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Challenging Relationships: HR Metrics and Organizational Financial Performance

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The inherent relationship driving human resources decisions is the assumption that changing human resources headcount affects the financial performance of the firm. Many limitations and assumptions within this relationship should not be overlooked. This article integrates and critically analyzes academic research to explore what is known and what remains unknown in the relationship between HR metrics (e.g. headcount, salaries, recruitment) and organizational financial performance (e.g. revenue, costs, profit). Through the use of examples, seven main obstacles in the interpretation and use of academic research relating to HR metrics and organizational financial performance are discussed, including embedded recommendations.

Key Words: Human resources management; organizational performance; human capital; downsizing; turnover

Classifications: Category 4–Descriptive Research

I. Introduction

Scan the business section of any newspaper or magazine and a specific human resources management trend becomes apparent. Companies experiencing financial performance problems announce headcount reductions in order to increase future financial performance. In contrast financially successful companies announce huge hiring sprees in order to maintain their financial strength (Cascio 1998; Dichter and Trank 1991; Thornhill and Saunders 1998). The inherent relationship that drives such decisions across industry, country, and corporate strategy is the assumption that altering human resources headcount affects the financial performance of the firm. However, many limitations and issues with this assumption should not be overlooked. This article utilizes academic research to explore what is known and what remains unknown in the relationship between HR metrics and organizational financial performance. Unlike purely academic articles that target theory building and research, this paper transfers what is known in academe into a set of practical questions and action plans that can be adapted into a corporate environment.

Although empirical studies consistently support a positive and statistically significant relationship between human resources (HR) metrics and organizational financial performance (OFP) (Dany, Guedri and Hatt 2008; Delaney and Huselid 1996; Delery and Doty 1996; Huselid, Jackson and

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Schuler 1997; Uysal 2008), the missing link is the translation of this relationship into functional action items or strategic plans to guide management practice (Becker and Gerhart 1996; Chhinzer 2004). Given the lack of prescriptive information in the research, the value of the relationship between HR metrics and OFP to practice remains unknown. The results of this extensive body of literature lack the development of a link between HRM practices (or policies) and organizational financial performance (Dany et al. 2008; Fleetwood and Hesketh 2007; Keegan and Boselie 2006).

This article provides an awareness of issues and obstacles to consider when using HR metrics and presents a series of action-oriented recommendations to overcome the pitfalls associated with decision-making using HR metrics. These include the following:

1. Issues with the initial selection of HR metrics
2. Difficulties aligning HR metrics with organizational goals or strategy
3. Problems with creating predictive measures to use in benchmarking and decision making
4. Complexities with the validity and reliability in measures of organizational financial performance
5. An insufficient understanding of causality between HR metrics and organizational financial performance
6. The affect of organizational structure on HR metrics
7. The human resources departments hesitancy to use financial metrics

Each of the obstacles outlined above will be addressed with a series of embedded recommendations for both researchers and managers. This article aims to inspire academics and practitioners alike to realize that an uneducated or unqualified use of HR metrics is besieged with obstacles.

II. Theories on HR Metrics and Organizational Financial Performance (OFP)

HR metrics allow internal and external evaluation of deliverables and provide an understanding of the impact these deliverable have on supporting organizational strategy (Boswell 2006; Truss and Gratton 1994). Although HR personnel and executives believe that the people strategy of a firm can significantly improve profitability, top company managers want to see a clear link between people and profits (Brewster, Larsen and Mayrhofer 1997; Budhwar and Sparrow 1997). Over half of Managing Directors believe measurement is the key to human resources management, and one in three believes that shareholders and investors are concerned with people reports and measures (Weiss and Finn 2005). Specifically, they want to know if HR costs are justified and if the programs that are implemented help the organization achieve its desired strategy and financial outcomes. Measurement of core HR activity can create recognition in the organization of the intangible human assets as a major source of value or competitive advantage and indicate strategic and operational importance of the HR functions (Rodwell and Teo 2008).

