are transferable between locations. We empirically support that over time employees are able to recombine the tacit knowledge in order to make positive contributions to organizational outcomes.

Finally our study **contributes to the literature on the microfoundations of knowledge recombination**. The study of knowledge recombination has a rich tradition in the fields of

economics and strategy (Schumpeter, 1939; Nelson and Winter, 1982; Henderson and Clark, 1990). One stream of this literature focuses on the microfoundations of knowledge recombination, i.e., the role that individuals play in knowledge recombination. This tradition dates back to Allen (1977) and is framed by Fleming (2001) as the process of recombinant search that is characteristic of individual inventors. In the subsequent literature, Carnabuci and Operti (2013) designate two distinct recombinant search strategies: "recombinant creation" (creating recombination new to the firm) and "recombinant reuse" (reconfiguring combinations already known to the firm). We make an empirical contribution by showing that over time the employee's ability to combine different experiences from different context in a new way results in sustained positive organizational outcomes. Prior literature has focused on diversity of task and experience (Staats, 2012). We further extend this diversity to diversity of experience in different locations. Our empirical analysis suggest that although it may take some time to understand the nuance of a new assignment in a new country, the absorptive capacity of the employee is being expanded and their ability to adapt is increased. Their ability to adapt is exponentially increased the more they pivot to new locations. Although each location is structurally different, increased adaptation allows for knowledge recombination, which results in better organizational outcomes.

7.2 Limitations and Venues for Future Research

This study has several limitations. First, our understanding of differences in context and the magnitude of the change in context on performance outcomes is limited to the data currently available. Second, we use one dependent binary variable. Binary variables tend to be a coarser measure of performance. Although this a limitation of available data, further insights could be gained through detailed analysis of continuous measures at different points in the life-cycle of a project. Third, there is a possibility of omitted variable bias. It would be helpful to add additional variables to the model, specific attributes of teams within a location or additional project attributes, but this data was unavailable. Fourth, our study is limited to similar projects. Because all of the

projects are military construction projects, there may be differences between public and private sector operations. Even though USACE functions as an independent firm, some human resource practices may be different and project assignment norms may be unique to the setting. In addition, USACE does much more than just vertical construction, we were limited by data availability. In this study the projects are similar, which may not be the case in other firms that employees work on multiple international projects. More granular data could be useful in determining how employees thrive in different contexts. Finally, our results come from one organization in one industry. To neutralize this drawback we have detailed information on employee work and performance outcome measures. In this context, we are able to leverage the deep knowledge of a single organization with empirical tests of our hypotheses. More granular data would also help us explore the appropriate mix of specialization for diverse contexts. Future research could focus on identifying different metrics for specialization and non-specialization and their impacts on on-time delivery. Additionally, future work could identify how an organization with a similar setting deploys its employees for maximum productivity. Also, additional research could focus on multiple organizations and conduct a comparative study.

7.3 Managerial Implications and Conclusion

Our analysis has important implications for managers who must quickly align new employees in an effective way in a project-based organization. Managers must be even more cognizant of employee attributes when they staff their projects, and they must also be aware of the risk their decisions pose to long-term outcomes. We find that employees engaged in the contextually-specialized manner can initially be extremely productive; however, over the long-term these employees begin to plateau and eventually stagnate. We also find that employees working in the contextually-non-specialization environment, can initially be unproductive; however, over the long-term these employees become the most productive. This tradeoff is important as organizations become even flatter. The effective allocation of human resources can be an organization's

competitive advantage. When managers are strategic in their resource allocation, they better respond to the short-term and long-term needs of the organization. They can better create slack and build resilience in the labor force. It can also protect the organization during market downturns.

Specifically in the context of project-based organizations, our finding that *contextual specialization* is an inverted U-shape is important information for managers to consider. If organizations require immediate results, they can take advantage of near-term gains and make future decisions to mitigate decreasing trends in productivity. Additionally, our finding that *contextual non-specialization* is an inverted U-shape is also important for managers to understand. The organization can make a more informed strategic staffing decision with some employees in an effort to benefit from the diverse experiences that they are initially exposed to. This information empowers managers to make decisions that most benefit the organization.

While results may differ in different settings, we maintain that organizations will continue to operate in multi-context settings where resource allocation is important. Our findings are especially timely, as organizations continue to leverage smaller labor forces that are required to operate outside their normal context. Although organizations cannot precisely predict the future, they can develop policies that help them navigate uncertain times. These policies, when implemented in a way that is sensitive to human capital that is within a manager's control, can have a positive impact on outcomes.

