

Commitment to Employees: Does It Help or Hinder Small Business Performance?

Lori A. Muse
Matthew W. Rutherford
Sharon L. Oswald
Jennie E. Raymond

ABSTRACT. This study used a sample of 4,637 small businesses to test the relationship between organizational commitment to employees (OCE) and company performance. OCE was significant in all five of the performance models. The results of the employee productivity model revealed a significant positive relationship between OCE and company performance, suggesting that small businesses might be able to realize some benefit in employee productivity from OCE programs. In addition, results from the return on assets, return on sales, return on cashflow, and employee growth models indicated that some OCE programs might be more beneficial to small businesses than others. Potential antecedents of OCE were also examined. Company size, owner education, and gender of the owner had positive relationships with OCE. Partial support was also found for a positive relationship between owner experience and OCE. Differences in the results of this study compared to studies for larger corporations and suggestions for future research are also discussed.

KEY WORDS: company performance, organizational commitment to employees, small business

The resource based theory of the firm suggests that human resource practices impact performance, yet, as some have noted “empirical research has been less than compelling thus far.” (Becker and Gerhart, 1996, p. 779). There have been few empirical studies in this area and those which have been done have provided conflicting results. Huselid (1995), MacDuffie (1995), Ostroff (1995), and Pfeffer (1994) all reported positive relationships between human resource practices and firm performance. However, other studies failed to find support for such a relationship (Bennet et al., 1998; Delaney et al., 1988) leaving the overall results inconclusive. The intuitive appeal of the theory coupled with the conflicting results have led some to call for further investigation on the relationship between human resource practices and company performance (Becker and Gerhart, 1996; Huselid, 1995; Lee and Miller, 1999). This study works to answer that call by examining the relationship between organizational commitment to employees (OCE), antecedents of OCE, and small business performance.

OCE is defined by an organization’s actions toward and treatment of its employees. Researchers have identified caring for employee well being and satisfaction, providing a fair rewards system, investing in training and development, and offering competitive compensation as reflections of OCE (Eisenberger et al., 1990; Eisenberger et al., 1986; Lee and Miller, 1999; Organ, 1990). This study will focus primarily on the compensation aspect of OCE; specifically average compensation, offering a healthcare program and providing a pension plan.

Final version accepted on February 28, 2003

Lori A. Muse
Department of Management
Haworth College of Business
Western Michigan University
Kalamazoo, MI 49008-5429
U.S.A.
E-mail: lori.muse@wmich.edu

Matthew W. Rutherford
Department of Management
Gonzaga University
Spokane, Washington 99258-0009
U.S.A.
E-mail: rutherford@jepson.gonzaga.edu

Sharon L. Oswald and Jennie E. Raymond
Department of Management
Auburn University
Auburn, AL 36849
U.S.A.
E-mail: oswald@business.auburn.edu
jraymond@business.auburn.edu

This study adds to the small business, strategy, and human resource literatures in several ways. First, it provides an additional empirical test to help clarify the true relationship between OCE and company performance. Based on the conflicting results of studies performed thus far, such studies are needed to determine the relationship between these variables. Second, the population of interest is small businesses. Whereas some studies have supported a relationship between human resource practices and company performance for large publicly traded companies (Huselid et al., 1997; Huselid, 1995), few studies have examined this relationship for small businesses (Lähteenmäki et al., 1998). Given that each small and medium enterprise (SME) employee makes up a larger percentage of the total workforce of the firm, the individual's ability to significantly impact the firm, either negatively or positively is far greater in small firms than in their larger counterparts (Gatewood and Feild, 1987; Solomon, 1984). In an empirical study of manufacturing firms, Deshpande and Golhar (1994) found that workforce characteristics are more important in the SME than larger firms. Given these conditions, the treatment of employees is even more critical to smaller companies than their larger counterparts. Third, this study also examines potential antecedents of OCE, whereas other studies have focused on its consequences. Finally, this study examines the relationships within the context of a broad range of industries and firm sizes.

Background and hypotheses

Jackson and Schuler (1995) identified several divergent bodies of research that have been used to study the relationship between human resource practices and firm performance, including agency theory (Jensen and Meckling, 1976), human capital theory (Becker, 1964), institutional theory (Meyer and Rowan, 1977), and the resource based theory of the firm (Barney, 1991). For purposes of this study we focus on the resource based theory of the firm. The resource based theory of the firm suggests that human resources can be leveraged to be a unique source of competitive advantage (Barney and Wright, 1998; Becker and Gerhart, 1996). As identified by Barney (1991), an asset must be valuable, rare, imperfectly imitable, and

without equivalent substitutes to be considered a true source of competitive advantage.

Many have contended that human resources can add value to the firm. Becker and Gerhart (1996) for example focused on the unique impact human resources can have "Unlike capital investments, economic scale, or patents, a properly developed HR system is an 'invisible asset' (Itami, 1987) that creates value when it is so embedded in the operational systems of an organization that it enhances the firm's capabilities" (1996, p. 782). Heskett, Jones, Loveman, Sasser, and Schlesinger (1994) identified the service profit chain as a means through which human resources can add value to the firm. The service profit chain suggests that profit and growth are the result of loyal, satisfied customers, who are retained by providing high quality goods and customer service, which in turn are provided by satisfied, loyal, productive employees. Kaplan and Norton (1992) provided another example of how human resources can add value to the firm with their concept of a "balanced scorecard." The "balanced scorecard" is based on satisfaction of three interrelated stakeholders: shareholders, customers, and employees. Employee behaviors influence customer satisfaction, which in turn impacts shareholder satisfaction, which in turn affects employee satisfaction in the form of investment in employee development, bonuses, compensation, and stock options. A business may succeed in the short run if it does not "balance the scorecard" and maintain satisfaction of all three stakeholders. However, the company would be sacrificing long-term performance by ignoring any one of the stakeholders. American Express, AT&T, and Eastman Kodak have all been successful in applying the "balanced scorecard" theory (Kaplan and Norton, 1992).

In addition to adding value to the firm, others have argued that the knowledge and skills of employees can be rare, difficult to imitate, and difficult to find an equivalent substitute, making human resources a source of competitive advantage (Barney and Wright, 1998; Becker and Gerhart, 1996). Others have suggested that human resource practices can help create a source of competitive advantage, especially when they are aligned with a competitive strategy (Begin, 1991; Jackson and Schuler, 1995; Wright and McMahan, 1992). How does a firm develop its human

resources into a source of competitive advantage? It can be argued that the answer to this question lies within its commitment to its employees.

