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Core employee based human capital and revenue productivity in small firms: An empirical investigation

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ABSTRACT

The human capital of a firm, as manifested by the experience and education of its workforce, represents a key resource that improves firm productivity. The current study proposes that task-specific experience is a significant organizational resource for small firms seeking productivity. Utilizing objective data from 1572 core-employees representing 100 small firms in two different industries, this study examines how two types of experience (task-specific and firm-specific) interact with education to influence firm productivity. Results show that the relationship between task-specific experience and productivity is stronger in firms with higher levels of core employee education than in firms with lower levels of core employee education.

1. Introduction

According to the resource based view of the firm, resources that are valuable and rare can provide a firm with a competitive advantage (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984). Human capital is considered a valuable resource that is specific and inimitable and that helps firms sustain their competitive advantage. A firm's human capital comprised of the knowledge and skills accumulated by employees through education and experience can be considered a key contributor to a firm's capabilities (Chena & Huang, 2009; Coff, 2002; Leonard-Barton, 1992).

Since human capital indicates a firm's skill based capabilities (Levy & Sharma, 2010), it may also explain why some firms perform better than others (Kor & Leblebici, 2005). Accordingly, numerous empirical studies have examined the link between firm level human capital and performance (Crook, Todd, Combs, Woehr, & Ketchen, 2011). This stream of research is mostly restricted to large firms (Sels et al., 2006). While the human resource management literature generally focused on employee level human capital and its link with individual outcomes such as compensation and individual productivity (Ployhart & Moliterno, 2011; Schmidt & Hunter, 1998) and on the practices that can acquire and develop the human capital, it largely ignored the human capital as the firm-level resource itself (Wright & McMahan, 2011). Entrepreneurship and small business literature, on the other hand, examined hypotheses grounded on human capital theory (Haber & Reicheil, 2007; Shrader & Siegel, 2007) by focusing entirely on the human capital of the owners and/or top managers (Rauch, Frese, & Letsch, 2005). Hence, a potential weakness of this stream of research may arise from its focus on the owners'/founders' human capital (for a review, see Unger, Rauch, Frese, & Rosenbusch, 2011) and not on employee based human capital. Unger and associates suggest that "if the dependent variable reflects firm-level performance, human capital may be better assessed at the level of the firm and should, thus, examine the human capital level of the employees" (Unger et al., 2011, p. 354).

In response to the above discussed gaps in human capital research, we focus on core employee based human capital in small firms and examine how different forms of human capital interact to influence firm productivity. As a result of this focus, our research makes several unique contributions. First, we capture small firms' human capital derived from firm employees. This is distinct in relation to both small firm literature and traditional human resource literature. Whereas, small firm entrepreneurship literature captures human capital of owners/top management and traditional HR literature focuses primarily on employee human capital in large firms. Second, we use existing small businesses as our sample. Finally, while most research on employee based human capital focuses primarily on individual outcomes, we differentiate in this paper by operationalizing our theory at the firm level.

To do this, we develop specific hypotheses predicting small firm productivity. To test our hypotheses, we draw upon a rich set of proprietary data from small firms in the technology and financial services sectors. Finally, we conclude with a discussion of implications, limitations and recommendations for future research.

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2. Theory and hypotheses

An organization's human capital is often conceptualized as general and specific knowledge and skills of people within the organization. Typically, human capital is accumulated through education and work experience (Lucas, 1988). Human capital theory posits that employees with superior human capital such as higher levels of education and experience will achieve more desirable outcomes by being more productive (Becker, 1964).

The resource-based view of the firm posits that superior firm performance can be achieved by possessing resources that are valuable, rare, and inimitable (Barney, 1991, Wernerfelt, 1984). Researchers with this view have argued that an organization's human capital is a valuable and inimitable resource which is important for a firm's competitive advantage and performance (Huselid, 1995). This is because human capital is socially complex and often the most unique intangible resource of an organization (Black & Boal, 1994; Hitt, Bierman, Shimizu, & Kochhar, 2001). Accordingly, the resource-based view has often been used as the basis for describing the relationship between an organization's human capital and performance (Carpenter, Sanders, & Gregersen, 2001). Superior human capital attributes such as formal education and experience are found to produce higher firm-level outcomes (Finkelstein & Hambrick, 1996; Pennings, Lee, & van Witteloostuijn, 1998; Sherer, 1995).

