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Using Competitive Intelligence Processes to Create Value in the Healthcare Industry

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Abstract

In a knowledge-intensive industry such as healthcare, competitive advantage is primarily achieved by effective management of human resources. With high job vacancy rates, and high staff turnover in US hospitals, demographic projections predict continued labor shortages due to strong growth in healthcare-related jobs and reductions in labor force growth rates. Healthcare is one industry in which formal competitive intelligence processes can make a significant impact although this has not been fully exploited in respect of CI information on labor markets or competitor practices. Managers in healthcare organizations need to develop ways to access competitive intelligence information to inform both strategic and tactical decision making. Based on key informant interviews, recommendations are given for HR-related competitive intelligence.

Introduction

The healthcare industry in the United States differs substantially from other competitive environments. A large portion of revenues are controlled by the government via Medicaid and Medicare reimbursements. Information about competitor practices and performance outcomes can be quite difficult, if not impossible to obtain (Porter and Teisberg, 2004) and firm growth may be inhibited by federal or state legislation designed to control supply in various service areas (Romano, 2003). In addition, the use of third party payers such as insurance companies, Medicare and Medicaid can artificially inflate consumer demand as out-of-pocket costs do not reflect the true cost of service (Herzlinger, 2002). Finally, the professional nature of the industry's internal labor markets makes movement from one organization to another relatively seamless for many professional fields such as nurses and pharmacists.

Given these conditions, it is imperative for managers in the healthcare field to develop ways to access reliable information about the competitive environment to inform both strategic and tactical decision making.

The field of competitive intelligence (CI) has experienced tremendous growth over the past 25 years (Prescott and Miller, 2001). Nevertheless, the healthcare industry is one of the few industries yet to fully exploit the value contribution associated with the development and use of formal competitive intelligence processes. A further paucity of field research on CI in healthcare makes it difficult to advance this particular knowledge area. The purpose of this paper is twofold. First, we will explore how CI can add value to the healthcare industry. In addition, we will outline some specific recommendations (based on interview data) that reveal how human resource related intelligence can be used by strategic planners in the healthcare industry to enrich their decision making.

The Healthcare Industry

Competition in the US healthcare industry is replete with contradictions to the traditional value creation process. Indeed, Porter and Teisberg (2004) describe the healthcare environment as "zero sum" competition where no one wins. This characterization is based on the pervasive problems of high cost structures, restricted choice and access to service, few net benefits being derived from consolidation, and an over-reliance on the legal system to handle disputes. These problems are worsened by the inflated demand for services placed on the system by consumers who are shielded from the true costs of services by the third party payer system (i.e., insurance companies, Medicare, etc.) (Herzlinger, 2002; Teisberg, Porter, and Brown, 1994). Further, the types of comparative information that could be used by consumers at all levels: insurance companies, physicians, patients and firms providing health benefits for example, to encourage the development of value-creating products, services and internal processes are, at best, difficult to find, and more often, completely unavailable (Porter and Teisberg, 2004).

These conditions can generate a dysfunctional environment for strategic planning, organizational learning and profitable growth. At the same time, managers need competitive intelligence to make high quality decisions. Difficulty in finding information or the complete lack of information not only impairs decision makers' mental models [*i.e., "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action."* (Senge, 1990)], it may also exacerbate the cognitive biases that often plague the decision making process (Bourgeois, Duhaime, and Stimpert, 1999). In such an environment, a firm's ability to generate actionable intelligence is absolutely necessary for effective decision making. Thus, these conditions also produce ripe opportunities for a formal competitive intelligence process to add value to an organization's decision making process.

The value of competitive intelligence (CI) in the healthcare industry goes far beyond providing externally-focused intelligence based on analyzed information about a firm's competitive environment, changes in the competitive environment, competitor moves and initiatives, and competitive threats and opportunities (Gilad and Gilad, 1988; Prescott, 1989; Youngblood, 1998; Dashman, 1998).