Organizational commitment to employees (OCE) in the small firm

While the authors are unaware of any research on OCE and the small firm, research has identified how rare and difficult it is for small businesses to offer competitive salaries, health insurance, and pension plans to their employees. Berger, Black, Scott, and Allen (1999) revealed that 60 percent of all minimum wage workers are employed at firms with fewer than 25 employees. Additional research further supports the link between small businesses and low wages (Brown and Medoff, 1989; Card and Krueger, 1995). Even though health insurance is the second most coveted benefit in America today (second only to paid vacation), only half of small business employers offer such a plan (U.S. Small Business Administration, Office of Advocacy, 2001). Morrissey, Jensen, and Morlock (1994) also noted a 31 percent decline in small businesses offering health insurance between 1993 and 1996. Statistics suggest that pension plans are even more rare than health care plans in small businesses. Glover (1997) identified that 59 percent of firms with fewer than 500 employees did not offer a pension plan, compared to only 23 percent of companies with 500 or more employees.

In addition to the statistics supporting how rare competitive salaries, health insurance, and pension plans are in small businesses, competitive salary has been used in recent research related to OCE and human capital in organizations. Lee and Miller (1999) used total dollars spent on compensation relative to competitors as a component of their measure of OCE. Youndt and Snell (2001) found competitive pay to be one of the most important variables in distinguishing between high levels of human capital. Economists also view compensation as central to encouraging desirable employee behaviors. This view, termed wage efficiency theory, holds that wage premiums will result in higher levels of productivity and employee commitment because it raises the cost of dismissal, lowers turnover, and raises morale (Main, 1990; Akerlof, 1984; Tomer, 1998). Wage efficiency

theory, use of competitive salaries in previous studies, and the rarity of competitive salaries, health care, and pension plans in small businesses suggest that these variables can be seen as demonstrating a commitment to employees for small businesses.

The potential impacts of OCE have been studied at both the micro and macro levels, suggesting a relationship between OCE and company performance exists. At the individual level, research has shown that if employees perceive their organization cares about their well being and distributes rewards fairly, they are likely to form affective attachments to the organization (Eisenberger et al., 1986; Eisenberger et al., 1990). Studies have also linked employees' affective attachment to the organization to work outcomes such as, reduced absenteeism (Eisenberger et al., 1986) turnover, and improved job performance (Mowday et al., 1984). It has also been suggested that even the most dedicated competitive strategy will fail to bring a firm success without inspired and committed employees to effectively execute the strategy (Lee and Miller, 1999).

At the organizational level, Yeung and Berman (1997) emphasized the robustness of previous studies on human resource practices related to OCE and firm performance. When examining their samples, the authors noted that MacDuffie (1995) studied firms within a single industry, Pfeffer (1994) across many industries, Huselid (1995) within a region, and Ostroff (1995) across the nation, all finding support for a positive relationship between human resource practices and firm performance. Based on previous studies we hypothesize:

Hypothesis 1: OCE will have a positive relationship with company performance.

Antecedents of OCE

Whereas previous research has examined the potential consequences of OCE, not much attention has been given to its antecedents (Goodstein, 1994). This study begins to identify potential characteristics of firms that are more likely to invest in their employees and have a stronger OCE. For purposes of this study two types of antecedents were selected on which to focus: company related and owner related.

Company related antecedents of OCE. It has been suggested that larger organizations that are more visible and have more constituents to whom they are accountable, have a stronger incentive to be more proactive (Mintzberg, 1983). Support for this argument has been found in the area of corporate social responsibility where several studies have found company size to have a positive relationship with the level of corporate social responsibility (Buehler and Shetty, 1976; Miles, 1987). Miles (1987) found that larger firms were more likely to take a collaborative approach to problem solving and were more devoted to community relations. Support for Mintzberg's (1983) argument can also be found in the area of employer involvement in work-family issues. Larger companies have been found to be more proactive in adopting employee benefits, including those that are work-family related (Goodstein, 1994; Morgan and Milliken, 1993). Based on these findings, it is reasonable to expect larger companies to have a stronger OCE than smaller firms.

Hypothesis 2: Company size will be positively related to OCE.

Owner related antecedents of OCE. Previous research has linked certain characteristics of the owner such as age, experience, and education to small business performance (Dyke et al., 1992; Lussier, 1995; Miller and Toulouse, 1986; Rutherford and Oswald, 2000; Steiner and Solem, 1988). However, research has not yet examined the possible relationship between these variables and OCE, yet it is reasonable to expect such relationships to exist.

Researchers have found that employees' perception of the organizational support they receive can have a positive impact on certain employee behaviors that can be beneficial to the organization. Eisenberger et al., (1990) found employees' perception of organizational support was positively related to, "... (a) conscientiousness in carrying out conventional job responsibilities, (b) expressed affective and calculative involvement in the organization, and (c) innovation on behalf of the organization in the absence of anticipated direct reward or personal recognition (p. 51)." Other researchers have found a positive relationship between perceived organizational support and

organizational citizenship behaviors, such as helping others and going beyond the normal expectations on their job (Brief and Motowidlo, 1986; Organ, 1988). Based on the items included in a frequently used questionnaire that measures perceived organizational support ("The company really cares about my well being" and "The company shows a great deal of concern for me" Eisenberger et al., 1986, p. 502) it is reasonable to expect that an organization's commitment to its employees will have a positive impact on an employee's perceived organizational support and, consequently, employee behaviors.

It is generally accepted that the owner-manager determines the values, beliefs, and practices that are adopted by all members of the smaller organization, and in fact, sets the firm's entire strategic direction (Hendry et al., 1991; Jennings et al., 1996). As a result, characteristics of the owner must be addressed in any meaningful discussion regarding the small firm. Some authors commenting on the use of human resource development techniques in the small firm have noted that the unenlightened owner may view these techniques as a waste of scarce resources (e.g. time and money) rather than an investment in the organization's future (Finegold and Soskice, 1988; Gatewood and Feild, 1987). Based on these observations, it can be argued that older, experienced, and more educated owners will be more knowledgeable about the potential positive impacts of OCE on employee behavior, and consequently will be more likely to make OCE a priority in their organizations.

Hypothesis 3: Owner age will be positively related to OCE.

Hypothesis 4: The owner's experience level will be positively related to OCE.

Hypothesis 5: Owner educational level will be positively related to OCE.