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Status (GS)	345750	10.12	4.56	1	16
Education	345750	11.83	4.19	1	21
Local Tenure (Years)	345750	4.28	2.91	0	11
Contextual Specialization	345750	0.39	0.39	0	1
Contextual Non-Specialization	345750	0.25	0.26	0	0.60
Veteran	343751	0.25	0.74	0	5
High Cost Projects	345750	0.92	0.27	0	1
Task	344443	91.18	93.13	1	518
Projects	345750	91.42	93.12	1	518

Table 2: Correlation Table

	On-Time Delivery	Status	Education	Local Tenure	Contextual Specialization	Contextual Non-Specialization	Veteren	High Cost Projects	Task	Projects	Turnover
Status	0.011										
Education	0.029	0.246									
Local Tenure	0.022	0.253	0.133								
Contextual Specialization	0.103	-0.116	-0.069	-0.033							
Contextual Non-Specialization	-0.100	0.135	0.068	0.017	-0.956						
Veteren	0.031	-0.056	0.022	-0.041	0.034	-0.010					
High Cost Projects	-0.002	-0.027	-0.007	0.061	-0.027	0.018	-0.016				
Task	0.054	-0.080	-0.004	0.144	0.037	-0.081	-0.089	0.068			
Projects	0.053	-0.082	-0.003	0.144	0.037	-0.081	-0.090	0.068	1.000		
Turnover	-0.134	-0.004	-0.030	-0.012	-0.097	0.096	-0.049	0.002	-0.018	-0.017	
Polic	-	0.036	-	0.139	-	0.051	0.015	0.045	-	-	-0.047

y Impact	0.048		0.020		0.054				0.045	0.046	

Table 3: Variable List

Variable	Overview	
On Time Delivery	(1)	A dummy variable of on-time delivery of projects to intended customers.
Status	(2)	The general service level (GS).
Education	(3)	Employee education level.
Local Tenure	(4)	Employee tenure in the Europe District.
Contextual Specialization	(5)	The proportion of specialization in context an employee possesses.
Contextual Non-Specialization	(6)	The proportion non-specialization in context an employee possesses.
Task*	(7)	The magnitude of task engaged in by employees.
High Cost Projects*	(8)	Indicates projects over $500,000.
Projects*	(9)	The number of projects employees are engaged in.
Veterans*	(10)	Indicates whether an employee is a Veteran.
Turnover+	(11)	Projects that have Turnover.
Policy	(12)	Employees affected by the five-year rule.

Impact++	
* ***Control Variables;+ Selection Coefficient; ++Instrumental Variable***	

Table 4a: Context and On-Time Delivery: Partial Specification

	Dep. Variable:	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**
	Turnover	**On-Time Delivery**	**Turnover**	**On-Time Delivery**	**Turnover**	**On-Time Delivery**	**Turnover**	**On-Time Delivery**
	1st Stage	***2nd Stage***	***1st Stage***	***2nd Stage***	***1st Stage***	***2nd Stage***	***1st Stage***	***2nd Stage***
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Contextual Specialization (CS)	-0.406***	0.587***			-0.364***	0.487***		
	(0.049)	(0.092)			(0.045)	(0.086)		
Contextual Non-Specialization(CD)			0.583***	-0.850***			0.520***	-0.697***
			(0.067)	(0.130)			(0.061)	(0.118)
Status	0.002	-0.002	0.002	0.001	0.024	-0.008	0.024	-0.009
	(0.003)	(0.004)	(0.003)	(0.004)	(0.021)	(0.026)	(0.021)	(0.025)
Status^2					-0.001	0.000	-0.001	0.000
					(0.001)	(0.002)	(0.001)	(0.001)
Education	-0.017***	0.017***	-0.017***	0.017***	-0.624***	-0.822***	0.606***	-0.794***
	(0.003)	(0.004)	(0.003)	(0.004)	(0.071)	(0.142)	(0.070)	(0.134)
Education^2					-0.066***	0.086***	-0.064***	0.083***
					(0.007)	(0.015)	(0.007)	(0.014)
Education^3					0.002***	-0.003***	0.002***	-0.003***
					(0.000)	(0.000)	(0.000)	(0.000)
Local Tenure	-0.013***	0.020***	-0.012***	0.019**	0.033	-0.063*	0.037*	-0.069**
	(0.004)	(0.006)	(0.004)	(0.006)	(0.018)	(0.026)	(0.018)	(0.026)
Local Tenure^2					-0.005**	0.008**	-0.005**	0.009**
					(0.002)	(0.003)	(0.002)	(0.003)
*CS*Local Tenure*								