While human capital is generated at the individual-level (Becker, 1964), its importance as an organization-wide critical resource comes from the collective accumulation of individual human capital (Faraj & Sproull, 2000). Consistently, organizational level human capital is defined as the aggregate knowledge, skills, and other abilities of an organization's workforce (Ployhart, Weekley, & Baughman, 2006). Prior research has defined a firm's human capital as an average of its individual human capital (Bingley & Westergaard-Nielsen, 2004; de Grip & Sieben, 2005; Hitt et al., 2001; Hoffman, Williams, Lamont, & Geiger, 2000). Thus, studies that examine the influence of human capital on firm performance on the basis of the resource-based view of the firm should benefit by focusing on the firm's employee based human capital.

2.1. Core employee based human capital in small business productivity

Since a firm's human capital can be conceived as the productive capacity of its people (Buchholtz, Ribbens, & Houle, 2003), developing and maintaining employee based human capital are critical for improving productivity. Past studies have demonstrated that organizational human capital can be captured by aggregating (often by averaging) employee human capital (Bingley & Westergaard-Nielsen, 2004; Hitt et al., 2001). Yet, a significant issue is whether all employees in an organization should be included as part of an inimitable and rare resource that creates competitive advantage for the firm.

Research suggests that firms invest in employees that work on core activities that are likely to be needed over time, are required for developing firm-specific skills and are difficult to monitor (Masters & Miles, 2002). Similarly, core employees can be defined as those that perform a company's core operations (Atchison, 1991). Prahalad and Hamel (1990) considered core employees to be more tightly tied to organizational competencies than other employees. Accordingly, the role of core employees (employees working on core activities) in a firm's competitiveness becomes an important subject (Lopez-Cabrales, Valle, & Herrero, 2006). Hence, human capital based on core employees can be significantly linked to a firm's competitive advantage and productivity.

Core employee based human capital is particularly important for small businesses in their quest to survive and compete with their larger counterparts. Small businesses usually have limited resources which necessitate efficient management of these resources to sustain competitiveness (Schneider & Lenzelbauer, 1993). Given that larger firms usually have better access to capital and technology, small firms must focus on their human capital in order to remain productive and competitive. However, both the popular press and scholarly research on small business suggest that the task of attracting and retaining talented employees is more difficult for small businesses compared to their larger counterparts (Gilbert & Jones, 2000; Hornsby & Kuratko, 1990; Kotey & Sheridan, 2001; McKee, 1991). Published research estimates that small firms lose about a tenth of their workforce each year (Tarasco & Damato, 2006). Accordingly, the availability of experienced employees can be considered as a rare resource particularly for small firms. Hence, the level of a small firm's employee based human capital is a significant resource that is rare and valuable for performance. Therefore, human capital is particularly critical for small business performance.

2.2. Forms of human capital

Human capital is often categorized in the literature as either general or firm-specific and measured as the extent of education and experience. For instance, formal education is considered general human capital, whereas, work experience in terms of tenure at the current firm is considered firm-specific human capital. Higher levels of general human capital attained through advanced education permit employees to be productive in performing jobs requiring knowledge of difficult and abstract concepts (Feeny & Wilcocks, 1998). Past research found support for a positive relationship between general human capital, such as level of education and productivity (Becker & Lindsay, 1994; Feeny & Wilcocks, 1998).

While general human capital is transferable with the movement of employees between firms, firm-specific human capital is not entirely transferable. The extent of an employee's firm specific experience (experience that contributes to firm-specific human capital), will make the employee less productive in another firm (Hatch & Dyer, 2004). Similar logic can be applied to employees' movements between different jobs within a firm for their task productivity. Past research suggests that work experience within a firm can be considered as task-specific based on the current job or based on all prior jobs (Balmaceda, 2006; Clement, Koonce, & Lopez, 2007). Accordingly, we conceptualized human capital based on experience within a firm as task-specific (based on the current job) and firm-specific (experience based on all prior jobs).