Previous research has also suggested that the management styles of men and women are different with respect to their attitude toward OCE. Some have found female managers to be more nurturing (Nubson, 1991). Others have described female managers to be "more comfortable with the personal, empathetic side of the business" (Goch, 1997). Survey results have also suggested women

tend to be more committed to their employees. A sample of 600 men and women managers were asked if they were more committed to their boss or their employees. Responses revealed 62% of female managers to be more committed to their employees, compared to 60% of male managers (Altany, 1993). Based on these observations and survey results we make the following hypothesis.

Hypothesis 5: Firms with a female owner will have a stronger OCE than those with a male owner.

Method

Data

The sample in this study was taken from the National Survey of Small Business Finances (NSSBF). The NSSBF conducted the survey during 1994–95 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration. The target population was all for-profit, non-financial, non-farm business enterprises that had fewer than 500 employees and were in operation as of the year-ended 1992. The sample was drawn from firms listed on the Dun's Market Identifier file as of November 1993. Businesses were contacted in advance of the survey to determine eligibility, verify addresses, and identify a contact person. Not all businesses met the target-population definition, some businesses could not be contacted, and others were determined to have erroneous frame data. The overall eligibility rate of sampled businesses averaged 60 percent. Each business meeting the eligibility criteria was sent an advance work sheet to encourage the use of written records in responding to the subsequent computer assisted interviews. Interviews were conducted by Price Waterhouse and averaged 50 minutes in length. The survey was voluntary and yielded a response rate of 50 percent.¹

A total of 4,637 firms are included in this public use data set. The data collected are for 1992/93. Due to the reluctance of small business owners to release financial data, the authors are not aware of a more recent collection of such comprehensive data on small businesses. The firms included in the sample represent 4.99 million

small businesses as defined by the Small Business Administration general guidelines as firms having less than 500 employees.

Measures

Company related antecedents of organizational commitment to employees (OCE). Company size was measured as total number of employees (Delaney and Huselid, 1996). The age of the company was calculated as the number of years since the firm had been founded, purchased or acquired. Since some of the OCE variables were employee benefits, percentage of full-time employees was also included.

Owner related antecedents of organizational commitment to employees (OCE). A dummy variables were included to measure gender (female = 1) and three dummy variables were included to measure the highest level of education obtained by the owner: high school degree, college degree, post-graduate degree, and less than a high school degree as the null classification. Management experience was measured as the number of years the owner managed or owned a business. The age of the owner was measured in years.

OCE. While the authors are unaware of an existing framework for the measurement of OCE for small businesses, based on our research on how rare certain programs are in small businesses (Berger et al., 1999; Brown and Medoff, 1989; Card and Krueger, 1995; Glover, 1997; Lee and Miller, 1999; Morrissey et al., 1994; U.S. Small Business Administration, Office of Advocacy, 2001; Youndt and Snell, 2001), OCE was measured using three variables: average compensation per employee, whether a health plan was offered, and whether a pension plan was offered. These measures are similar to a recent study on OCE and company performance of large firms performed by Lee and Miller (1999). Lee and Miller (1999) used a 5-point Likert scale asking CEOs to rate their organizations relative to their competitors on total dollars spent on compensation and total dollars invested in training and development as a measure of OCE. For purposes of this study, average compensation per employee was used to take into

account company size and offering health and pensions plans were used based on their rarity with small businesses. Average compensation per employee was calculated by dividing total compensation by the total number of employees. Dichotomous variables were used for offering a healthcare program and a pension plan (1 = yes).

Control variables. Following the advice of researchers in the field (Becker and Gerhart, 1996; Huselid, 1995), due to the large size of the dataset ($n = 4,637$), a conservative approach was used in including as many control variables as possible. Consistent with many other researchers, company size was included as a control variable (Bennet et al., 1998; Gimeno et al., 1997). In the OCE models company size was measured as the total number of employees (Delaney and Huselid, 1996), and in the company performance models as total sales for the year in dollars. Industry was controlled for (Bennet et al., 1998; Gimeno et al., 1997) through the use of six dummy variables that classified companies as mining, construction, transportation, manufacturing, service, financial, or retail as the null classification. Consistent with research on company performance, debt (Hitt and Smart, 1994; Jensen, 1989) and fixed assets (Huselid, 1995; Becker and Olson, 1992) were also used as control variables.

In addition to the company related control variables, two owner related control variables were also included. In their sample of 1,547 entrepreneurs, Gimeno et al. (1997) found positive relationships between education level and management experience of the owner, and economic performance. In addition, Lussier (1995), and Miller and Toulouse (1986) found education and management experience respectively, to have a relationship with small business success. Based on these results, we controlled for both educational level and management experience of the owner. Three dummy variables were included to measure the highest level of education obtained by the owner: high school degree, college degree, post-graduate degree, and less than a high school degree as the null classification. Management experience was measured as the number of years the owner managed or owned a business.

Company performance. Multiple measures of company performance were used. Consistent with most performance related research, the accounting measures return on assets (ROA) and return on sales (ROS) were used (Ball and Brown, 1968; Keats and Hitt, 1988). Consistent with small business research we also used return on cashflow (RCF) as a performance measure because it factors out accounting accruals that can distort short-term performance results (DeDee and Vorhies, 1998). To test for the impact of OCE on company growth, employee growth was included as a performance measure (Becker and Gerhart, 1996).

Finally since the focus of the study was on commitment to employees, one additional performance measure that tends to be more closely related to treatment of employees, employee productivity, was used. Employee productivity has been widely recognized as a measure of company performance reflecting employee efforts that are somewhat insulated from variations in capital and product markets (Huselid, 1995; Huselid et al., 1997; Pritchard, 1992; Ulrich, 1997). Employee productivity was calculated as sales per employee. To overcome the problem of skewness, logarithmic transformations were used for all performance variables. In the event the company had a negative ROA, ROS, RCF, or employee growth, the logarithm of one plus ROA, ROS, RCF, and employee growth was used.

Analysis. Logistic and linear regression models for each of the OCE variables were run to analyze the antecedents of OCE. In these models owner age, experience, and education were independent variables. Hierarchical regression was used to analyze the relationships between OCE and each of the measures of company performance. Company control variables were entered in block one (sales, debt, fixed assets, and industry dummy variables) and owner related control variables were entered in block two (owner education dummy variables and owner experience). To take into account the antecedents of OCE, the predicted values from the linear regression and logistic models for average compensation, offering a health plan, and offering a pension plan were entered in block three. In order to reduce the degree of multicollinearity between the predicted values for each of the OCE variables, owner

education was omitted from the models generating predicted values for average compensation and offering a health plan, and company size was omitted from the model generating the predicted values for offering a pension plan. It should be noted that even though the variables representing the predicted values for offering a health plan and company size are highly correlated ($r = 0.83$), their variance inflation factor (VIF) values (ranging from 1.02 to 6.4) were well below the critical VIF value of 10 (Neter et al., 1996) and the average VIF (ranging from 2.56 to 2.70) for each of the performance models was also well below 10.