Two typologies outline the spectrum of HR metrics. Using the balanced scorecard approach, these metrics can be classified into four groups: learning and growth, internal business, customer, and financial (a.k.a. operating efficiency) (Becker, Huselid and Ulrich 2001; Fields 2002; Kaplan 1996). Comparatively, Rogers and Wright (1998) suggest that HR metrics

can be categorized into four distinct groups: human resources (e.g. turnover), organization (e.g. productivity, quality, customer satisfaction), market (e.g. Tobins Q, stock prices), and financial (e.g. return on asset, return on investment, profit, sales, labor ratios). In a meta-analysis on HR metrics, over 82 percent of studies on HR metrics were focused on financial metrics (Rogers and Wright 1998). Therefore, this article will focus on HR metrics associated with OFP.

The commonality in HR metrics focused on OFP is the inclusion of financial measures such as revenue, profit, return on investment/assets, and/or cost in association with human resources measures (Grossman 2000). In fact half of the top ten HR metrics include financial performance measures (Grossman 2000). These include the following:

1. Revenue Factor: Revenue / Total Full-Time Employees
2. Human Resources Value Added: Revenue – (Operating Expenses – [Compensation Cost + Benefits Cost]) / Total Full Time Employees
3. Human Resources ROI: Revenue – (Operating Expenses – [Compensation Cost + Benefits Cost]) / (Compensation Costs + Benefits Costs)
4. Total Compensation Revenue Percent: (Compensation Costs + Benefits Cost) / Revenue
5. Total Labor Costs Revenue Percent: (Compensation Costs + Benefits Cost + Other Labor) / Revenue

Multiple studies have indicated a positive statistically significant relationship between strategic human resource management and OFP (Arthur 1994; Guest, Michie, Conway, and Sheehan 2003; MacDuffie and Kochan 1995; Wright, Gardner, Moynihan and Allen 2005; Youndt, Snell, Dean and Lepak 1996). While this scratches the surface in terms of identifying research relationships that add value to an organization, no universal, standardized action plan exists that can help the theory move into practice (Dany et al. 2008).

The positive impact of larger human resource strategies is so robust that it is difficult to pinpoint the links between human resources management and OFP (Fleetwood and Hesketh 2007). Researchers have identified the need to understand the *process* through which human resource practices might impact performance (Dyer and Shafer 1998; Huselid 1995; Wright et al. 2005), but beyond the mathematic and economic equations that drive such decisions are underlying assumptions, extraneous factors, causality questions, and the need to understand the process of how the relationship works. To overcome these issues, an awareness of challenges associated with the development, use, and interpretation of financially based HR metrics is essential. Next, we explore seven critical obstacles that limit the ability of theoretic and practical advancement of our understanding of the HR metrics and OFP relationship. Each obstacle includes embedded recommendations.

III. Obstacles Explored with Embedded Recommendations

A. Obstacle 1. Selection of HR metrics

Most studies use publicly available metrics in their human resources calculations, such as revenue, profit, operating expenses, and productivity (Rogers and Wright 1998; Ulrich 1996). Granted these measures are easily accessible and have some level of standardization (profit = revenue - costs), but no justification is given as to the selection of measures. "Researchers rarely justify their choice of measures and ... the primary goal is to demonstrate plau-

sible potential effects from investing in HR activities and/or strategies" (Dyer and Shafer 1998, p 10).

The selection of measures used should be aligned with the corporate strategy (Becker et al. 2001). Selection of metrics should not only convey the values, priorities and organizational structure of the company but also operate at the individual employee level to drive performance in those key areas that are measured (Ulrich 1996). The basic notion that HR needs are highly contingent on a firm's business strategy is still widely supported (Boswell 2006). The strategic HRM approach seeks to drive organizational performance through managing human resources based on business goals (Kamoche 2001; Lepak, Liao, Chung, and Harden 2006).