Employees gain task-specific human capital through performance of specific tasks germane to their current job settings within the firm (Zarutskie, 2010). Research suggests that the task-specific value of the human capital will be at least partially lost when employees move between jobs (Gibbons & Waldman, 2004). For instance, a loss of task-specific human capital would occur if an employee serving as an End User Computing Specialist, whose main tasks involved providing solutions to computer problems of customers within a firm, was promoted to the job of Help Desk Manager where he or she is now primarily responsible for the prioritization and coordination of reported problems as well as providing overall direction of the help desk staff. Thus, task-specific human capital developed with tenure in the current job enhances job-specific skills and expertise, but firm-specific human capital based on experience in prior jobs is less applicable to current tasks (Clement et al., 2007; Harris, Kacmar, & Carlson, 2006). Arguably, long tenure in a firm can come from employees occupying multiple jobs that may not be directly relevant for the current job.

Therefore, task-specific experience and firm-specific experience can be conceptualized as two different forms of experience. With an increase in employee tenure in the current job, task specific experience can augment job-specific skills and expertise (Gathmann & Schoenberg, 2010; Zarutskie, 2010). As Adam Smith (1776) suggested, repeated exposure to each task of the current position makes an employee more productive in that position through learning by doing (Mouw & Kalleberg, 2006). Therefore, a small firm's task-specific human capital increases its productivity as workers become more expert and proficient at performing their current tasks through repetition (Gibbons & Waldman, 2004; Levitt, 1972).

Conversely, employees gained firm-specific experience in prior jobs may not improve their proficiency of performing tasks in their current jobs (Clement et al., 2007). While prior job experience is less pertinent to current task performance, this experience is valuable in terms of company specific general knowledge. Specifically, firm-specific experience on all prior jobs encompasses firm-wide knowledge of policies and procedures, culture, formal and informal reporting relationships and organizational structure (Groysberg, Sant, & Abrahams, 2008). A company with high levels of human capital attained from firm-specific experience in prior jobs would have employees with a thorough understanding and mastery of the firm's idiosyncratic systems and processes. This knowledge of firm-specific systems and processes is likely to allow workers to be more efficient in managing their work and operating within the firm. Therefore, while task-specific experience improves productivity by improving employee proficiency in performing current tasks, firm-specific experience improves productivity by improving employee understanding of firm-specific systems and processes.

While the above section arrives at the same conclusion as the generally accepted theory — that human capital in terms of education and experience leads to higher levels of firm productivity (Becker, 1964; Schultz, 1960; Sherer, 1995), we argue that the underlying reasons for the positive effects of task-specific experience and firm-specific experience on prior jobs are different. As a result, we expect that the combined effects of education and experience will vary based on the type of experience. Education usually offers foundational knowledge that can be applied to jobs related to a particular field of study. Hence, a higher level of education is likely to enhance procedural knowledge or improve the ability to grasp complex techniques more efficiently in a particular field. For instance, a higher level of education in accounting is likely to enhance one's knowledge of accounting principles and also one's ability to comprehend the job specific accounting task efficiently.

The combination of task-specific human capital with advanced levels of education would likely enhance employee productivity by incorporating fundamental educational principles with employee task expertise which can be applied to specific jobs. As a result, the relationship between task-specific human capital and productivity would be enhanced in firms where employees have higher levels of education. However, since the influence of firm-specific experience in prior jobs on firm productivity comes from the knowledge of firm-specific idiosyncratic processes and systems, higher levels of education are less likely to augment this influence. Accordingly, we argue that the combination effect of formal education and experience based human capital on firm productivity will be significantly different if we measure experience in terms of task-specific as opposed to firm-specific. More specifically, in conjunction with formal education, task-specific human capital, but not prior experience based human capital will have an augmented influence on firm productivity. Hence, we predict the following hypotheses:

Hypothesis 1. Formal education will moderate the relationship between experience based human capital and firm performance such that the moderating effect will be stronger on the relationship between task-specific experience and firm performance than on the relationship between firm-specific experience and firm performance.