Results

Table I provides descriptive statistics and correlations for all variables. The data shows that the size of firms in the sample ranges from 1 to 495 employees with a mean of 32. In terms of sales dollars, companies in the sample had between \$100 and \$340 million in sales with a mean of \$3.68 million. The sample is well disbursed across industries with 1,560 companies in service, 1,441 in retail, 579 in manufacturing, 526 in construction, 324 in finance, 182 in transportation, and 25 in mining. Owner age ranged from 19 to 92 years with a mean of 50.17. Of the owners represented, 190 reported they did not have a high school degree, 922 had a high school degree, 1,116 had some college, 1,424 had a college degree, and 985 had a graduate degree. In terms of experience, owners had an average of 19.82 years with a range from less than a year to 70 years.

Hierarchical regression was used to test hypothesis one (OCE will have a positive relationship with company performance). Several measures of performance were used including ROA, ROS, RCF, employee growth, and employee productivity. A summary of the results for each of the performance models is presented in Table II. After controlling for company size, debt, fixed assets, industry, and owner education and experience, the change in R^2 for the OCE block was significant ($p < 0.01$) in all performance models. Total R^2 ranged from 0.11 for employee growth to 0.20 for RCF, with incremental R^2 for the OCE block ranging from 0.01 for RCF to 0.06 for employee growth. Therefore, in this sample of small busi-

nesses, it appears that a relationship between OCE and company performance does exist.

Partial support was found for hypothesis one in the ROS, RCF, productivity, and employee growth models. The ROS, RCF, and productivity models revealed a significant positive relationship between offering a pension plan and each of these company performance measures ($p < 0.05$). However, a significant negative relationship was also found between offering a health plan and ROS and RCF ($p < 0.01$). In contrast, the employee growth model found a significant positive relationship between offering a health plan ($p < 0.001$) and growth, and a significant negative relationship between offering a pension plan and growth ($p < 0.001$). The model using ROA as a performance measure revealed a statistically significant ($p < 0.001$) negative relationship between offering a health plan and ROA, not supporting hypothesis one. Therefore hypothesis one was partially supported by four of the five company performance models.

A summary of regression models used to analyze the antecedents of OCE is presented in Table III. Hypothesis two (Company size will be positively related to OCE) was supported by the data. Specifically, company size was significant ($p < 0.05$) and positively related to all three OCE variables. Hypotheses three through five focused on owner-related antecedents of OCE, stating that positive relationships would exist between owner age, experience, and education and OCE. Owner age was not statistically significant in any of the OCE models; therefore hypothesis three was not supported. Owner experience had a significant positive relationship with offering a health plan ($p < 0.05$), but its relationships with offering a pension plan and average compensation were not significant, providing partial support for hypothesis four. Supporting hypothesis five, owner education had a significant positive relationship with OCE. Both coefficients for undergraduate and graduate degrees were statistically significant ($p < 0.01$) in all three OCE models. Having a high school diploma, however, was not statistically significant. Hypothesis six suggested that female owners would have stronger OCE than male owners. The coefficient on the gender variable (female = 1) was statistically significant in both the average compensation and pension plan

TABLE I
Means, standard deviations, and correlations for all variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. ROA	0.88	0.82													
2. ROS	0.35	0.36	0.65												
3. RCF	2.73	1.83	0.58	0.54											
4. Employee growth	0.05	0.49	0.00	0.00	0.04										
5. Productivity	10.97	1.17	0.22	0.20	0.27	-0.07									
6. Sales	13.14	2.13	0.10	0.17	0.28	0.16	0.65								
7. Number of employees	2.08	1.66	-0.01	0.09	0.19	0.26	0.15	0.84							
8. Company age	15.31	13.61	-0.04	0.04	0.00	-0.09	0.13	0.23	0.20						
9. Mining	0.00	0.07	-0.06	-0.04	-0.03	-0.02	0.03	0.02	0.01	0.02					
10. Construction	0.11	0.32	0.10	0.06	0.04	0.00	0.02	-0.03	-0.05	-0.02	-0.03				
11. Manufacturing	0.12	0.33	-0.04	0.08	0.08	0.04	0.01	0.19	0.24	0.06	-0.03	-0.13			
12. Transportation	0.04	0.19	-0.05	-0.03	-0.04	0.07	0.01	0.06	0.07	-0.01	-0.01	-0.07	-0.08		
13. Financial	0.07	0.25	-0.10	-0.15	-0.15	-0.04	0.07	-0.03	-0.10	0.03	-0.02	-0.10	-0.10	-0.05	
14. Service	0.34	0.47	-0.13	-0.18	-0.24	-0.01	-0.24	-0.24	-0.14	-0.04	-0.05	-0.25	-0.27	-0.14	-0.19
15. Full-time employees	0.79	0.27	0.03	0.05	0.10	0.10	0.14	0.28	0.27	0.09	0.01	0.02	0.14	0.02	0.00
16. Owner age	50.17	11.35	-0.06	0.01	-0.04	-0.11	0.08	0.15	0.13	0.46	0.03	-0.07	0.06	0.01	0.07
17. High school	0.20	0.40	0.09	0.06	0.07	-0.03	-0.04	-0.11	-0.12	0.01	-0.02	0.11	-0.05	0.01	-0.04
18. College	0.31	0.46	-0.01	0.00	0.03	0.04	0.10	0.16	0.14	-0.01	0.04	-0.07	0.04	0.00	0.06
19. Graduate degree	0.21	0.41	-0.07	-0.06	-0.09	0.01	0.04	0.07	0.06	0.02	0.00	-0.12	0.02	-0.04	0.00
20. Experience	19.82	11.31	-0.04	0.02	0.01	-0.07	0.15	0.26	0.24	0.51	0.05	-0.03	0.06	0.02	0.07
21. Gender	0.18	0.39	-0.01	0.00	-0.05	-0.01	-0.14	-0.19	-0.14	-0.08	-0.03	-0.08	-0.04	0.01	-0.02
22. Average compensation	9.18	1.10	-0.08	-0.11	-0.04	-0.13	0.56	0.39	0.10	0.11	0.01	-0.06	-0.03	0.04	0.09
23. Health plan	0.53	0.50	-0.01	0.03	0.12	0.09	0.29	0.59	0.56	0.17	0.03	-0.08	0.16	0.03	-0.04
24. Pension plan	0.28	0.45	-0.02	0.06	0.06	0.07	0.27	0.50	0.46	0.18	0.03	-0.03	0.14	0.03	-0.03
25. Predicted compensation	9.15	0.23	-0.11	-0.07	-0.04	0.04	0.19	0.47	0.48	0.54	0.06	-0.27	-0.13	0.17	0.46
26. Predicted health plan	0.53	0.29	-0.03	0.07	0.18	0.23	0.18	0.83	0.95	0.29	0.05	-0.13	0.27	0.06	-0.06
27. Predicted pension plan	0.28	0.17	-0.06	0.04	0.07	0.04	0.24	0.46	0.44	0.48	0.07	-0.09	0.36	0.08	-0.08