Hospitals are faced with a number of internal issues (i.e., labor and other cost drivers) that can have a significant impact on profitability. These 'within-firm' issues produce internally-focused intelligence needs that can be addressed through the proper allocation of CI resources (Miree and Prescott, 2000). In addition, the supportive nature of a formal CI process within a firm (Prescott, 1989) can provide managers with continuous time-sensitive actionable intelligence and help them to understand the ever evolving context within which the intelligence must be leveraged, thereby increasing the speed and quality of the decision making process (Bernhardt, 1994). A well designed CI process will produce actionable intelligence that can be used to tackle both internal and external issues (Bernhardt, 1994). Thus, the development and use of formal CI processes can help healthcare firms to overcome some of the structural inefficiencies associated with the healthcare industry (Porter and Teisberg, 2004).

Related Literature Relevant to CI

Although the advantages of employing a CI process are many, there have been, to date, relatively few articles examining how the competitive intelligence process is used to support decision making in the healthcare industry. Norling, Herring, Rosenkrans, Stellpflug, and Kaufman (2000), for example, emphasize the importance of formalizing intelligence processes to remain abreast of technological developments, particularly in the area of research and development. They illustrate how a formal CI process was used by four companies to assist in new product introductions, refine company pipelines, and support firm profitability. Other researchers have highlighted the importance of using a competitive intelligence process to understand customers' needs (Sawyer, 1997) and the competition (Cox, 1991). Finally, Bradley and Noda (2003) and Walker (2003) contribute to the literature by presenting individual case studies on how CI processes were developed within healthcare firms.

While each of these articles identifies an important area of inquiry, there are other areas that should also be considered when contemplating CI's potential contribution to a healthcare firm's value creation process. Table 1 identifies a number of internal and external key intelligence topics (and decision areas) wherein a formal CI process could not only add value to healthcare organizations (hospitals in particular), but also have an impact on the firm's bottom line (Walker, 2003; Romano, 2003).

From an external perspective, hospitals need to continuously collect data on various conditions in the macro environment that have the potential to impact growth and profitability. For example, in some states, a hospital's growth may be encumbered by the use of "Certificate of Need" (CON) documents that restrict local capacity along certain service lines based on projected demand and other demographic trends. Monitoring the proliferation of physician-run surgical centers and the resulting competition between hospitals and physicians' offices for outpatient surgeries represents another significant trend. Finally, because health plans influence physician

and hospital choice for a large group of people, understanding customer needs and continuously improving medical equipment, technologies and services to meet these needs is paramount (Walker, 2003).

Table 1: Critical Issues in the Healthcare Industry

Internal Issues	External Issues
• Human Resource Related: o Labor Shortages o Compensation o Retention o Diversity Initiatives o Changing workforce demographics o Employee Satisfaction • Cost Containment (Labor, Materials and Supplies) • Customer Satisfaction • Medical Errors • Service Quality • Liability	• Demographic Changes • Federal, State and Local Legislation (Medicaid/care reimbursements, tort reform) • Local Growth in key service areas (new surgical centers, monitoring certificates of need) • Technological Developments (new medical equipment) • Competitor Outcomes (mortality rates for procedures, frequency with which procedures are performed) • Competitive Threats (Hospital-Physician competition for out patient surgery) • Contracting strategies of Health Plans

From an internal perspective, service quality and employee and customer satisfaction are important intelligence areas (Sawyer, 1997). In addition, monitoring cost drivers like liability, credit and capital spending are also essential intelligence issues (Haugh, Larkin, Serb and Towne, 2004). Labor is another important intelligence area. In a service industry like healthcare, the effective management of human resources is critical to success. The urgency of developing and disseminating labor-related intelligence becomes especially pronounced when viewed in light of the labor issues plaguing the healthcare industry (Haugh, Larkin, Serb and Towne, 2004). In 2001, researchers found that nurses, imaging/radiology technicians, and pharmacists all have vacancy rates over 10%, and one in seven hospitals reported a severe shortage of nurses with more than 20% of positions for the designated title "Registered Nurse" were vacant (First Consulting Group). These labor shortages apparently have not abated and, coupled with competition for workers, lead to rising compensation costs. In fact, labor costs (regular, overtime, and agency) can account for 40% of net revenue for for-profit hospitals, 50% for not-for-profit hospitals and 60% for public hospitals