A hypothetical example of a sales employee in a telecommunications company exemplifies this issue. If this employee is measured on annual sales revenue; then he or she will be rewarded on maximizing the volume of networking equipment sold to the customer this year. That might mean a variety of options are open to an employee, including giving volume discounts to ensure that the revenue is high (regardless of profit margins), selling the predicted expansions for next year this year (negatively impacting future revenue), or using very aggressive pressure tactics in the customer relationship to close the sale (while potentially losing a long-term customer). If this employee is measured on profit for the year, he or she may be hesitant to give discounts. Comparatively, if this employee is measured on a 3-5 year track record with the same customer, he or she may not sell the entire inventory upfront. Instead, the employee would benefit from creating a long-term sustainable relationship with the customer. Also, customer satisfaction would be brought to the forefront as using aggressive measures might not be beneficial for the sales person.

A broad consensus among most researchers exists in favour of the greater integration of HRM and business strategy (Boxall and Purcell 2003; Lepak et al. 2006; MacDuffie and Kochan 1995; Wright and MacMahan 1992). Careful selection of aggregated HR metrics is imperative in the success and functioning of individual employees. When selecting these metrics the organizational values conveyed to all stakeholders must be considered.

B. Obstacle 2. Alignment of HR Metrics and Organization Goals

HR metrics that focus on profit or revenue (financial metrics) are often used to measure human resources success (Dany et al. 2008; Lepak et al. 2006). Economically, maximizing revenue can be accomplished by increasing sales price, sales volume, or both. Maximizing marginal profit margins can be accomplished by maximizing the difference between the sale price and the costs. A company may choose to focus on one or both of these targets. However, the measures used must align with the goal of the company (Lepak et al. 2006).

Again, it is best to illustrate the point with a hypothetical example. This example assumes a small burger restaurant has the choice in determining the number of burgers it makes, 10, 20, 30, or 40 (See Table 1). The company can expect the cost per burger to decrease as the number of burgers made increases due to economies of scale. It can also expect price per burger to decrease as the number of burgers made increases due to basic supply and demand economics.

Table 1.*l*

ABC Burger Restaurant

Number of burgers made a day	Cost per burger ($)	Price per burger ($)	Total revenue ($)	Profit per burger ($)
10	2.00	3.50	35.00	1.50
20	1.80	3.20	64.00	1.40
30	1.60	2.90	87.00	1.30
40	1.40	2.50	100.00	1.10

If the company's goal is to maximize revenue, it would hire and train enough human resources to make 40 burgers a day. In turn it would be operating at the lowest profit margin. However, if the company's goal is to maximize marginal profit, it would only hire and train enough employees to make 10 burgers a day. In turn it would be operating at the lowest revenue point.

HR metrics do not account for these corporate differences when reviewing OFP nor have the studies that have supported the relationship between OFP and HR metrics (Kamoche 2001). When determining which metrics to use, it is imperative for one to know what the company strategy is in order to analyze the information correctly and develop an action plan accordingly (Brewster, Larson, and Mayrhofer 1997; Budhwar and Sparrow 1997).

C. Obstacle 3. Benchmarking

HR metrics are important in measuring value through benchmarking. Benchmarking is a structured approach in which organizations set goals and targets for performance levels of measure achievements in relation to those goals, with internal and external comparisons of success (Chhinzer 2004). Benchmarking HR provides an ongoing or periodic audit to measure what is working and what is not through identifying strengths, weaknesses, trends, or gaps in HR performance (Chhinzer 2004).

Analysis of HR metrics aids in benchmarking against competitors and recognizing year-over-year (or year-to-year) trends within a company. Reviewing basic annual metrics does not take into account any new ventures, new goals for the company, new talent, new competitors, etc. In an era of hyper-competition, companies are very dynamic. Annual comparisons of HR metrics lose value in consistently evolving organizations, since the point of comparison may have significantly changed.

Rather than emphasizing a standard 'fit' or 'match' (Kamoche 2001), human resources management can be optimized through development of multiple distinct HR systems focused on each specific objective (Lepak et al. 2006). Thus, each

HR metric used for benchmarking should be evaluated before it is internalized. Each company's goals, vision, use of training, turnover rate, value for human assets, and long-term versus short-term focus affects the measures to such a great extent that the use of a quantitative comparison alone is insufficient to drive any significant changes within the corporation. If the HR metric fits a specific organizational objective and is measured in a systematic way, it can be valuable in assessing organizational position relative to competitors.