Variable	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1. ROA														
2. ROS														
3. RCF														
4. Employee growth														
5. Productivity														
6. Sales														
7. Number of employees														
8. Company age														
9. Mining														
10. Construction														
11. Manufacturing														
12. Transportation														
13. Financial														
14. Service														
15. Full-time employees	-0.05													
16. Owner age	-0.03	0.06												
17. High school	-0.07	-0.01	0.03											
18. College	-0.07	0.03	-0.05	-0.33										
19. Graduate degree	0.22	0.01	0.02	-0.26	-0.35									
20. Experience	-0.10	0.10	0.71	0.04	-0.04	-0.03								
21. Gender	0.07	-0.09	-0.07	0.03	-0.02	-0.05	-0.16							
22. Average compensation	0.01	0.14	0.09	-0.04	0.03	0.08	0.11	-0.10						
23. Health plan	-0.07	0.25	0.11	-0.10	0.10	0.11	0.18	-0.12	0.25					
24. Pension plan	-0.03	0.22	0.09	-0.11	0.09	0.14	0.13	-0.13	0.25	0.45				
25. Predicted compensation	0.01	0.16	0.44	-0.08	0.08	0.09	0.56	-0.49	0.21	0.33	0.29			
26. Predicted health plan	-0.11	0.42	0.18	-0.11	0.13	0.07	0.31	-0.20	0.15	0.59	0.46	0.56		
27. Predicted pension plan	-0.07	0.57	0.24	-0.29	0.24	0.37	0.34	-0.34	0.19	0.37	0.38	0.45	0.56	NA

Note. Correlations of 0.03 or more are significant at beyond the 0.05 level under a two-tailed test.

TABLE II
Summary of hierarchical regression analyses

Variable	Log ROA ROA			Log ROS			Log RCF			Productivity ^b			Employee growth		
	Beta	t	R ²	Beta	t	R ²	Beta	t	R ²	Beta	t	R ²	Beta	t	R ²
Block 1			0.13***			0.11***			0.19***			0.11***			0.04***
Company size ^a	0.18	10.15***		0.06	6.79***		0.39	8.13***					-0.04	-4.81***	
Mining	-0.56	-2.80**		-0.27	-2.81**		-1.44	-2.43*		-0.43	-1.89		-0.23	-2.14*	
Construction	-0.07	-0.96		-0.05	-1.61		-0.61	-3.41**		-0.29	-4.30***		0.09	2.91**	
Manufacturing	-0.29	-3.86***		-0.06	-1.63		-0.63	-3.25**		-0.67	-8.87***		0.04	1.10	
Transportation	-0.47	-4.76***		-0.20	-4.26***		-1.19	-4.44***		-0.46	-4.82***		0.27	5.73***	
Financial	-0.40	-3.40**		-0.22	-3.82***		-1.35	-4.42***		-0.11	-0.98		0.04	0.79	
Service	-0.23	-4.56***		-0.12	-4.89***		-0.97	-7.40***		0.77	-16.44***	0.02	0.96		
Fixed Assets	0.00	-3.50***		0.00	-1.21		0.00	-1.40		0.00	2.43*		0.00	1.61	
Debt	0.00	-0.96		0.00	-0.41		0.00	-0.89		0.00	4.30***		0.00	1.45	
Block 2			0.14**			0.11*			0.19**			0.14***			0.05***
High school	0.12	2.19*		0.05	1.83		0.14	0.93		0.16	3.12**		0.00	-0.37	
College	-0.06	-1.06		-0.05	-1.89		-0.36	-2.56**		0.07	1.41		0.07	2.54*	
Graduate	-0.14	-2.11*		-0.10	-3.09**		-0.61	-3.49***		0.05	0.73		0.08	2.42*	
Experience	0.00	-0.60		0.00	-0.54		0.00	-1.31		0.00	1.49		0.00	-4.72***	
Block 3			0.16***			0.13***			0.20**			0.17***			0.11***
Average salary	-0.25	-1.31		-0.12	-1.32		-0.78	-1.56		-0.11	-0.57		-0.13	-1.43	
Pension plan	0.24	1.25		0.24	2.61**		1.23	2.45*		1.78	9.20***		-0.41	-4.44***	
Health plan	-0.83	-5.93***		-0.27	-4.05***		-1.02	-2.80**		-0.11	-0.12		0.82	12.61***	
Adjusted R ²			0.15			0.12			0.19			0.17			0.10
N	1572			1576			1386			3221			2951		

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. All tests for two-tailed. Betas reported are unstandardized.

^a Measured as total sales in dollars.

^b Due to a high correlation between the number of employees and sales ($r = 0.84$), size was not used as a control variable.

TABLE III
Summary of commitment linear and logistic regression analyses

Variable	Compensation			Health plan			Pension plan		
	Beta	Linear regression <i>t</i>	<i>R</i> ²	Beta	Logistic regression Wald	Class %	Beta	Logistic regression Wald	Class %
Adjusted <i>R</i> ²			0.06***			76.8***			74.50***
Company size ^a	0.03	2.12*	0.06	0.87	797.02***		0.59	502.34***	
Company age	0.00	3.20**		0.01	10.39**		0.02	30.95***	
Mining	-0.02	-0.09		0.86	2.27		0.50	0.97	
Construction	-0.15	-2.45*		-0.41	10.35**		0.16	1.33	
Manufacturing	-0.21	-3.71***		0.15	1.18		0.14	1.31	
Transportation	0.17	1.92		-0.03	0.02		0.31	2.56	
Financial	0.33	4.17***		-0.01	0.01		0.14	0.68	
Service	0.00	-0.03		-0.05	0.29		0.21	4.41*	
Full-time employees	0.51	6.74***		1.33	69.07***		1.75	73.15***	
Owner age	0.00	0.48		-0.01	2.31		0.00	0.05	
High school	0.02	0.46		0.01	0.02		-0.03	0.05	
College	0.14	2.94**		0.33	11.36**		0.50	23.70***	
Graduate	0.26	4.90***		0.66	37.39***		0.91	65.67***	
Experience	0.00	1.94		0.01	4.37*		0.00	0.83	
Gender	-0.21	-4.33***		-0.18	3.58		-0.51	19.56***	
<i>N</i>	3697			4636			4636		

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. All tests for two-tailed. Betas reported are unstandardized.