(Haugh, Larkin, Serb and Towne, 2004). Further, labor problems can have a considerable impact on a hospital's operating budget and ability to perform day-to-day operations. These statistics highlight the importance of sound human resource management to hospital organizations. As a result, deploying intelligence resources toward the recruitment, development, and retention of a high-quality workforce may be one of the most valuable contributions of any CI effort to hospitals. We will now focus closely on how CI can add value to the human resource management function.

HR in Healthcare

An organization's individual employees are perhaps the greatest resource that it can access and leverage in the pursuit of competitive activity. In many knowledge-intensive or service industries, such as healthcare, competitive advantage is primarily achieved based on "people-embodied know-how" (Bohlander and Snell, 2004). McLean (1995) states: "In most industries, it is now possible to buy on the international marketplace machinery and equipment that is comparable to that in place by the leading global firms. Access to machinery and equipment is not the differentiating factor. Ability to use it is. A company that lost all of its equipment but kept the skills and know-how of its workforce could be back in business relatively quickly. A company that lost its workforce, while keeping its equipment, would never recover."

Increasingly, attracting and retaining top-quality employees is challenging, and may be getting more difficult (Chambers, Foulon, Handfield-Jones, Hankin, and Michaels, 1998; Fishman, 1998). While the Bureau of Labor Statistics projections indicate a significant reduction in labor force growth rates (down from 1.6% per year during 1950-2000, to 0.4% between 2010 and 2020), growth in healthcare-related jobs remains strong (Horrigan, 2004). According to the Bureau of Labor Statistics, Current Employment Statistics estimates of educational and health services employment for the 1995-2004 period show annual average employment growing from 13,289,000 at the beginning of the period to 16,954,000 in 2004, an all-time high. From 1995 to 2004 the average annual growth rate in education and health service was 2.76% with 10-year growth rates ranging from 17% for "other healthcare practitioner and technical occupations" to 44% for "occupational and physical therapist assistants and aids" (Table 2). The growth rates for many healthcare jobs grew by about 3% per year for the decade 1992-2002, and are projected to continue to grow by that same pace through 2012 (Table 3).

Table 2: Occupational Employment and Job Openings Data, 2002–2012

Code	2002 national employment matrix occupation	Employment		Employment Change 2000-2012		Annual average job openings due to growth and total replacement needs 2002-2012
		2002	**2012**	**Numeric**	**%**	
29-0000	Healthcare practitioners and technical occupations					
		6,580	8,288	1,708	26.0	820
29-1120	Therapists					
		450	592	142	31.7	57
29-2000	Health technologists and technicians					
		2,263	2,857	593	26.2	373
29-2050	Health diagnosing and treating practitioner support technicians					
		451	574	123	27.2	92
29-2061	Licensed practical and licensed vocational					
		702	844	142	20.2	115
29-9000	Other healthcare practitioners and technical occupations					
		56	65	10	17.4	10
31-0000	Healthcare support occupations					
		3,310	4,452	1,143	34.5	795
31-2000	Occupational and physical therapist assistants and aides					
		114	164	50	44.2	26
31-9000	Other healthcare support occupations					
		1,182	1,644	462	39.1	252

Source: The 2002–12 National Employment Matrix Structure, Bureau of Labor Statistics
(data in thousands)