Hypothesis 2. Formal education will moderate the effect of task-specific experience and firm performance: The relationship between task-specific experience and firm productivity is stronger when the formal education is higher.

3. Method

3.1. Sample

Facing the challenges of examining and measuring human capital resources as the most critical firm resource, we identified two industry sectors where human capital as a critical organizational resource is evident and measurable. These two sectors are: information technology (IT) and financial services, where professionals perform the dominant activities for the firms and constitute a significant resource for their firms. Consistent with the U.S. Department of Commerce Economics and Statistics Administration's description of IT firms (Henry & Dalton, 2002), we included computer hardware and software producers, service providers, communication equipment producers and service providers as members of the IT sector. Similarly, consistent with previous studies (Yang & Hyland, 2006), we selected small commercial banks, consumer finance, financial planning, and accounting services as members of the financial service sector.

Data for this study came from a wage survey collected in 2006 by one of the five leading compensation consulting firms in the United States whose clients are evenly spread throughout the United States. Client firms were asked to provide human capital data on each of their full time employees and firm level data about the number of employees, revenue, and industry affiliation. The consulting company used a comprehensive data collection technique to ensure reliability. After data entry, the data set was reviewed carefully and whenever necessary the respondents were contacted directly to verify and/or correct responses. Additional support for the data reliability comes from its use in past research published in prestigious journals like WorldatWork Journal. Consistent with other studies on small firms, we restricted our data to firms with 500 employees or fewer (Johnston, Wade, & McClean, 2007). Based on the restriction of our study to two sectors and to firms with only 500 or fewer employees, we received a data set representing 118 firms. Given the importance of professionals in our study, we included data only from those firms that provided information on the professional status of their employees. Finally, after the above restrictions, we were left with data on 1572 professionals representing 100 small firms.

3.2. Measures

3.2.1. Dependent variable

Worker productivity is recognized as a particularly important measure of performance for small firms (Schneider & Lenzelbauer, 1993). A firm's worker productivity is also considered important for indicating the effectiveness of a firm's human capital (Guthrie, 2001). To represent a firm-level dependent variable, we used a firm's mean worker productivity. Hence, following past research (Guthrie, 2001; Huselid, 1995; Sun, Aryee, & Law, 2007), we used the logarithm of average revenue per employee as a measure of firm performance.

3.2.2. Independent variables

The three human capital variables: formal education, task-specific and firm-specific experiences were operationalized using the objective HR data on all professionals in each small firm. Formal education was coded as 1 = less than high school, 2 = high school, 3 = high school plus one year of technical school, 4 = associate degree, 5 = bachelor degree, and 6 = graduate degree. Task-specific experience was operationalized as the professionals' current job tenure in years, whereas, firm-specific experience was operationalized as the professionals' total firm-specific experience minus current job tenure in years. Following prior research, mean scores were used to represent the three firm-level independent variables (Bantel & Jackson, 1989; Carpenter et al., 2001; Hitt et al., 2001).

3.2.3. Control variable

To control for the spurious effect of extraneous variables, the study collected firm-level data on average professional compensation, number of professionals, and number of employees. Additionally, a dichotomous variable representing the two sectors (IT = 1; Financial Services = 0) and a variable representing industry sales per employee were used as controls. Besides sector, client firms indicated key-words that identify their industries. We were able to convert these key-words into four digit NAICS codes. Using NAICS codes industry

sales per employee information were collected from Standard and Poor's database. A natural log of this data was used as a control.

4. Data analysis and results

4.1. Descriptive statistics and correlations

Table A1 provides descriptive statistics, and zero order correlation coefficients for all study variables. The dependent variable, revenue per employee, shows positive correlations with all three independent variables (education and the two types of experience). Among the nine study variables only nine bivariate correlations were statistically significant. As some of the independent variables show significant correlations, they raise the issue of multicollinearity. However, each relationship produced a variance inflation factor score well below 10, suggesting minimal multicollinearity problems (Chatterjee & Price, 1991).