^a Measured as total employees.

models ($p < 0.001$), indicating the owner's gender is related to OCE. However, the sign of the gender coefficient was negative in both models, suggesting that male owners had stronger OCE than female owners. Thus, hypothesis six was not supported.

Discussion and conclusions

The findings in this study provide a unique examination of OCE and company performance for small businesses. After controlling for company size, industry, debt, fixed assets, owner education, and owner experience, OCE was significant in all five performance models. The most compelling finding of this study is the contrast in results when compared to other studies examining human resource practices and company performance for larger corporations. Huselid (1995), MacDuffie (1995), Ostroff (1995), and Pfeffer (1994) for example, all found support for a positive relationship between human resource practices and company performance. This study

found a positive relationship between only some of the OCE variables and company performance (ROS, RCF, productivity, and employee growth). Several observations can be made from our findings.

First, the difference in results across performance measures might indicate that some of the performance measures are better suited to capture the relationship between OCE and enhanced worker performance. Of the performance measures used in this study (ROA, ROS, RCF, employee growth, and employee productivity), employee productivity is the only one that measures individual worker performance. This might explain why the results of the productivity model indicated only a significant positive relationship between OCE and productivity and the other performance measures found mixed results. The results of the employee productivity model might be due in part to employees' perception of OCE programs strengthening employee loyalty and commitment to the organization that has been found by other researchers (Eisenberger et al., 1986; Mowday et

al., 1984). The mixed results could also be a sign costs rising faster than revenues, thereby, marginalizing the impact of OCE on company performance.

Secondly, the trend in the direction of the relationship between the OCE variables and company performance is also quite interesting. Average compensation was not significantly related to any of the five measures of company performance. Whereas the pension plan variable had a significant positive relationship with ROS, RCF, and productivity, but a significant negative relationship with employee growth. Conversely the health plan variable had a significant negative relationship in three of the performance models, and a significant positive relationship with employee growth. These results could suggest that offering a pension plan has a stronger impact on employee performance than higher salaries or health coverage. The results of the employee productivity model also revealed a much stronger positive relationship between offering a pension plan and company performance than any of the other company performance models. Perhaps employees of small businesses expect competitive salaries and health insurance, but view a pension plan as an added benefit for which they are willing to work harder.

However, it is important to also note that the firm performance/OCE relationship is subject to endogenous effects in that higher levels of performance may enable firms to offer pension plans, rather than vice versa. Relatedly, the negative relationship between offering a health plan and performance may be caused by a poorly performing firm's inability to offer such benefits rather than the absence of benefits driving performance. One final explanation of the negative relationship found with salary and firm performance was put forth by Kanungo and Mendonca (1992), who stated that high performing, cash-strapped SMEs often offer creative incentive schemes other than salary to attract and keep top performers.

Finally, the conflicting results could indicate that perhaps managing costs associated with higher salaries, health and pension plans are too difficult for small businesses to realize the same benefits that researchers have found for larger companies. For example, the employee growth

results indicated a negative relationship between offering a pension plan and company performance. These results might suggest that small businesses, due to more limited resources than larger firms, have to choose between growing the company and offering benefits such as pension plans. Similarly, the negative relationships between offering a health plan and ROA, ROS, and RCF might be due to the cost of the health plan for small businesses exceeding the benefits that the firms gained from providing the plan. A lag could also exist in the effect, where firm growth enables the offering of higher salaries and health plans, but only after the fact.

This study also revealed interesting findings about potential antecedents of OCE. The results strongly suggest larger companies are more likely to demonstrate a stronger OCE than smaller companies. These results are consistent with previous research in the areas of corporate social responsibility (Buehler and Shetty, 1976; Miles, 1987) and work-family benefits (Goodstein, 1994; Morgan and Milliken, 1993). This might be due in part to the ability of larger companies to better afford an investment in OCE. In addition, companies with owners holding either an undergraduate or graduate degree were more likely to have a stronger OCE than companies with owners that did not have a degree. Partial support was also found for a positive relationship between owner experience and OCE. This supports Golhar and Deshpande's (1997) suggestion that more enlightened owners have adopted many of the personnel practices common in larger firms because they are more aware of the potential benefits from such programs.

Limitations

Some limitations of this study suggest that the results should be viewed cautiously. First, as this is cross-sectional data, causality should not be assigned to the relationships found here. The empirical results of this study support a relationship between OCE and firm performance that is grounded in the resource theory of the firm. These results, however, cannot provide support for a causal relationship. Whereas, our results imply that OCE has positive effects on employee growth, it may be that growth allows organizations to engage in more OCE-enhancing behavior. Second,

since the data were collected by telephone interview the potential for common method variance does exist. However, since the company performance measures were obtained from company records by the interviewee, we believe that any impact from common method variance was greatly reduced. Third, our measure of OCE could be further developed. The authors are unaware of any existing framework on OCE for small businesses. Therefore, one of the contributions of this study is that it provides a starting point for further definitions of OCE for the small firm.

Future research

Future research should continue to focus on the relationship between OCE and company performance, especially on small businesses, to determine if OCE can be viewed as an investment for small businesses or simply an expense. Longitudinal studies that can address causality could be particularly enlightening in lending support to this and previous studies on OCE. In addition, more studies at the micro level examining if OCE initiatives impact employee attitudes and behaviors would also be useful in determining specifically what benefit companies receive for investing in OCE. Specifically studies with a pre-test post-test design collecting data from companies making OCE change initiatives would help isolate what impact, if any, implementing OCE has on employee and company performance.