*CS*Local Tenure^2*								
*CN*Local Tenure*								
*CN*Local Tenure^2*								
Controls								
Veteran					-0.106***	0.115***	-0.110***	0.121***
					(0.019)	(0.024)	(0.019)	(0.024)
High Cost Projects					-0.053	0.079**	-0.050**	0.076**
					(0.016)	(0.024)	(0.016)	(0.023)
Task					-0.023	0.034***	-0.023***	0.034***
					(0.007)	(0.010)	(0.007)	(0.009)
Projects					0.023**	-0.034***	0.023**	-0.034***
					(0.007)	(0.010)	(0.007)	(0.009)
Policy Impact (Instrument)	-0.250**		-0.273**		-0.229*		-0.227*	
	(0.092)		(0.090)		(0.112)		(0.108)	
Constant	-0.362***	0.160	-0.665***	0.596**	-2.155***	2.537***	-2.387***	2.840***
	(0.062)	(0.255)	(0.053)	(0.194)	(0.218)	(0.272)	(0.219)	(0.276)
N		339382		339382		336137		336137
VCE		**CLUSTER**		**CLUSTER**		**CLUSTER**		**CLUSTER**

Robust standard errors in parentheses *p<0.05,**p<0.01,***p<0.001

Notes: This table reports the second-stage of the heckman probit regression. The first-stage leverages all variables above in addition to the variable *Turnover* as the dependent variable and the *variable Policy Impact* as the instrument variable required for this specification. The outcome variable in the second-stage is a dummy variable, which is set to 1 when the project is on-time that has the word "On-Time" in its title. Table 3 shows that when *contextual specialization* and *contextual non-specialization* interacts with local tenure and local tenure^2 influence on-time delivery. Controls are whether an individual is a prior veteran, the number of task an individual is engaged, the number of

projects an individual is engaged, and a dummy variable for when projects are over $500,000

Table 4b: Context and On-Time Delivery: Full-Specification with Interactions

	Dep. Variable:	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**
	Turnover	**On-Time Delivery**	**Turnover**	**On-Time Delivery**
	1st Stage	***2nd Stage***	***1st Stage***	***2nd Stage***
	(1)	(2)	(3)	(4)
Contextual Specialization (CS)	-0.328	0.365		
	(0.205)	(0.241)		
Contextual Non-Specialization (CN)			0.004*	-0.001
			(0.002)	(0.002)
Status	0.028	-0.013	0.013	-0.016
	(0.021)	(0.025)	(0.022)	(0.027)
Status^2	-0.001	0.001	-0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.002)
Education	0.654***	-0.869***	0.514***	-0.726***
	(0.071)	(0.146)	(0.068)	(0.135)
Education^2	-0.068***	0.090***	-0.054***	0.076***

	(0.007)	(0.015)	(0.007)	(0.014)
Education^3	0.002***	-0.003***	0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)
Local Tenure	0.205***	-0.329**	-0.03	-0.006
	(0.061)	(0.103)	(0.027)	(0.035)
Local Tenure^2	-0.019**	0.031**	-0.005	0.005
	(0.006)	(0.010)	(0.004)	(0.004)
*CS*Local Tenure*	-0.255**	0.389**		
	(0.093)	(0.141)		
*CS*Local Tenure^2*	0.021*	-0.033*		
	(0.009)	(0.014)		
*CN*Local Tenure*			0.002***	-0.003***
			(0.000)	(0.000)
*CN*Local Tenure^2*			-0.000***	0.000***
			(0.000)	(0.000)
Controls				
Veteran	-0.103***	0.111***	-0.105***	0.120***
	(0.019)	(0.023)	(0.019)	(0.024)
High Cost Projects	-0.052**	0.078***	-0.041*	0.063**
	(0.016)	(0.023)	(0.016)	(0.022)
Task	-0.023**	0.034***	-0.052***	0.060***
	(0.007)	(0.010)	-0.008	(0.009)
Projects	0.023**	-0.034***	0.048***	-0.057***
	(0.007)	(0.010)	(0.007)	(0.009)
Policy Impact (Instrument)	-0.232*		-0.246*	
	(0.109)		(0.101)	
Constant	-2.215***	2.687***	-1.942***	2.438***
	(0.252)	(0.318)	(0.215)	(0.290)
N		336137		336137
VCE		**CLUSTER**		**CLUSTER**