4.2. Hypotheses testing

Hierarchical regression analysis was used to test the hypothesized relationships. To see how much additional variance was explained by the independent variables, the analysis was performed by entering control variables in step 1 and independent variables in step 2. Finally, the hypothesized interactions between task-specific and firm-specific experience variables and education were added to the regression analysis in step 3. The process of testing the effects of control variables in step 1, main effects in step 2, and interaction effects in step 3 is well established in contemporary research methodology (Long, Bendersky, & Morrill, 2011). This process allowed tracing changes in the multiple squared correlation coefficients (ΔR^2) from step to step. The R^2 changes reflect the amount of variance explained by the entry of variable sets in step 1, step 2, and step 3 of the hierarchical regression.

We followed previous research recommendations (Aiken & West, 1991) to minimize the problems of multicollinearity of interaction terms by centering the independent variables prior to computing their interactions. However, this data transformation did not influence the unstandardized regression coefficients, the model's R^2 and F values. In order to facilitate interpretation, each significant interaction term was plotted, where the first-order influences of experience variables on revenue per employee were examined over the range of education as the moderating variable.

Results of the regression analyses are summarized in Table A2. As shown, after controlling for sector, industry revenue per employee, number of employees, number of professionals, and average total yearly compensation for professionals, the addition of all the independent variables in step 2 produced a significant change in R^2 ($\Delta R^2 = .135$; $p < .01$). Thus, the addition of all the independent variables significantly explained the variance in revenue per employee. An examination of individual beta coefficients shows positive main effects of all three human capital variables ($b = .3$, $p < .01$ for education; $b = .16$ and .17; $p < .05$ for task-specific and firm-specific experiences, respectively) on firm performance.

Model 3 shows results related to hypothesized moderated relationships that test whether the influence of experience variables on revenue per employee significantly varied with the level of education as predicted. As shown, the two interaction terms together produced a statistically significant change in R^2 ($\Delta R^2 = .034$, $p < .05$). Specific results show a significant positive beta for the interaction between task-specific experience and education ($b = .18$; $p < .05$), whereas the interaction between firm-specific experience and education is not significant ($p > .05$). Therefore, Hypothesis 1 is supported. Hence, the moderating effects of education on experience based human capital vary based on the type of the experience. To gain further insights and clearly examine the significant moderated relationship, the interaction effect was plotted (Fig. A1). As firms moved from lower to higher average task-specific experience, performance increased for firms with higher educated professionals but not for firms with lower educated professionals. Hence, Hypothesis 2 is supported.

Since firms in our data set have an average of 296 employees with a large standard deviation of 165, we performed a post-hoc analysis to test the robustness of our results and see if the results hold for the entire range of our sample firms. For this we split the sample into two groups: firms with less than 250 employees and the rest of the firms. Next, we ran regression analyses separately on these two groups. As shown in Table A3, the main effects of all three human capital variables and the interaction effect of task-specific experience and education for both samples are at least marginally significant and positive.

5. Discussion

5.1. Implications for small firm practice

This article focuses on small firms' core-employee based human capital in terms of experience and education as a valuable and rare resource. While the study supports the existing knowledge that higher levels of human capital contribute to small firm productivity, it also presents unique findings about the combination effects of levels of education and two types of experience on small firm performance. In particular, findings suggest that the positive effect of task-specific experience can significantly be enhanced in the presence of higher levels of education, whereas, the effect of firm-specific experience may not change in the presence of different levels of education. We suggest that an important reason for this finding is that the manner by which the two forms of human capital contribute to productivity differs significantly and therefore, has notable implications for both research and practice.