Table 3: Employment in Healthcare 1992, 2002, and Projected 2012

Industry Title and North American Industry Classification System Code	Thousands of jobs			Change		Average Annual Rate of Change %	
	1992	2002	2012	1992-2002	2002-2012	1992-2002	2002-2012
Health care and social assistance (62)	10,178	13,533	17,919	3,355	4,386	2.9	2.8
Ambulatory health care services (621)	3,200	4,634	6,532	1,434	1,899	3.8	3.5
Offices of health practitioners (6211–3)	2,267	3,190	4,419	923	1,229	3.5	3.3
Offices of physicians (6211)	1,401	1,983	2,753	582	770	3.5	3.3
Offices of dentists (6212)	541	726	949	185	224	3.0	2.7
Offices of other health practitioners (6213)	326	482	717	156	235	4.0	4.1
Ambulatory health care services, except offices of health practitioners (6214–6, 6219)	933	1,444	2,113	511	670	4.5	3.9
Outpatient care centers (6214)	287	410	550	123	140	3.6	3.0
Medical and diagnostic laboratories (6215)	139	174	240	36	66	2.3	3.2
Home health care services (6216)	393	675	1,052	282	377	5.5	4.5
Other ambulatory health care services (6219)	114	184	272	70	88	4.9	4.0
Hospitals, private (622)	3,711	4,153	4,785	442	632	1.1	1.4
General medical and surgical hospitals (6221)	3,492	3,925	4,511	433	586	1.2	1.4
Psychiatric and substance abuse hospitals (6222)	112	90	98	-22	8	-2.2	0.9
Specialty (except psychiatric and substance abuse) hospitals (6223)	107	138	176	31	38	2.5	2.5
Nursing and residential care facilities (623)	2,044	2,743	3,685	700	942	3.0	3.0
Nursing care and residential mental health facilities (6231–2)	1,578	2,048	2,607	470	559	2.6	2.4
Nursing care facilities (6231)	1,273	1,574	1,925	300	351	2.1	2.0
Residential mental retardation, mental health and substance abuse facilities (6232)	305	474	682	169	208	4.5	3.7
Community care facilities for the elderly and residential care facilities, n.e.c. (6233, 6239)	465	695	1,078	230	382	4.1	4.5
Community care facilities for the elderly (6233)	364	530	815	167	285	3.8	4.4
Other residential care facilities (6239)	102	165	262	64	97	5.0	4.7

Sours: Bureau of Labor Statistics

These trends place a burden on the US healthcare labor force where projected growth or demand for jobs often outstrips college graduation rates across multiple healthcare-related jobs Anderson, 2004). Coile (2003) predicts that the healthcare industry will continue to experience acute workforce shortages with nurses, pharmacists and physicians for many years to come. More specifically, Pieper (2003) concludes that two out of three healthcare organizations are experiencing labor shortages, with one out of two reporting long-term vacancies of six months or more in key positions. These shortages can have significant strategic implications for hospitals as they struggle to maintain nurse-to-patient ratios while continuing to grow in key specialty areas such as cardiac care, radiology, and anesthesiology.

Beyond vacancies, voluntary and involuntary turnover can wreak havoc on a firm's bottom line. Costs of turnover include the direct economic costs of staffing and training new hires as well as the indirect costs of the downtime needed for the new employee to gain proficiency in the job, and training and development investments are lost when employees leave (Mello, 2002). The cost of turnover is especially acute in healthcare, where high turnover rates exacerbate the impact of a declining labor pool across all healthcare professions and, in the process, affect the quality and availability of healthcare (Abrams, 2004). Waldman, Kelly, Arora, and Smith (2004), for example, found that one fourth of total turnover costs were due to nurse turnover, and total turnover costs in healthcare were 3.4 - 5.8% of the annual operating budget of a major medical center. Moreover, turnover rates average about 45% for nursing homes and about 10% for home health programs (Stone and Weiner, 2001).

Given the financial and operational implications of these labor force issues, prudent hospital administrators should approach the recruiting, selection, and retention of talent in key areas with the same diligence that they approach other broader strategic decisions and initiatives such as hospital expansion. Because hospitals are labor-intensive, collecting, analyzing and disseminating human resource intelligence is critical to maintaining an efficiently functioning organization. Traditionally, the job of human resource management has primarily fallen into the hands of a firm's HR specialists with little to no cross fertilization between human resource professionals and CI professionals (Fleisher and Schoenfield, 1993). More recently, some healthcare firms have begun to create operational links between their HR executives, CI personnel and their strategic planners (Walker, 2003; Haugh, Larkin, Serb and Towne, 2004). These linkages provide HR professionals with the opportunity to not only introduce HR-related intelligence into the strategic planning process, but also define key intelligence needs and expose HR-related intelligence gaps.

