

Improving Public Sector Performance Through Standardized Human Capital
Performance Measurement & Reporting

by

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Bachelor of Commerce, University of Alberta, 1988

Chartered Professional in Human Resources, 2003

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of the Requirements for the Degree of

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Supervisory Committee

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Dr. Bart Cunningham (School of Public Administration)
Supervisor

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Abstract

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New Public Management and increasing calls for public sector transparency and accountability drive public sector leaders to do more with less. One place these leaders can turn to make the organizational, program, and process improvement needed is its workforce, its people. This resource, its human capital, is increasingly recognized as a driver of organizational performance and success. Public sector leaders need the *learning* and *accountability* provided by human capital performance measurement and reporting to improve service efficiency, effectiveness, and impactfulness. This study examined recent research to see if there were common human capital performance indicators and performance reporting systems that could form the basis of standardized measurement and reporting. What was found was, while no standardized indicators or systems are in place, there is a good foundation with some initiating steps having been taken. Common groupings or themes of human capital indicators were uncovered including ones addressing organizational strategy impact, talent management, engagement & wellness, and workforce awareness. A balanced scorecard approach was often used as the performance reporting method to deliver these indicators. Maturity in both the human resources profession and performance reporting, along with further research, is needed to advance the concept of a common human capital performance indicators and performance reporting system.

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Dedication

I dedicate this thesis to my Claire and James. It is these two important people that provided the motivation to take on a master's program for all the right reasons – to learn, to better myself, and to be an inspiration to them. They put up with endless early-morning and late-night reading and writing sessions. Most importantly, they supported and encouraged me the whole way through.

Chapter 1: Introduction

“We are moving from a world dominated by all things financial to the age of people.” (Hesketh, 2014, p. 7)

a) The Issue

Human capital¹, often described as the skills, knowledge, competencies, capabilities, abilities, experience, and motivations people bring to work (Bernstein & Beeferman, 2017, p. 5; Hesketh, 2014, p. 7), is increasingly seen as having more of an effect on organizational performance and impact than capital assets (Cunningham, 2016, p. 1.10). Even with growing recognition of the significant contribution human capital plays, there is a lack of strong, consistent performance indicators and reporting mechanisms that provide the learning needed to identify opportunities for and the accountability needed to motivate improvements towards organizational success. Through two parallel systematic literature reviews, this study consolidated and extended recent research about which human capital performance indicators and performance reporting mechanisms can best help public sector leaders gain the learning and accountability to make the evidence-based decisions needed to improve human capital management and practices.

By contrast, if a member of the public, legislators, analysts, or leaders wanted to understand and assess a public sector organization’s financial operation and promote accountability, they can turn to the organization’s financial statements (Chartered Professional Accountants of Canada, 2017, para. 1000.21). Financial statements provide robust, consistent financial performance measurement and reporting. They explain how

organizations are managing financial resources and their ability to continue to provide public services (Chartered Professional Accountants of Canada, 2017, para. 1000.20).

There are no similar tools to provide reliable, consistent human capital performance measurement and reporting.

Improving human capital is recognized as a critical contributor to organizational success. In the private sector, investing in human capital through practices like proactive safety programs and strategic workforce planning can be leading indicators of financial performance (Bassi & McMurrer, 2008, p. 864). In the public sector the importance of robust human capital programs is seen when improvements in employee engagement lead to positive outcomes in patient care (Plemmons, 2018, para. 13; Bogaert, Wouters, Willems, Mondelaers, & Clarke, 2013, p. 683), teacher-pupil interaction (Runhaar, Sanders, & Konermann, 2013, p. 2017), and social welfare program effectiveness (Kim, Henderson, & Ho Eom, 2015).

Investing in human capital management programs increases efficiencyⁱⁱ, effectivenessⁱⁱⁱ, and impactfulness^{iv}, and through this, organizational performance and value (Bassi & McMurrer, 2008, p. 864; Lawler & Boudreau, 2015, p. 1; Frigo & Ubelhart, 2015, p. 28; Gamerschlag & Moeller, 2011, p. 145). However, as important as human capital management is to organizations, there appears to be little agreement on what performance indicators are most useful at capturing human capital improvements nor how these indicators should be reported (Bernstein & Beeferman, 2017, pp. 3,40). Establishing consistent human capital performance indicators and dashboards could tell the public, legislators, analysts, and leaders if public sector organizations are managing

their people well and if they have the human capital needed to continue to provide services.