Robust standard errors in parentheses p<0.05,**p<0.01,***p<0.001

Notes: This table reports the second-stage of the heckman probit regression. The first-stage leverages all variables above in addition to the variable *Turnover* as the dependent variable and the *variable Policy Impact* as the instrument variable required for this specification. The outcome variable in the second-stage is a dummy variable, which is set to 1 when the project is on-time that has the word "On-Time" in its title. Table 3 shows that when *contextual specialization* and *contextual non-specialization* interacts with local tenure and local tenure^2 influence on-time delivery. Controls are whether an individual is a prior veteran, the number of task an individual is engaged, the number of projects an individual is engaged, and a dummy variable for when projects are over $500,000 dollars.

Table 5: Context and On-Time Delivery: Highly Educated Employees and High Local Tenure

	Dep. Variable:	Dep. Variable:	Dep. Variable:	Dep. Variable:	Dep. Variable:	Dep. Variable:	Dep. Variable:	Dep. Variable:
	Turnover	On-Time Delivery	Turnover	On-Time Delivery	Turnover	On-Time Delivery	Turnover	On-Time Delivery
	1st Stage	*2nd Stage*	*1st Stage*	*2nd Stage*	*1st Stage*	*2nd Stage*	*1st Stage*	*2nd Stage*
	Education > Mean				Local Tenure > Mean			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Contextual Specialization (CS)	0.052	-0.019			1.055	-2.106		
	(0.091)	(0.111)			(0.589)	(1.319)		
Contextual Non-Specialization(CN)			-0.157	0.075			-0.834	3.108
			(0.136)	(0.166)			(0.863)	(1.949)
Status	0.106**	-0.145**	0.103**	-0.138**	0.023	-0.014	0.013	-0.007
	(0.033)	(0.046)	(0.033)	(0.045)	(0.039)	(0.046)	(0.039)	(0.048)
Status^2	-0.006**	0.009**	-0.006**	0.008**	0.000	0.002	0.001	0.002
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)
Education	-5.125**	5.870*	-5.164**	5.768*	0.693***	-0.212	0.679***	-0.155
	(1.892)	(2.464)	(1.898)	(2.435)	(0.103)	(0.197)	(0.104)	(0.199)

Education^2	0.324**	-0.365*	0.327**	-0.359*	-0.075***	0.022	-0.073***	0.016
	(0.118)	(0.152)	(0.118)	(0.151)	(0.010)	(0.019)	(0.010)	(0.020)
Education^3	-0.007**	0.007*	-0.007**	0.007*	0.002***	-0.001	0.002***	-0.001
	(0.002)	(0.003)	-0.002	(0.003)	(0.000)	(0.001)	(0.000)	(0.001)
Local Tenure	0.027	-0.076	-0.059	0.029	0.321	0.216	0.0643	0.735
	(0.028)	(0.041)	(0.024)	(0.033)	(0.106)	(0.210)	(0.099)	(0.266)
Local Tenure^2	-0.003	0.006	0.003	0.001	-0.026	-0.009	-0.009	-0.045
	(0.003)	(0.004)	(0.002)	(0.003)	(0.07)	(0.014)	(0.007)	(0.016)
*CS*Local Tenure*	-0.117**	0.151**			-0.407*	0.694		
	(0.042)	(0.056)			(0.167)	(0.362)		
*CS*Local Tenure^2*	0.007	-0.008			0.028*	-0.047*		
	(0.004)	(0.005)			(0.011)	(0.024)		
*CN*Local Tenure*			0.190**	-0.221**			0.374	-1.03
			(0.062)	(0.079)			(0.247)	(0.540)
*CN*Local Tenure^2*			-0.013*	0.013			-0.025	0.071*
			(0.006)	(0.007)			(0.017)	(0.035)
Controls								
Veteran	-0.109***	0.118***	-0.112***	0.123***	-0.183***	-0.028	-0.184***	-0.028
	(0.023)	(0.028)	(0.023)	(0.028)	(0.028)	(0.038)	(0.028)	(0.039)
High Cost	-0.047**	0.070**	-0.046**	0.069**	-0.036	-0.034	-0.034	-0.038