HR Intelligence as a Critical Healthcare Resource

Human Resource intelligence refers to analyzed information about HR decision areas such as compensation, employee relations, selection, recruitment and conditions in the competitive environment (Hannon, 1997a; Smith and Marinakis,

1997; Fleisher and Schoenfield, 1993). Figure 1 shows the sub-set of elements which would normally be included in each of these categories.

Figure 1: Categories of HR Intelligence

Competitive Environment
-Competitor workforce data, personnel policies, culture
-Profiles of key individuals in competitors' management teams
-Regulatory changes and other external factors

Recruitment
-Labor force statistics, demographic projections, occupational outlook
-Campus interviews
-HR Planning and Staffing

Human Resource Key Intelligence Areas

Employee Relations
-Job attitudes surveys; benchmarks and norms
-Workplace support programs
-Work scheduling
-Employee Satisfaction

Compensation
-Salary survey data
-Benefits packages offered by competitors

Selection
-Database of employee profiles: employee knowledge, skills, experience, training, development experiences
-Succession planning
-Headhunters partnering

Source: Developed by the authors from: Fleisher & Schoenfeld, 1993 and Craft, Fleisher and Schoenfeld (1990)

The importance of HR intelligence has been investigated in the literature. Craft, Fleisher, and Schoenfield (1990) outlined the positive consequence of gathering human resources competitor intelligence to formulating firm strategy and effective organizational performance. According to these authors, focusing on one's competitors enables an organization to understand how competitors develop and leverage culture, talent base, leadership depth, skill mix, personnel programs, and personnel changes to maintain effective organizational functioning. They also identify labor market competitors as one of the key areas within which intelligence should be

gathered and used in strategic HR decisions. Labor market competitors are described as organizations who compete with each other for the same or similar personnel. For example, in the healthcare industry this would include two hospitals competing for registered nurses, pharmacists or physicians or even perhaps a hospital and a specialty physician practice competing for the best physician talent. Within the type of intelligence, Craft, Fleisher, and Schoenfield (1990) suggest that information relating to core recruiting, selection, and reward policies would be of primary interest. Fleisher and Schoenfield (1993) describe in great detail, the relationship between HR intelligence and business strategy. Further, they ground their perspective in a global context and identify a number of potential sources of human resource competitive intelligence.

Understanding a healthcare organization's HR issues and needs enables managers to assess, manage, and respond to three key areas within a healthcare organization: operating expenses, staffing requirements, and service delivery (Fleisher and Schoenfield, 1993). In an industry where labor costs are a large percentage of total operating costs, such as healthcare, effective gathering of HR intelligence is critical for organizational success (Gao and Campbell, 2002).

HR Intelligence in Practice
Methodology

As a part of this research, we conducted a series of interviews with six company officials at two prominent hospitals in southeastern Michigan. All of the interview data was collected using a protocol (Appendix A). The key informants from the firms included HR personnel, the VP of Strategic Planning at both organizations, and the VP of Human Resource management at one organization. While the interview with the respondents of one organization was recorded, we were unable to obtain permission to record at the second organization. Once both sets of interviews were complete, we transcribed the data (where applicable) and used a qualitative technique called meaning condensation (Kvale, 1996) to analyze the data. Meaning condensation is designed to identify key themes in qualitative data without having to first transform the data into a quantitative expression. (Cf., Kvale, 1996; Tesch, 1990). Meaning condensation consists of four main steps. First, the whole transcribed interview is read. Second, the data is condensed, reviewed again, and key themes are stated as simply as possible. Next, the key themes are examined within the context of the study's purpose and underlying questions. Finally, all non-redundant themes are tied together into a descriptive statement (Kvale, 1996). Within the context of this study, the resultant key themes are presented as recommendations. We have also included representative quotes from the respondents that illustrate some of the raw data used to derive the themes.