Jac Fitz-enz, a performance measurement pioneer, underlined the significance of human capital when he said that “Since people are the only self-determining assets, it follows they are the cause of everything that happens.” (2009, p. 293). Managing the performance of human capital means understanding people: how their skills, knowledge, successes, and motivations build an organization. Public sector leaders can turn to human capital performance indicators to gain evidence-based knowledge about their people. They learn what changes or improvements to human capital practices are needed. This knowledge, along with the authority and accountability to carry out these improvements should lead to increased human capital value and, therefore, increased organizational performance.

The *measurement* aspect of human capital performance measurement provides leaders with the right evidence-based information they need to learn about their people, their human capital. Organizations such as Alberta Health Services (2017a, pp. 21,22; 2017b, p. 5) and the University of Lethbridge (2014, p. 17) do this by incorporating human capital indicators into organizational and human capital dashboards. Human capital performance indicators can tell the story leaders require to learn how to improve performance. These performance indicators can include turnover rates, full-time/part-time ratios, engagement scores, disabling injury rates, budget to headcount ratios and a host of other available indicators. Using these performance indicators helps organizations find the strengths, weaknesses, and gaps in their human capital programs.

The *performance reporting* part of performance management systems involves selecting the right targets and developing processes to help leaders achieve those targets. It means finding the right vehicle or system to present these indicators, including human capital dashboards and other reporting approaches and tools. We see these tools in British Columbia as the government mandates three-year rolling Service Plans and Annual Service Plan Reports for all ministries and Crown agencies. This initiative has been in place for 16 years, and an independent review of the system affirmed its value (Budget Process Review Panel, 2009, p. 54). There is also a performance reporting method pioneered by the United Kingdom (UK) government – deliverology. This method formalizes performance reporting, follow-up routines, and evidence-based supports that can build accountability. Performance reporting helps to find out if an organization’s leaders are successful in building the strengths of their people.

Some studies identify performance indicators and dashboards that convey the value or story of an organization’s human capital potential. The “Value your Talent” report from the UK is one (Hesketh, 2014). However, even with these, there is no consensus on which human capital performance indicators give the most value to organizations nor how these should be used to hold leaders accountable for achieving improvements in human capital management and practices. This study investigated this issue and looked to find the performance indicators most effective as building learning and the performance reporting tools that build accountability for improving performance.

Finally, there is an issue around terminology. The term human capital itself has some general understanding surrounding it, but no definitive definition. It is unlikely there were one until there is some standard practice on reporting human capital.

Similarly, in the performance field, terms such as measures, metrics, and indicators are often used interchangeably and should not be.

b) The Need

The need for better understanding of an organization's human capital is underlined by the increased pressure for public accountability public sector organizations face as they are called to be more efficient, effective, and impactful in the face of fiscal constraints and public demand for more services or services that are more complex and integrated. Public sector organizations are expected to improve efficiency called for by initiatives such as New Public Management^v and the call for governments to adopt entrepreneurial practices (Diefenbach, 2009, p. 892). These initiatives call leaders to find ways to provide more services for less cost or to “do more with less.” Tightening resources force public sector efficiencies as local councils in the UK reduce services to the bare legal minimum (The Guardian, 2018, para. 1), the United States (US) federal government faces government shutdowns amidst calls to cut government spending (De Ruyg, 2018; BBC News, 2018, para. 1), and Alberta, Manitoba, and other Canadian provinces implemented public sector wage freezes (Bennett D., 2018, para. 1; Annable, 2017, para. 1).

At the same time, governments are expected to provide more and or higher levels of services that increase their programs' effectiveness and impactfulness. These services are often found to be more complex and interrelated. Canadians demand greater government transparency and accountability through 'open government' initiatives, a more efficient healthcare system for an increasingly ageing society, more housing and

social programs for people in need, and better policing, education, and infrastructure maintenance – all in an environmentally sustainable manner.

To meet these challenges, public sector leaders look to do more with existing resources. As leaders address this issue, it would be helpful to have reliable, effective human capital performance indicators and reporting systems to help understand one resource that builds organization success – their people. This issue creates a need for useful, consistent human capital measures and effective tools and methods to report and use them.

Another issue is a perception that monitoring and reporting performance, be it for human capital or otherwise, is at best a burden to leaders and at worst a disincentive to improve performance. Authors such as Mears have written about how the performance reporting system in the UK health system encouraged gaming the system (Mears, 2014, p. 293) and was a disincentive to improvements in patient care (McCann, Granter, Hassard, & Hyde, 2015, p. 778).

Others see the learning and accountability provided through performance measurement and reporting as mutually exclusive or at least as two ends of a spectrum (ADMN 582 Discussion, n.d., para. 1). A better understanding of the supportive nature of performance measurement and reporting is needed. This includes a better understanding of how leadership is required to create an organizational culture where learning and accountability are supportive of organizational performance improvement.