An important implication for practice comes from our findings that show that core-employee based human capital is a significant predictor of small firm outcomes. Given the inherent resource constraints, developing and maintaining a strong core-group of employees, rather than all employees, may make more sense for small firms. Further, perhaps small firms could benefit by utilizing external labor markets or contingent employees for non-core activities. This research also raises an important consideration for small firms: whether to promote their core-employees from within or, alternatively, to hire highly educated employees for high level professional jobs and retain them in the same position.

The significance of the combination effect of education and task-specific experience suggests that small firms that hire highly educated core employees must focus on creating task-specific human capital in order to achieve amplified effects on performance. The implication, as our current findings suggest, is that productivity will increase if a small firm can retain higher educated professionals in a job for a prolonged period of time rather than having them move between jobs. However, there are potential challenges in trying to retain highly educated core employees in one job. An important challenge is to keep these employees committed at the same position for a longer period.

Instead of job promotion for employee commitment, small firms can offer cash incentives such as salary increment and bonuses as well as percent ownership to maintain commitment among highly educated professionals. Part ownership works especially well since opportunity for promotion is limited in small businesses and task-specific experience is important for productivity. Accordingly, we recommend small productivity-seeking firms to hire a limited number of highly educated professionals for top levels of professional positions and retain their employment in the same position. Additionally, our findings show that productivity may actually decline with increasing task-specific experience in firms that do not hire highly educated core employees (Fig. A1). In other words, firms gain the full benefit of task-specific experience when they hire educated core employees, as the gain in firm productivity is based on the understanding of foundational knowledge and repetition of work. Therefore, small firms with lower levels of core employee education may consider lateral movement of these employees to different jobs within the same level. Such movement will

allow cross-training and help develop organization-wide, firm-specific human capital.

While firm-specific human capital based on organization-wide experience was found to improve productivity, it does not seem to offer any added benefit in small firms with highly educated core employees. Therefore, small firms that cannot afford to hire, or those that may not require highly educated core employees (such as gas stations, mom and pop grocery stores, laundry marts, etc.), may develop firm-specific human capital by promoting from within and by implementing job enlargement and job enrichment strategies for their core employees. In general, it is essential for small firms to weigh the pros and cons of promoting lower educated professionals from within the firm as opposed to hiring higher educated professionals for higher level professional positions. An understanding of the relationships between firm-specific human capital, task-specific human capital and education can help provide insight on such considerations.

5.2. Limitations and future research

The findings and implications of this study must be viewed in the light of its limitations. One important limitation is that this study focused only on revenue determined productivity. While there are other performance measures, revenue is one of the most important performance criteria for small firms (Ireland, Reutzel, & Webb, 2005). We recommend future research to examine the combination effect of education and experience-based human capital on other forms of small firm performance such as profitability.

Another limitation of this study is the use of a third party consulting firm to collect data, which may not be generalizable. While the use of one consulting firm may not be ideal, the large number and even distribution of its clients make this firm a valuable and legitimate source of data. In addition, legitimacy of this source also comes from past published studies that have used data from this source. Given this limitation, we call upon future researchers to replicate our study with primary data.

A final limitation of this study is the lack of firm age as a control variable. Firm age may have a spurious influence on firm productivity. By using firm size, which is shown to be highly correlated with age (Soriano & Castrogiovanni, 2012), as a control the study accounted for some of the potential age effect. In addition, the post-hoc analyses on split samples confirming similar results for smaller and larger firms within our sample provide additional evidence of the reliability of our findings. We recommend future human capital study predicting firm performance to include firm age whenever possible.

In conclusion, despite the above limitations, the findings of this study provide initial insights into the importance of core-employee based, task-specific human capital for small firms. Specifically, we examined the combination effects of experience based human capital and education on small firm productivity. In doing so, we have shown the importance of extending small business research on human capital to include the examination of capital beyond the skills and attributes of the owners/top management.

Our findings suggest interesting considerations related to employee practices within small firms, implications that should be more closely examined to yield potentially valuable organizational prescriptions. We hope that future research will deepen our understanding of task-specific human capital as a significant resource and its combined effects with other sources of human capital on small firm productivity.

Appendix A

Table A1
Correlation matrix study variables.