Results and Recommendations

Both organizations used formal CI processes to collect HR-related intelligence. This intelligence is used as a part of their strategic planning processes.

Although we attempted to approach the study without any hard and fast "preconceived notions," we were both surprised and encouraged that both organizations had existing CI processes that not only linked into the firms' strategic planning process but also included and valued HR professionals. According to one of the VPs of Strategic Planning: "HR professionals are viewed as key CI people and competitive intelligence gathering is seen as an important aspect of their job. HR professionals are responsible for managing human capital. The results, stated as recommendations, are listed below.

1. *Clearly define your organization's HR-related intelligence needs.*

Organization size, intensity of competitive market, and specific HR issues should dictate the type human resource-related CI that would be most valuable to your healthcare organization. Because all intelligence gathering efforts have associated costs, understanding the organization's specific decision needs up-front can help tailor and empower the intelligence process. Examples of key human resource-related CI areas mentioned by the respondents include:

- Compensation and employee benefits
- Competitor recruiting
- Intelligence related to succession planning
- Intelligence related to human resource demand forecasting
- Employee satisfaction and motivation
- New entrants in the marketplace (physician competition, other hospitals adding services in new areas, new for-profit entities and Certificate of Need legislation concerning physician-run out-patient surgical centers).
- Changing workforce demographics (both local and national)
- Workplace support programs and work schedules
- Employee relationships with supervisors

2. *Involve human resource professionals and business managers in the intelligence gathering process.*

While centralized decision support area can be helpful, direct involvement in the intelligence gathering process empowers leaders more than a centralized CI unit. It also leads to greater buy-in during the implementation phase of the strategy-making process. *"There is a centralized decision support area. Nevertheless, having leadership directly involved in intelligence gathering empowers leaders more than a centralized CI unit. It also leads to greater buy-in during the implementation phase of the strategy-making process."* Further, because HR professionals are responsible for managing human capital, they are key CI people and intelligence gathering is seen as an important aspect of their job.

3. *Gather intelligence that can be used to strengthen both recruiting and retention.*

If competitors have found ways to increase the number of applicants they get for open positions, this information might be used to enable the organization to be more selective in their hiring decisions and more easily meet their Equal Employment Opportunity recruiting goals. Similarly, competitive intelligence on how other organizations are increasing their employees' length of service might be used to

reduce recruitment and selection costs, and get a higher return on the organization's investment in training and development. This competitive intelligence might include information about a competing organization's culture (i.e., guiding values and beliefs), performance evaluation and communication systems, processes for management and executive succession, employee development programs (including career planning programs, opportunities for promotion), and compensation policies (Craft, Fleisher, and Schoenfield, 1990). *"We try to get data on salary surveys, work schedules and other workplace support programs. The primary focus of this HR-CI is retention so internally we gather data on relationships with supervisors. We might do an internal search for data regarding job satisfaction from employee and management surveys. There is some data gathered on compensation towards the end of recruiting."*

4. Directly tie the firm's competitive intelligence process to the firm's strategic planning process.

"Service line level data is collected and shared on a quarterly basis. Hospital level data is shared annually. HR data is time sensitive and is gathered and shared on an annual basis. A lot of our data is gathered as a part of the balanced scorecard approach to strategy formulation and performance measurement." This response is consistent with other findings in the literature. In a recent benchmarking study on coordinating strategic and tactical intelligence in organizations, Miree and Prescott (2000) found benchmarked companies intentionally link the competitive intelligence efforts to their strategic planning function. Indeed, CI is shared with top management to assist in strategic planning. One of the key themes of their research suggests that before strategic decisions are made and resources are allocated, CI input from the strategic and tactical levels is weighed, evaluated and incorporated into the decision-making process. Further, the outputs of the planning process are then used to further coordinate the collection and analysis of intelligence across organizational levels.