This study contributed to the small business, strategy, and human resource literatures by examining the relationship between OCE and company performance for small businesses. Despite the importance of this issue to small business owners, few studies have examined this relationship for small businesses (Lähtenmäki et al., 1998). This study found OCE to be significant in all five of the performance models. The results of the employee productivity model revealed a significant positive relationship between OCE and company performance, suggesting that small businesses might be able to realize some benefit in employee productivity from OCE programs. In addition, results from the return on assets, return on sales, return on cashflow, and employee growth models indicated that some OCE programs might be more beneficial to small businesses than others.

This study also focused on antecedents of OCE in small businesses, another area that has largely been ignored in prior research (Goodstein, 1994). Company size, owner education, and gender of the owner had positive relationships with OCE. Partial support was also found for a positive relationship between owner experience and OCE.

Note

¹ Explanation was taken from the NSSBF codebook.

References

- Akerlof, G. A., 1984, 'Gift Exchange and Efficiency-Wage Theory: Four Views', *American Economic Review* 74(2), 79-83.
- Altany, D. R., 1993, 'If Women Ran Industry', *Industry Week* 242(18), 40-41.
- Ball, R. and P. Brown, 1968, 'An Empirical Evaluation of Accounting Income Numbers', *Journal of Accounting Research* 6, 159-177.
- Barney, J. B., 1991, 'Firm Resources and Sustained Competitive Advantage', *Journal of Management* 17(1), 99-120.
- Barney, J. B. and P. M. Wright, 1998, 'On Becoming a Strategic Partner: The Role of Human Resources in Gaining Competitive Advantage', *Human Resource Management* 37(1), 31-46.
- Becker, B. and B. Gerhart, 1996, 'The Impact of Human Resource Management on Organizational Performance: Progress and Prospects', *Academy of Management Journal* 39(4), 779-801.
- Becker, B. E. and G. Olson, 1992, 'Unions and Firm Profits', *Industrial Relations* 31(3), 395-415.
- Becker, G. S., 1964, *Human Capital*, New York, New York: National Bureau of Economic Research.
- Begin, J. P., 1991, *Strategic Employment Policy: An Organizational Systems Perspective*, Englewood Cliffs, New Jersey: Prentice Hall.
- Bennet, N., D. J. Ketchen and E. B. Schultz, 1998, 'An Examination of Factors Associated with the Integration of Human Resource Management and Strategic Decision Making', *Human Resource Management* 37(1), 3-16.
- Berger, M. C., D. A. Black, F. A. Scott and S. N. Allen, 1999, *Distribution of Low-Wage Workers by Firm Size in the United States* (SBAHQ-98-M-0695), Washington, DC.
- Brief, A. P. and S. J. Motowidlo, 1986, 'Prosocial Organizational Behaviors', *Academy of Management Review* 11(4), 710-725.
- Brown, C. and J. Medoff, 1989, 'The Employer Size-Wage Effect', *Journal of Political Economy* (October), 1027-1059.
- Buehler, V. M. and Y. K. Shetty, 1976, 'Managerial Response to Social Responsibility Challenge', *Academy of Management Journal* 19(1), 66-78.
- Card, D. and A. Krueger, 1995, *Myth and Measurement: The*

- new *Economies of the Minimum Wage*, Princeton: Princeton University Press.
- DeDee, J. K., and D. W. Vorhies, 1998, 'Retrenchment Activities of Small Firms During Economic Downturn: An Empirical Investigation', *Journal of Small Business Management* 36(3), 46-61.
- Delaney, J. T. and M.A. Huselid, 1996, 'The Impact of Human Resource Management Practices on Perceptions of Organizational Performance', *Academy of Management Journal* 39(4), 949-969.
- Delaney, J. T., D. Lewin and C. Ichniowski, 1988, *Human Resource Management Policies and Practices in American Firms*, New York, NY: Industrial Relations Research Center, Graduate School of Columbia University.
- Deshpande, S. P. and D. Y. Golhar, 1994, 'HRM Practices in Large and Small Manufacturing Firms: A Comparative Study', *Journal of Small Business Management* 32(2), 49-57.
- Dyke, L. S., E. M. Fischer and A. R. Reuber, 1992, 'An Inter-Industry Examination of the Impact of Owner Experience on Firm Performance', *Journal of Small Business Management* 30(4), 72-87.
- Eisenberger, R., P. Fasolo and V. Davis-LaMastro, 1990, 'Perceived Organizational Support and Employee Diligence, Commitment, and Innovation', *Journal of Applied Psychology* 75(1), 51-59.
- Eisenberger, R., R. Huntington, S. Hutchinson and D. Sowa, 1986, 'Perceived Organizational Support', *Journal of Applied Psychology* 71(3), 500-507.
- Finegold, D. and D. Soskice, 1988, 'The Failure of Training in Britain: Analysis and Prescription', *Review of Economic Policy* 4(3), 21-53.
- Gatewood, R. D. and H. S. Feild, 1987, 'A Personnel Selection Program for Small Business', *Journal of Small Business Management* 25, 16-24.
- Golhar, D. Y. and S. P. Deshpande, 1997, 'HRM Practices of Large and Small Canadian Manufacturing Firms', *Journal of Small Business Management* 35(3), 30-39.
- Gimeno, J., T. B. Folta, A. C. Cooper and C. Y. Woo, 1997, 'Survival of the Fittest? Entrepreneurial Human Capital and the Persistence of Under-Performing Firms', *Administrative Science Quarterly* 42(4), 750-783.
- Glover, J. W., 1997, 'Characteristics of Small Business Employees and Owners', *U.S. Small Business Association Office of Advocacy* [On-line], Available: www.sba.gov/advo/stats/ch_em97.pdf.
- Goch, L., 1997, 'A Woman's Place: Women Handle Competition Differently, View Themselves Differently and May Be Better Attuned to Some Changing Aspects of Insurance', *Best's Review - Property Casualty Insurance Edition* 98(8), 68-72.
- Goodstein, J. D., 1994, 'Institutional Pressures and Strategic Responsiveness: Employer Involvement in Work-Family Issues', *Academy of Management Journal* 37(2), 350-382.
- Hendry, C., A. Jones, M. Arthur and C. Pettigrew, 1991, 'Human Resource Development in Small to Medium-Sized Enterprises', *Warwick Business School*, Resource Paper No. 88.
- Heskest, J. L., T. O. Jones, G. W. Loveman, W. E. Sasser, Jr. and L. A. Schlesinger, 1994, 'Putting the Service-Profit Chain to Work', *Harvard Business Review* 72(2), 164-174.
- Hitt, M. A. and D. Smart, 1994, 'A Disciplining Force for Managers or a Debilitating Force for Organizations?', *Journal of Management Inquiry* 3(4), 144-152.
- Huselid, M. A., 1995, 'The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance', *Academy of Management Journal* 38(3), 635-672.
- Huselid, M. A., S. E. Jackson and R. S. Schuler, 1997, 'Technical and Strategic Human Resource Management Effectiveness as Determinants of Firm Performance', *Academy of Management Journal* 40(1), 171-188.
- Itami, H., 1987, *Mobilizing Invisible Assets*, Boston, MA: Harvard University Press.
- Jackson, S. E. and R. S. Schuler, 1995, 'Understanding Human Resource Management in the Context of Organizations and Their Environments', in J. T. Spence, J. M. Darley and D. J. Foss (eds.), *Annual Review of Psychology*, vol. 46. Palo Alto, CA: Annual Reviews, Inc., pp. 237-264.
- Jennings, P. L., P. Banfield and G. Beaver, 1996, 'Human Resource Development in Small Firms: A Competence Based Approach', *Strategic Change* 5, 89-105.
- Jensen, M. C., 1989, 'Eclipse of the Public Corporation', *Harvard Business Review* 67(5), 61-74.
- Jensen, M. C. and W. Meckling, 1976, 'The Theory of the Firm: Management Behavior, Agency Costs, and Ownership Structure', *Journal of Financial Economics* 3, 305-360.
- Kanungo, R. N. and M. Mendonca, 1992, *Compensation: Effective Reward Management*, Toronto, Ontario: Butterworths Canada Limited.
- Kaplan, R. S. and D. P. Norton, 1992, 'The Balanced Scorecard Measures That Drive Performance', *Harvard Business Review* 70(1), 71-79.
- Keats, B. W. and M. A. Hitt, 1988, 'A Causal Model of Linkages Among Environmental Dimensions, Macro Organizational Characteristics, and Performance', *Academy of Management Journal* 31(3), 570-598.
- Lähteenmäki, S., J. Storey and S. Vanhala, 1998, 'HRM and Company Performance: The Use of Measurement and the Influence of Economic Cycles', *Human Resource Management Journal* 8(2), 51-65.
- Lee J. and D. Miller, 1999, 'People Matter: Commitment to Employees, Strategy and Performance in Korean Firms', *Strategic Management Journal* 20(6), 579-593.
- Lussier, R. N., 1995, 'A Non-Financial Business Success Versus Failure Prediction', *Journal of Small Business Management* 33(1), 8-26.
- MacDuffie, J. P., 1995, 'Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry', *Industrial and Labor Relations Review* 48(2), 197-221.
- Main, B. G., 1990, 'The New Economics of Personnel', *Journal of General Management* 16(2), 91-103.
- Meyer, J. W. and B. Rowan, 1977, 'Institutionalized Organizations: Formal Structure as Myth and Ceremony', *American Journal of Sociology* 83, 340-363.
- Miles, R. H., 1987, *Managing the Corporate Social*