Performance measurement and reporting are central to public management in that it is intended to improve organizational performance and public accountability (McDavid, Huse, & Hawthorn, 2012, p. 337). Performance measurement relies on

outcome indicators that are measurable, targetable, reliable, benchmarkable, and defensible. Measurement is an exercise in evaluation. Establishing indicators is not the end. Indicators are merely the language used to help understand the change in the value of something (Fitz-enz, 2009, p. 291). This measurement, through effective human capital indicators, can provide learning needed to understand an organization's human capital. Performance reporting systems can use these indicators to provide leaders with accountability for achieving human capital performance improvements. Performance reporting systems build the indicators into tools such as human capital dashboards that, in turn, builds accountability.

c) **The Purpose**

Strong, standardized human capital performance measurement and reporting can provide public sector leaders with the learning needed to make evidence-based decisions that improve human capital management and practices. This, in turn, improves organizational performance (efficiency, effectiveness, and impactfulness). Through two parallel systematic literature reviews, this study consolidated and extended recent research in this issue (**Error! Reference source not found.**).

RESEARCH QUESTIONS:

- 1. Which human capital performance indicators (performance measurement learning tools) could provide learning that gives a complete, standardized picture of an organization's workforce and its needs?*
 - 2. What types of human capital performance reporting platforms (performance reporting accountability tools) can provide accountability that motivates improvement in human capital management and practices?*
-


d) The Terminology

To achieve an acceptable level of review of human capital indicators and reporting tools used to inspire improved performance, this study needed to review related terminology. Understanding what is meant by ‘human capital’, ‘indicators’, and ‘dashboards’ is pivotal in pulling understanding out of recent research and build upon it. Unfortunately, the fields of human resources and performance measurement have not established definitive definitions for a number of these terms. Fortunately, strong themes appeared in how some of these terms were used. These themes were used to establish definitions to be used in this study, providing, at least, consistency within this study.

Figure 1: Purpose

IMPROVING PUBLIC SECTOR PERFORMANCE THROUGH
HUMAN CAPITAL PERFORMANCE MEASUREMENT & REPORTING

PURPOSE



Strong, standardized human capital performance measurement and reporting can help public sector leaders make evidence-based decisions that improve human capital management and practices.

This, in turn, improves organizational performance (efficiency, effectiveness, and impactfulness).

Through two parallel systematic literature reviews, this report will consolidate and extend research in this issue.

RESEARCH QUESTIONS:

1. Which human capital performance indicators (performance measurement learning tools) could provide learning that gives a complete, standardized picture of an organization's workforce and its needs?
2. What types of human capital performance dashboards (performance reporting tools) can motivate improvement in human capital management and practices?

Chapter 2: Background

*“The stakes are high in the talent game. Improving predictability in an intangible like people can make or break organizational survival.
(Cooper & Jackson, 2018, p. ii)*

a) Pressure to Do More with Less

Public sector leaders are endlessly called to “do more with less” due to budget constraints and public demand. In the 1980s, the New Public Management movement started with the UK’s Thatcher government. It sought to use private sector-derived accounting and management processes, strategies, and technologies as a way to pursue public sector efficiency (Lapsley, 2009, p. 2). This was driven by the belief that the public sector could learn to manage its affairs and program delivery better by adopting private sector approaches. Politicians started to see this as a better alternative to the traditional budget increases (Lapsley, 2009, p. 3) and reflected the public’s demand for transparency and accountability (Ahyaruddin & Akbar, 2016, p. 1).

Among the doctrines New Public Management brought with it was decentralization of management control. This decentralization meant leaders needed clear goals, a way to measure their progress, and the flexibility, ability, and authority to make decisions and change course. These leaders were now held accountable for resources and the achievement of outputs and outcomes (Moynihan, 2006, p. 79). This emphasis pushed the need for performance measurement indicators that helped leaders learn what was broken and the accountability to motivate them to make the fixes.

Even though New Public Management has been around for over thirty years, public sector leaders still feel the stress of being asked to “do more with less”. In the

United States (US), a survey showed that 85 percent believe their workload will increase in the future, but only 20 percent think their resources will keep pace (Joyce, 2017, para. 1). There is a sense they are hitting their limits, but the call goes on.