5. Design a CI process that emphasizes the continuous gathering of HR-related intelligence rather than ad hoc efforts.

Constantly shifting demands for human resources requires continuous CI data collection, so that effective strategic HR plans can be created. For example, the compensation and benefits packages offered by competitors change unpredictably, as organizations react to labor market conditions, their own recruiting needs, and organizational constraints. HR must focus on efficient delivery of services, but also focus on making HR effective, by systematically collecting information about competitors that will be useful in its own strategic planning. *"We would describe our search behavior as continuous, particularly in the HR area. Strategic planning uses some of this data monthly. We will also search on an as-needed basis as issues arise."* Hannon (1997a) claims that it is impossible for a company to have strategic intent, be visionary, beat competitors to market, create and sustain a competitive advantage, and continuously learn and improve, unless it educates, empowers, and rewards all of its employees for beating its competitors through efficient and effective acquisition, analysis, and dissemination of strategic competitive intelligence information.

6.   Regularly disseminate intelligence briefs centered around key HR issues or initiatives.

The regular dissemination of intelligence will enable business or service line managers to discern and begin discussion on important trends (retention rates, employee satisfaction or demographic shifts). Regular dissemination will also allow for proactive adaptation and permit managers to draw a more complete picture of the current and future HR position.

7.   Challenge your organization's HR assumptions to minimize potential competitive blind spots.

Competitive blind spots are "areas where a competitor will either not see the significance of events at all, will perceive them incorrectly, or will perceive them very slowly" (Porter, 1980; Zajac and Bazerman, 1991). When trying to attract and retain quality workers, unveiling assumptions about worker behavior can be important to maintaining staff. One of the respondents used the following example to illustrate the importance of gathering intelligence on changing workforce demographics: *"It is important to gather intelligence on changing workforce demographics (age and gender along different service areas). Intelligence on work tenure based on residency should also be sought. Hospitals make assumptions about the availability of workers based on peoples' willingness to commute. These assumptions are often incorrect. Because of our CI processes we know that employing people living in a 10 mile radius will lead to a higher retention rates for employees (3 - 7% turnover). We have also detected that there is a 40% turnover among employees in a "diversity" category, especially when they live more than 10 miles away from the facilities. This intelligence helps us to refine our diversity initiatives so that they are more likely to be successful."* Firms that are aware of these commuting trends are in a better position to use recruiting dollars effectively than their rivals. Further, as the US population continues to geographically shift and demographically change, being able to detect these changes can provide firms with an edge over competitors as they seek to meet their staffing needs.

Discussion

The key informants in this study were able to articulate the need for, and the advantages of, an effective competitive intelligence process, especially CI related to human resources management. Yet, many widely-used introductory human resource management textbooks don't have competitive intelligence in their subject index (Fisher, Schoenfeldt, and Shaw, 2006; Jackson and Schuler, 2006; Mathis and Jackson, 2006). This was surprising; especially in the service sectors of the economy where knowing what competitors are doing in human resources may be as important as what competitors are doing in marketing. For these organizations, HR was assumed to be a part of strategic planning. Nevertheless there is little evidence that the field of human resources has recognized the importance of CI to HR pedagogy.

We were also surprised to see the depth of employee involvement (by both HR and non-HR personnel) in the firm's on-going CI process. By empowering employees, at all levels, to contribute to the CI process, these firms are able to increase

the amount, quality and timeliness of a firm's stock of intelligence and allow for a more seamless interaction between the different CI gathering units.

Finally, we could not help but wonder why human resource involvement in the CI process has received so little attention in the literature given the potential positive impact (both in terms of cost and the development of human capital) that gathering HR-related intelligence can have on a firm in terms of creating a "winning" workforce.