Projects								
	(0.018)	(0.025)	(0.018)	(0.024)	(0.022)	(0.050)	(0.022)	(0.049)
Task	-0.034***	0.051***	-0.035***	0.051***	-0.023*	0.061**	-0.022*	0.060**
	(0.008)	(0.011)	(0.008)	(0.011)	(0.009)	(0.021)	(0.009)	(0.022)
Projects	0.033***	-0.050***	0.034***	-0.050***	0.024**	-0.061**	0.023**	-0.060**
	(0.008)	(0.011)	(0.008)	(0.011)	(0.009)	(0.021)	(0.009)	(0.022)
Policy Impact (Instrument)		-0.276**		-0.271**		0.231*		0.240**
		(0.100)		(0.102)		(0.092)		(0.092)
Constant	25.651*	-29.869*	25.876**	-29.324*	-3.396***	-2.796***	-2.694***	-4.548***
	(9.994)	(13.126)	(10.023)	(12.967)	(0.422)	(0.838)	(0.465)	(1.117)
N		233023		233023		147236		147236
VCE	**CLUSTER**	**CLUSTER**	**CLUSTER**	**CLUSTER**	**CLUSTER**	**CLUSTER**	**CLUSTER**	**CLUSTER**

Robust standard errors in parentheses *p<0.05,**p<0.01,***p<0.001

Notes: This table reports the second-stage of the heckman probit regression. The first-stage leverages all variables above in addition to the variable *Turnover* as the dependent variable and the *variable Policy Impact* as the instrument variable required for this specification. The outcome variable in the second-stage is a dummy variable, which is set to 1 when the project is on-time that has the word "On-Time" in its title. Table 3 shows that when *contextual specialization* and *contextual non-specialization* interacts with local tenure and local tenure^2 influence on-time delivery. Controls are whether an individual is a prior veteran, the number of task an individual is engaged, the number of projects an individual is engaged, and a dummy variable for when projects are over $500,000 dollars.

Table 6: Context and On-Time Delivery: Status

	Dep. Variable:	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**
	Turnover	**On-Time Delivery**	**Turnover**	**On-Time Delivery**
	1st Stage	***2nd Stage***	***1st Stage***	***2nd Stage***
	Status > Mean			
	(1)	**(2)**	**(3)**	**(4)**
Contextual Specialization (CS)	0.532***	-0.548***		
	(0.105)	(0.110)		
Contextual Non-Specialization (CN)			-0.957***	1.101***
			(0.169)	(0.230)
Status	1.401*	-1.509*	1.349*	-1.415*
	(0.601)	(0.635)	(0.610)	(0.713)
Status^2	-0.054*	0.058*	-0.052*	0.054*
	(0.023)	(0.024)	(0.023)	(0.027)
Education	0.607***	-0.667***	0.601***	-0.704***
	(0.088)	(0.093)	(0.089)	(0.123)
Education^2	-0.064***	0.070***	-0.063***	0.075***
	(0.009)	(0.009)	(0.009)	(0.012)
Education^3	0.002***	-0.002***	0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)
Local Tenure	0.185***	-0.206***	-0.022	0.008
	(0.032)	(0.034)	(0.028)	(0.003)
Local Tenure^2	-0.015***	0.017***	-0.001	0.004
	(0.003)	(0.003)	(0.003)	(0.003)
*CS*Local Tenure*	-0.263***	0.274***		
	(0.048)	(0.052)		
*CS*Local Tenure^2*	0.018***	-0.018***		
	(0.005)	(0.005)		

*CN*Local Tenure*			0.446***	-0.524***
			(0.075)	(0.114)
*CN*Local Tenure^2*			-0.031***	0.035***
			(0.007)	(0.009)
Controls				
Veteran	-0.125***	0.130***	-0.126***	0.137***
	(0.026)	(0.029)	(0.026)	(0.033)
High Cost Projects	-0.074***	0.076***	-0.066***	0.082***
	(0.018)	(0.019)	(0.017)	(0.022)
Task	-0.022**	0.028***	-0.022**	0.038*
	(0.008)	(0.008)	(0.008)	(0.015)
Projects	0.022**	-0.028***	0.022**	-0.038*
	(0.008)	(0.008)	(0.008)	(0.015)
Policy Impact (Instrument)		-0.059		-0.177
		(0.041)		(0.121)
Constant	-11.514**	12.544**	-10.711**	11.402*
	(4.035)	(4.263)	(4.089)	(4.805)
N		216347		216347
VCE	**CLUSTER**	**CLUSTER**	**CLUSTER**	**CLUSTER**

Robust standard errors in parentheses *p<0.05,**p<0.01,***p<0.001

Notes: This table reports the second-stage of the heckman probit regression. The first-stage leverages all variables above in addition to the variable *Turnover* as the dependent variable and the *variable Policy Impact* as the instrument variable required for this specification. The outcome variable in the second-stage is a dummy variable, which is set to 1 when the project is on-time that has the word "On-Time" in its title. Table 3 shows that when *contextual specialization* and *contextual non-specialization* interacts with local tenure and local tenure^2 influence on-time delivery. Controls are whether an individual is a prior veteran, the number of task an individual is engaged, the number of projects an individual is engaged, and a dummy variable for when projects are over $500,000 dollars.