D. Obstacle 4. Validity and Manipulation of OFPMeasures

Enron, WorldCom, and Bernard Madoff Ponzi scheme types of financial scandals have surfaced issues of validity in financial reports. Accounting practices allow for some subjectivity on reporting expense versus an investment as well as the timing of revenue recognition, costs, inventory, and depreciation (Chhinzer 2004). Using these financials to create HR metrics and make strategic decisions such as acquisition, downsizing, or hiring based solely on these metrics is not necessarily valid or reliable. The use of these metrics in business strategy will be contingent on ensuring the values used are truly representative of the OFP. Changes in legislation (ex. The Sarbanes Oxley Act) aspire to minimize fraudulent financial reporting, but differences in accounting practices should be kept in mind when reviewing historical data.

In addition each company has its own lag period between working on a project and actually deriving revenue from it. This could be dependent on three organizational determinants; industry (e.g. NASA Aerospace's lag period might be multiple years, but Pizza Huts' lag period might be less than a day), accounting practices (using 'First in, First out' (FIFO) versus 'Last in, Last out' (LIFO) principles), or individual contract details (some customers are given a longer time to pay; whereas, others are given discounts if they pay within a certain timeframe) (Chhinzer 2004). The question about how long a company should lag the financial data to ensure it is applicable to the HR measured still remains virgin territory. We recommend that the lag period of OFP metrics to be compared with HR metrics be derived by the three organizational determinants above.

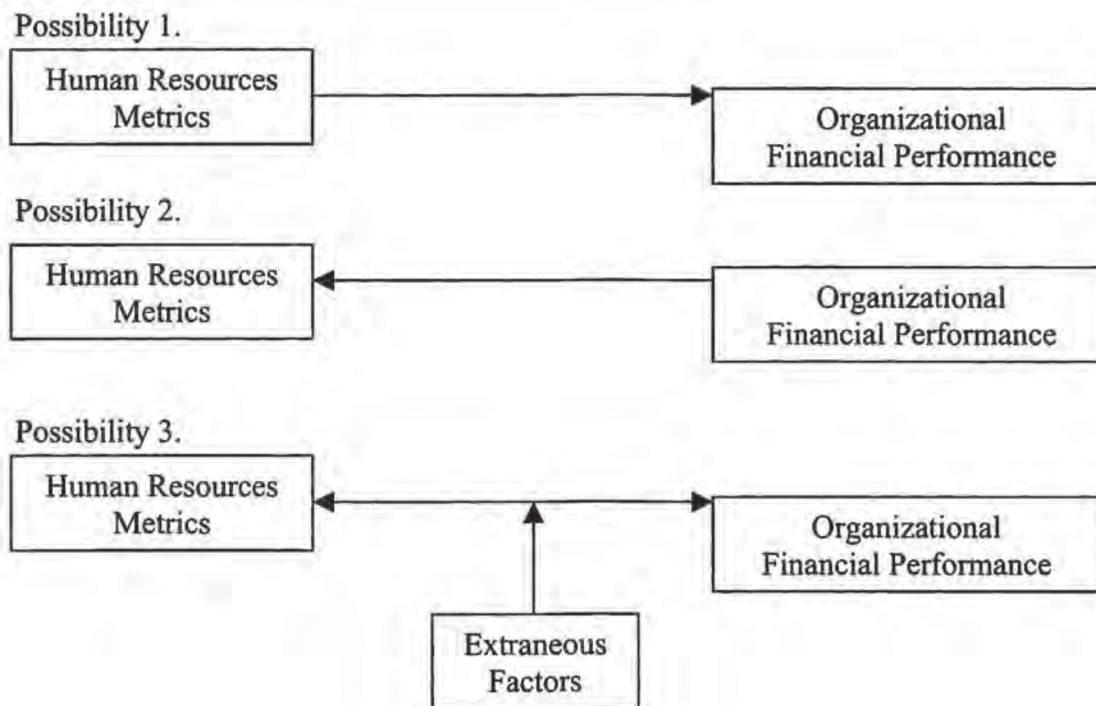
Lastly, it is extremely challenging to attach a dollar value to knowledge, relationship building, conflict resolution, technical training, or other non-tangible elements of production and sales (Dany et al. 2008). Corporations must develop well understood, accepted measures to evaluate their HR metrics. The metrics do not have to be universal but should align with the corporate strategy, values, and priorities as outlined above.