Limitations

The current study represents one qualitative exploration into the role of HR-related CI in a firm's overall CI process. However, as with all studies, this too has a number of limitations. First and foremost is the number of firms and people included in the sample. We collected data from cooperative key informants, rather than employing more rigorous sampling techniques. For example, at one of the hospitals, we initially contacted the VP of Strategic Planning, who recommended and then facilitated the inclusion of the VP of Human Resources (along with other respondents). Second, the six key informants were from two prominent hospitals in a major metropolitan area which were already known to use fairly developed and formal competitive intelligence processes. The results might not generalize well to smaller organizations with less well-developed CI processes or organizations in non-service industries. A third limitation is the data collection and analysis methods that were used. The data was collected in structured one-hour interviews, and analyzed using meaning condensation, which does not necessitate transforming the data into a quantitative expression before analysis takes place. Given the nature of the data analysis, this can allow for the introduction of biases when developing themes. We did however attempt to guard against this condition by examining the data separately before we had any joint discussion about emergent themes.

Future Research and Conclusion

Healthcare is one industry wherein formal competitive intelligence processes can make a significant impact. Moreover, in an industry where labor costs are a large percentage of total operating costs, such as healthcare, focusing a significant portion of competitive intelligence resources on human resource-related intelligence is critical for organizational success. Further empirical studies (both qualitative and quantitative) are needed to broaden our understanding how CI is currently being leveraged in this industry. For example, future research on HR-related competitive intelligence might examine other samples with a higher number of key informants from other cities, different sizes of organizations, or other industries. The interview protocol used here can easily be adapted to other organizations in a variety of industries, to discover the "best practices" for collecting, disseminating, and using HR-related competitive intelligence.

In addition, once a set of consistent themes have been discovered, developing a quantitative study using a survey instrument may enable us to explore the

relationship between the use of formal HR-related CI processes and various measures of strategic and HR performance (speed and quality of strategic decision making, retention, return on recruiting investments, etc.).

Finally, in an effort to keep up with the changing nature of competition in the ever-evolving global context, an effort should be made by researchers to update HR-related key intelligence topics and questions based on current practice. While the current study does provide some of these topics within the healthcare industry, an effort should be made to explore this avenue across multiple industries. As healthcare executives (both HR and non HR) continue to recognize the importance of formal intelligence systems to quality decision making, we anticipate that there will be significant growth in this area of the field.

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Appendix A: Interview Questions

1.   One of the aspects of competitive intelligence involves the management of intelligence about current and future employees (in this case doctors, nurses, pharmacists and key administrators). Who do you consider to be your key competitors for the aforementioned human resources? What do you consider to be some of the most significant competitive threats in your environment? What are some of the opportunities that exist in your environment?

2.   Describe your organization's human resource-related competitive intelligence needs. Is there a unit in the organization that manages your firm's CI process? If so, where is it located?

3.   What are your 3-5 top human resource-related competitive intelligence topics/questions?

4.   Where do you search for human resource-related competitive information? How often do you engage in competitive information gathering?

5.   What kinds of human resource-related CI do you value most?

     - CI on competitor compensation
     - CI on competitor recruiting
     - Intelligence related to succession planning
     - Intelligence related to human resource demand forecasting
     - Intelligence related to increasing strategic flexibility through one's human resources

6.   Within the healthcare industry, how would you rank the importance of regularly gathering intelligence in the aforementioned areas?

7.   Would you describe your CI search behavior as continuous or issue/decision-specific? Do your search methods depend on your specific needs?

8.   How do constraints affect your search activities?

9.   Does your organization have a formal CI process? If so, please describe it.

10. Are stocks of competitive knowledge held collectively by the firm (i.e., within a database or by a CI unit)?

11. How often and by what formal means is competitive intelligence shared with subordinates, superiors and peers?

12.   How often do you draw on the CI process to inform your own decision-making? How does the design of the process increase the speed at which you are able to make decisions?

13.   What aspects of the design work particularly well? Which aspects do not work as well?

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Competitive intelligence is the systematic and ethical process for gathering, analyzing, and managing information that can impact an organization's operations and plans. Competitive intelligence is a necessary, ethical business discipline for decision-making based on understanding the competitive environment.