The call to ‘do more with less’ is occurring when governments are asked to deal with new and more complex issues that need new and more complex services. Not long ago, the public would not have even contemplated the need for government to provide and monitor a national ‘Do Not Call List’. The changing nature of Canada’s social fabric and responsibility necessitated the establishment of the Truth and Reconciliation Commission of Canada. These, of course, compete with existing programs for resources – financial, capital, and human. To meet these challenges, public sector leaders have had to continue to look to do more with existing resources.

b) Success through Human Capital

To do more with less and improve organizational performance, public sector leaders can turn to the strengths of their organization’s people – their human capital. Leaders can hope to address New Public Management’s call for efficiency through less bureaucracy and more autonomy by drawing on workforce knowledge, skills, abilities, and effort. However, the increased intangible value human capital brings to organizations goes beyond efficiency gains. An organization’s human capital is becoming recognized as more important to increasing performance than capital assets (Cunningham, 2016, p. 1.10). Investing in human capital increases program effectiveness and impactfulness, and with this, organizational performance and value (Bassi & McMurrer, 2008, p. 864; Lawler & Boudreau, 2015, p. 1; Frigo & Ubelhart, 2015, p. 28; Gamerschlag & Moeller, 2011, p. 145).

In the private sector, superior human capital practices can be leading indicators of financial performance (Bassi & McMurrer, 2008, p. 864). Public sector leaders have the potential to realize performance gains by understanding their people and taking accountability to achieve people driven efficiency, effectiveness, and impactfulness.

c) The Need to Measure and Report Human Capital Performance

*You can't fix what you don't know is broke.
You won't fix it unless you care. (Bennett A. C., 2018, p. 9)*

There are those that suggest navigating between performance measurement for learning and performance reporting for accountability is like walking a slack wire. The closer you get to one pole, the harder it is to stay on the wire. This metaphor suggests reporting performance for accountability sacrifices learning and vice versa (ADMN 582 Discussion, n.d., para. 1).

If adopted as evidence-based learning tools in an environment where leadership has genuinely created a performance improvement culture, performance measurement and performance reporting can be complementary tools used to achieve public-policy goals. Lahey and Nielsen highlight that balance can exist between accountability and learning (2013, p. 55). Performance reporting contributes value through a leader's learning gained via the performance management cycle's feedback loop (McDavid, Huse, & Hawthorn, 2012, p. 8).

To tap into their workforce's potential, public sector leaders should understand more about their people and the programs and initiatives that can help improve their performance (e.g., lowering absenteeism). As all improvements come from or are

implemented by people, leaders can learn more about those people and how to improve effectiveness and impactfulness through evidence-based human capital decisions. With this knowledge, they help build a performance measurement culture where improvement comes from increased *learning* and *accountability*.

Building learning through performance measurement. Organizational performance is improved by giving leaders the right information about their people – in the right format. Human capital indicators can tell the story leaders need to improve performance. These indicators can include turnover rates, full-time/part-time ratios, engagement scores, disabling injury rates, budget to headcount ratios, and a host of other available indicators. It also means finding the right vehicle to present these indicators, including human capital dashboards. Organizations such as Alberta Health Services (2017a, pp. 21,22; 2017b, p. 5) and the University of Lethbridge (2014, p. 17) do this by incorporating human capital indicators into organizational and human capital dashboards.

Performance measurement is central to public management as it intends to improve the management of organizational performance and public accountability (McDavid, Huse, & Hawthorn, 2012, p. 377). It links outcomes with strategic goals (Pal, 2014, p. 286). This link relies on the development of outcome indicators that are measurable, targetable, reliable, benchmarkable, and defensible. Human capital performance measurement gives a framework through which organizations can increase the value of their human capital by improving awareness about an organization's people. Performance measurement tools such as dashboards with effective human capital indicators help organizations understand the question of "What is happening?"

Building accountability through performance reporting. Performance reporting systems can use reporting, supported by tools and processes, to implement learnings leaders gain through human capital indicators and dashboards. Many provinces and provincial agencies in Canada implemented these systems – many, such as the British Columbia government, Alberta Health Services, and the City of Edmonton include human capital elements.

To move beyond just understanding a workforce, performance-reporting systems can motivate learning and accountability for achieving performance improvements. In the late 20th and early 21st century, the human resource balanced scorecard presented by Ulrich (1997, p. 306), Yeung & Berman (1997, p. 322), Walker & MacDonald (2001, p. 368) and the Institute of Management & Administration (2003, p. 4) advocated the use of others. There is also a new system pioneered by the UK government – deliverology. This method formalizes performance reporting, follow-up routines, and evidence-based supports that can build accountability.