E. Obstacle 5. Causation Versus Correlation

A risk associated with altering HR metrics to influence OFP of a firm is that causality is unknown. Although a relationship between the two is evident in research, there is no confirmation of causality. Do HR metrics affect OFP, or does OFP affect the HR metrics? Thus, the theory on how financial metrics are related to HR metrics can be argued as visualized in Figure 1.

Figure 1.

Questioning Causality



Possibility 1: HR metrics affect OFP: a change in human resources (e.g. headcount, salaries, traits of employees recruited) causes a change to OFP metrics (e.g. revenue, profit, costs) *OR*;
Possibility 2. OFP affect HR metrics: a change to OFP metrics (e.g. revenue, profit, costs) causes a change in human resources (e.g. headcount, salaries, traits of employees recruited) *OR*;
Possibility 3. An extraneous factor affects both OFP *and* human resources. Possibilities for this are infinite, but they could include stock prices, management styles, or organizational structure. A change in the extraneous factors causes a change in *both* HR metrics (e.g. headcount, salaries, traits of employees recruited) *and* OFP (e.g. revenue, profit, costs).

Research to date has demonstrated a statistically significant relationship between HRM and OFP (Delaney and Huselid 1996; Uysal 2008; Youndt et al. 1996), however a correlation does not imply causation. A correlation between two factors (or variables or constructs) suggests that a change in one factor (in this case HR practices or OFP) will relatively consistently mean that the other factor is also changed (Pedhazur 1982). The nature of the relationship can be positive or negative based on the exact correlation. A causal relationship implies that changing one factor will cause a change in the second factor (Pedhazur 1982). Although organizations often react to poor financial performance of the company by reducing headcount (Cascio 1998; Thornhill and Saunders 1998), the challenge

is that the exact causal relationship between the44 two remains unknown (Rogers and Wright, 1998). In order to benefit from our knowledge of the HRM and OFP relationship, researchers first determine the nature of the influence between the two factors. Therefore, each organization must carefully assess the causes of the decline in financial success prior to executing headcount reductions.

F. Obstacle 6. The Affect of Organizational Structure on HR Measures

Organizational hierarchies and levels have an impact on the use of HR metrics to influence OFP (Kirkpatrick, Davies and Oliver 1992). In general employees who perform better on core tasks demonstrate more citizenship behavior and a higher level of commitment to the employer (Tsui, Pearce, Porter and Thpoli 1997). Hierarchical organizations experience difficulty in assigning a dollar value to an individual position due to complicated tracking measures and difficulty in assigning dollar values to the tasks performed by multiple managers (Kirkpatrick et al. 1992). This complicates using the HR metrics to design work flow or HR-based decisions (Chhinzer 2004).

Also, the shift from manufacturing to service sector jobs has compelled organizations to determine how productivity and financial metrics are associated with the human resources (Chhinzer and Ababneh, 2008). Manufacturing or production-oriented organizations can place a value on the performance of one member with more ease since these employees directly affect output (Brewster et al. 1997). The costing structure is usually the measure used to gauge performance. Revenue is also driven by individual activity, so it is easier to apply HR metrics to OFP. This perspective significantly changes once departments outside of manufacturing or production are included in the metrics (Budhwar and Sparrow 1997). How can a company assess the value of the marketing department? What was the exact benefit of a launched campaign or customer presentation in dollar values? To what level did the administrative team assist in the closure of a major customer deal? What impact does the technical support group have on bottom line financials? In order to create an action plan based on metrics, financial contribution must be measured both vertically and horizontally (Brewster et al. 1997; Budhwar and Sparrow 1997).