- Environment: A Grounded Theory*, Englewood Cliffs, NJ: Prentice Hall.
- Miller, D. and J. Toulouse, 1986, 'Strategy, Structure, CEO Personality and Performance in Small Firms', *Entrepreneurship Theory and Practice* (Winter), 47-63.
- Mintzberg, H., 1983, *Power In and Around Organizations*, Englewood Cliffs, NJ: Prentice Hall.
- Morgan, H. and F. Milliken, 1993, 'Keys to Action: Understanding Differences in Organizations' Responsiveness to Work-and-Family Issues', *Human Resource Management Journal* 31(3), 227-248.
- Morrissey, M. A., G. A. Jensen and R. J. Morlock, 1994, 'Small Employers and the Health Insurance Market', *Health Affairs* 13(4), 149-161.
- Mowday, R. T., L. W. Porter and R. M. Steers, 1984, *Employee Organization Linkages: The Psychology of Commitment, Absenteeism and Turnover*, New York, NY: Academic Press.
- Neter, J., M. H. Kutner, C. J. Nachtsheim and W. Wasserman, 1996, *Applied Linear Statistical Methods*, 4th ed., Chicago, IL: Irwin.
- Nubson, D., 1991, 'The Feelings Manager', *Management Quarterly* 32(1), 18-26.
- Organ, D. W., 1988, *Organizational Citizenship Behavior: The Good Soldier Syndrome*, Lexington, MA: Lexington Books.
- Organ, D. W., 1990, 'The Motivational Basis of Organizational Citizenship Behavior', in B. M. Staw and L. L. Cummings (eds.), *Research in Organizational Behavior*, Greenwich, CT: JI Press, pp. 43-72.
- Ostroff, C., 1995, *Human Resource Management: Ideas and Trends in Personnel*, CCH Incorporated.
- Pfeffer, J., 1994, *Competitive Advantage Through People: Unleashing the Power of the Work Force*, Boston, MA: Harvard Business School Press.
- Pritchard, R. D., 1992, 'Organizational Productivity', in M. D. Dunnette and L. M. Hough (eds.), *Handbook of Industrial and Organizational Psychology* (2nd ed.), vol. 3, Palo Alto, CA: Consulting Psychologists Press, pp. 443-471.
- Rutherford, M. R. and S. Oswald, 2000, 'Antecedents of Small Firm Performance' *New England Journal of Entrepreneurship* 3(2), 21-33.
- Solomon, R. J., 1984, 'Using the Interview in Small Business', *Journal of Small Business Management* 22(4), 17-24.
- Steiner, M. P. and O. Solem, 1988, 'Factors for Success in Small Manufacturing Firms', *Journal of Small Business Management* 26(1), 51-55.
- Ulrich, D., 1997, 'Measuring Human Resources: An Overview of Practice and a Prescription for Results', *Human Resource Management* 36(3), 303-320.
- U.S. Small Business Association Office of Advocacy, 2001, *Small Business Health Insurance* (SBA FF11), Washington, DC.
- Wright, P. M. and G. C. McMahan, 1992, 'Theoretical Perspectives for Strategic Human Resource Management', *Journal of Management* 18(2), 295-320.
- Yeung, A. K. and B. Berman, 1997, 'Adding Value Through Human Resources: Reorienting Human Resource Measurement to Drive Business Performance', *Human Resource Management* 36(3), 321-335.
- Youndt, M. A. and S. A. Snell, 2001, *Human Resource Management, Intellectual Capital, and Organizational Performance*, Working Paper, Skidmore College.

Copyright of Small Business Economics is the property of Kluwer Academic Publishing / Business and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.