Study variables	Mean	Std. dev	1	2	3	4	5	6	7	8
1. Log_n revenue per employee	6.77	2.32								
2. Sector	.54	.501	.001							
3. Log_n industry revenue per employee	8.81	.642	.613**	.039						
4. Number of employee	296.59	165.65	.04	−.073	.13					
5. Number of professionals	17.51	37.76	.068	.173*	.025	.223*				
6. Professional compensation	80,794	139,910	.053	.076	.019	−.045	−.059			
7. Task-specific experience	4.77	3.935	.17*	.032	−.03	−.013	−.085	.070		
8. Firm-specific experience	1.67	2.609	.292**	−.001	.178*	−.091	−.054	.072	−.077	
9. Education	4.511	1.087	.470**	−.112	.283**	−.166	.081	.141	.042	.184*

* $p < .05$.
** $p < .01$.

Table A2
Hierarchical regression analysis results.

Predictor	Criterion variable = log_n revenue per employee		
	Model 1	Model 2	Model 3
	Std. beta	Std. beta	Std. beta
1. Sector	−.043	.008	.028
2. Log_n industry sales per employee	.62**	.488**	.431**
3. Number of employees	−.058	.035	.063
4. Number of professionals	.075	.044	.041
5. Professional compensation	.046	−.019	−.048
6. Task-specific experience		.161*	.132
7. Firm-specific experience		.169*	.175*
8. Education		.300**	.275**
9. Task-specific experience × education			.183*
10. Firm-specific experience × education			−.101
R^2	.385**	.520**	.554**
ΔR^2		.135**	.034*
F	11.77**	12.33**	11.06**

* $p < .05$.
** $p < .01$.

Table A3
Post-hoc regression analysis on split samples.

Predictor	Criterion variable = $\log_n$ revenue per employee			
	Firms with 250 or fewer employees		Firms with more than 250 employees	
	Model 1	Model 2	Model 1	Model 2
1. Sector	−0.086	−0.027	0.046	0.034
2. $\log_n$ industry sales per employee	−0.267*	−0.203	−0.535**	−0.454**
3. Number of employees	−0.015	−0.014	−0.016	0.016
4. Number of professionals	0.077	0.094	0.063	0.039
5. Professional compensation	−0.03	0.02	0.026	0.052
6. Task-specific experience	0.25*	0.198	0.253*	0.341**
7. Firm-specific experience	0.263*	0.125	0.2+	0.243*
8. Education	0.351**	0.281*	0.198+	0.182
9. Task-specific experience × education		0.304+		0.264*
10. Firm-specific experience × education		−0.009		−0.128
R^2	.63**	0.67**	.53**	0.59**
ΔR^2	.63	0.04+	.53	0.06*
ΔF	7.68**	1.77+	6.97**	3.41*
Sample size	43		57	

** $p < .01$.
* $p < .05$.
+ $p < 0.1$.

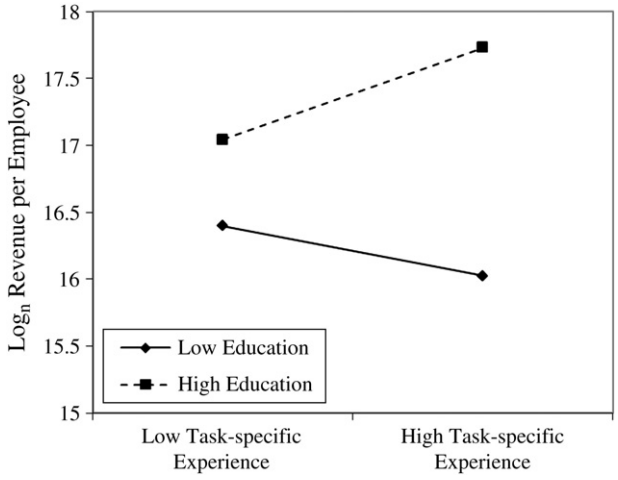

Fig. A1. Task-specific experience and revenue per employee. Relationship at different levels of education of core-employees.

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