G. Obstacle 7. Human Resources Hesitancy to use Financials

According to Jack Phillips, CEO of Performance Resource Organization, fewer than 1 percent of human resources budgets are spent on managing and tracking HR metrics, with almost no funding available in small- to medium-sized businesses (Grossman 2000). Generally, human resources personnel do not have training in financial metrics nor is it a job requirement. There is an intrinsic hesitancy to use quantitative analysis by those without a strong financial background.

The problem is that most managers do not know what should be measured, let alone how. A study of 1,050 companies provided evidence that on average HR professionals devote less than a third of their time to strategic HR initiatives (e.g. employee development, top talent recruitment, training, career management, performance management) (Lepak, Scott and Snell 1998). HR education traditionally lacks development of the ability to match an organization's

strategic environment to the broader social and institutional context (Barber 1999).

Since historical information does not exist, the human resource department may not be sure where to start. Systems are expensive and time consuming to set up. As well, the value derived from creating such a system will not be tangible until multiple years of data collection are complete (Ulrich 1996). Combined, this creates multiple entry barriers for companies to start using HR metrics systems efficiently.

HR professionals must develop business skills including the ability to conduct quantitative analysis and determine which financials to use and how (Barber 1999). Research needs to create a standardized set of desirable traits to increase OFP through human resources to address this issue (Dany et al. 2008).

IV. Discussion and Conclusion

Most firms decrease their workforce size to improve performance and increase competitiveness while cutting costs (Cascio, Young and Morris 1997). Almost all corporations react to negative financial performance by reducing their human resources via layoffs, downsizing, or divestures to increase OFP. Rarely does a company react to poor OFP by increasing its human resources (Thornhill and Saunders 1998). In contrast companies do not downsize when doing well financially, regardless of the performance or costs associated with workforce resources (Cascio 1998). There is an inherent assumption that human resources have a predictive link to an organization's financial performance.

This review outlined research regarding the relationship between HR metrics and OFP, identifying areas of concern. First, existing literature on the relationship between HR metrics and OFP was reviewed. Next, challenges in development of a link between HR metrics and organizational financial performance were examined in order to use existing research to drive value to an organization. These were presented in the section entitled 'Obstacles and Embedded Recommendations for HR metrics and OFP.

Researchers suggest a need to develop a standardized, universal set of adoptable action plans or key metrics that could drive the financial performance of a company based on the results of HR metrics (Barber 1999; Delery and Doty 1996; Fleetwood and Hesketh 2007). By examining obstacles in the use of HR metrics to affect OFP, the concept of a universal set of traits appeared implausible for a number of reasons. The metrics selected should be dependent on the individual corporation's strategy, organization, and priorities. The lag period between human resource efforts and revenue recognition should be dependent on the industry, company, and project specifications. The accounting practices and choice of financials used should be dependent on the goal of the organization and its stakeholders. The revenue accounted for at each business unit should be dependent on the organizational level and structure. The interpretation of these numbers should be dependent on the selection of benchmarks and competitors.

Therefore, each organization must review its corporate strategies, goals, vision, operations, and measures prior to making the assumption that a change in human resources in the organization will change OFP. To assume a causal relationship between HR metrics and OFP is risky. Yet, many organizations assuming a change in HR metrics will change the financial performance of the company. Prior to changing human resources as a reaction to poor financial performance, corporations should look to other measures such as

business strategy, operations, or customer demand and develop an action plan accordingly.

Multiple studies support a statistically significant relationship between HR metrics and OFP, but not a single one has examined a predictive relationship between them. After reviewing 140 research papers and multiple books on the topic of HR metrics, Scarpello and Theeke (1989) stated:

> If Human Resource Value could be measured, the knowledge of that value could be used for internal management and external investor decision making. However, until human resource accounting advocates demonstrate a valid and generalizable means of measuring human resources in monetary terms, we are compelled to recommend the researchers abandon further considerations and benefits of human resource accounting. (p.213)

Two decades later, we have made some progress in empirically proving some relationships, but the black box still exists. The intellectual community has developed measures and theories around the relationship between financial performance of an organization and HR metrics, but we have yet to create an adoptable or specific action plan to help organizations use this knowledge to foster better human resource strategies.

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