Table 7: Context Diversity and On-Time Delivery

	Dep. Variable:	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**	**Dep. Variable:**
	Turnover	**On-Time Delivery**	**Turnover**	**On-Time Delivery**	**Turnover**	**On-Time Delivery**
	1st Stage	***2nd Stage***	***1st Stage***	***2nd Stage***	***1st Stage***	***2nd Stage***
	(1)	(2)	(3)	(4)	(5)	(6)
Contextual Diversity (CD)	0.666***	-0.837***	0.674***	-0.735***	0.611***	-0.671
	(0.056)	(0.100)	(0.060)	(0.063)	(0.096)	(0.099)
Status	0.00002	-0.001	0.01	0.003	0.012	-0.0002
	(0.003)	(0.004)	(0.021)	(0.022)	(0.021)	(0.022)
Status^2			-0.0003	-0.0005	-0.0005	0.0003
			(0.001)	(0.001)	(0.001)	(0.001)
Education	-0.003	-0.0002	0.501***	-0.559***	0.488***	-0.547***
	(0.003)	(0.004)	(0.070)	(0.073)	(0.071)	(0.073)
Education^2			-0.051***	0.057***	-0.050***	0.056***
			(0.007)	(0.007)	(0.007)	(0.007)
Education^3			0.002***	-0.002***	0.001***	-0.002***
			"(0.0002)"	(0.0002)	(0.0002)	(0.0002)
Local Tenure	-0.011**	0.016**	-0.044*	0.033	0.002	-0.002
	(0.004)	(0.006)	(0.021)	(0.022)	(0.027)	(0.028)
Local Tenure^2			0.003	-0.001	-0.004	0.006
			(0.002)	(0.002)	(0.003)	(0.003)
*CD*Local Tenure*					0.065	-0.069
					(0.042)	(0.045)
*CD*Local Tenure^2*					-0.009*	0.009*
					(0.004)	(0.004)
Controls						
Veteran			-0.073***	0.072**	-0.069***	0.068**

			(0.021)	(0.022)	(0.021)	(0.022)
High Cost Projects			-0.045*	0.050*	-0.042*	0.048*
			(0.020)	(0.020)	(0.020)	(0.021)
Task			-0.023**	0.028***	-0.024***	0.029***
			(0.007)	(0.007)	(0.007)	(0.007)
Projects			0.023**	-0.028***	0.024***	-0.030***
			(0.007)	(0.007)	(0.007)	(0.007)
Policy Impact (Instrument)	-0.286*		-0.083***		-0.086***	
	(0.122)		(0.022)		(0.025)	
Constant	-0.322***	0.143	-1.719***	1.912***	-1.736***	1.932***
	(0.063)	(0.379)	(0.217)	(0.223)	(0.216)	(0.224)
N		339382		336137		336137

Robust standard errors in parentheses *p<0.05,**p<0.01,***p<0.001

Notes: This table reports the second-stage of the heckman probit regression. The first-stage leverages all variables above in addition to the variable *Turnover* as the dependent variable and the *variable Policy Impact* as the instrument variable required for this specification. The outcome variable in the second-stage is a dummy variable, which is set to 1 when the project is on-time that has the word "On-Time" in its title. Table 3 shows that when *contextual diversity* interacts with local tenure and local tenure^2 influence on-time delivery. Controls are whether an individual is a prior veteran, the number of task an individual is engaged, the number of projects an individual is engaged, and a dummy variable for when projects are over $500,000 dollars.

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NOTES

Experiences enables the development of tacit knowledge. Even in organizations with deep institutional knowledge structures, tacit knowledge is enhanced and recombined based on operating in different locations. The varied experiential attributes are a mechanism in which generates a managerial tradeoff on human capital placement with multi-national firms. We theorize that varied experiences are aid to postitive outcomes versus non-varied. Actually that non-varied experiences have a sharper decline than the accepted uniform inverse.