Deliverology implements policy and program improvements by

“establishing a small team focused on performance, gathering performance data to set targets and trajectories, and having

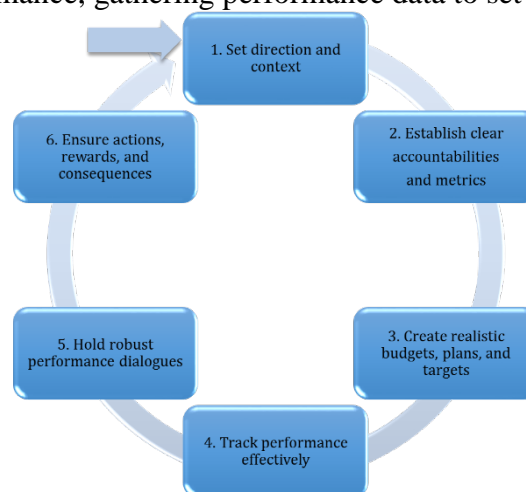
routines to drive and ensure a focus on performance” (Barber, Kihn, & Moffit,

2011) as seen in Figure 2. Deliverology

“is a system that helps governments

keep their promises” (Franco, 2016,

Figure 2: Deliverology Approach [adapted from (Barber, Kihn, & Moffit, 2011)]



para. 1) through the adage that “what gets measured gets managed” (Henderson, 2015, para. 1).

This study looked to learn from recent research what human capital performance indicators are best at providing the learning needed by public sector leaders to understand what is broken. It also looked to determine what types of dashboards as performance reporting tools are best at providing public sector leaders with the accountability for fixing it. By doing so, it is hoped that this provides insight into how public sector organizations can then, in turn, improve organizational performance.

Chapter 3: Literature Review

“...we have a moral obligation to use the best available evidence when making a decision. We can do this by learning how to distinguish science from folklore, data from assertions, and evidence from beliefs, anecdotes or personal opinions.” (Barends, Rousseau, & Briner, 2014, p. 3)

There is a great deal of academic research and grey literature reviewing the effect of performance measurement and reporting on an organization’s operational and strategic outcomes. The following gives a summary of that research to help figure out if human capital performance measurement and reporting can be used by public sector organizations to increase human capital value. It also reviewed recent thoughts on the research methodology used in this study – the systematic literature review.

a) Growing the Value of Intangible Resources

A primary strategic focus for many public sector organizations is to improve their intangible resources (Cunningham, 2016, p. 1.2). Gates & Langevin describe intellectual capital as all the intangibles based on knowledge and includes three components: human capital, structural capital, and relational capital^{vi} (2010, p. 113). While there has been research about the contributions intangible resources make to an organization’s value, there has been much less written about *how* to unlock an organization’s hidden value (Bukowitz, Williams, & Mactas, 2004, p. 44). Of the three components of intellectual capital, human capital garnered significant focus. Roughly described as the knowledge, skills, abilities, and effort of employees (Cunningham, 2016, p. 1.2), investments in human capital (formal or informal) can be made to increased performance and value.

b) Human Capital

Since the turn of the 20th century, there has been a drastic evolution in how organizations perceive their workforce: from labour commodity to intellectual and experiential capital. In the early 20th century, the workforce was seen as the physical sum of people employed. Adam Smith did not use the term ‘human capital’. However, he saw human capital as one of the fixed capitals organizations had, like machines, buildings, and improvements to land (Spengler, 1977, p. 32). According to Smith, the sources of human capital were experience and education (Vittadini, 2010, p. 249).

Today, there are many definitions of human capital. They include definitions such as:

- A workforce’s experience and education (Vittadini, 2010, p. 249);
- The skills, knowledge, and abilities people bring to work (Bernstein & Beeferman, 2017, p. 5); and
- People’s competencies, capabilities and experience, and their motivations to innovate (Hesketh, 2014, p. 7);

Even with the multitude of definitions (see Appendix A: Definitions for Human Capital for a more comprehensive list), they attempt to describe the value an organization’s people contribute to its overall success. Hesketh reinforced that human capital relates to the extent to which people are aligned with and support an organization’s governance and risk management, their ability to understand, develop, and execute an organization’s strategy, as well as their motivation for improving processes, goods, and services (2014, p. 8). What some research found was that the quality of a firm’s human capital is one of the most important determinants of a firm’s future financial performance (Bassi & McMurrer, 2008, p. 864).

c) **Human Capital Performance Measurement and Reporting**

Performance measurement is “the lifeblood of accountability” for public sector organizations according to Hoque (2008, p. 469). It provides leaders with an opportunity to *learn* – to find out what is working and what needs attention – in order to improve the performance of their workforce and their programs. The public sector is a knowledge-driven industry. It is not unusual to see salaries and benefits make up over 70% of operating costs. Therefore, making evidence-based decisions guided by performance measurement has noticeable effects on a public sector organization’s outcomes.

The number of academic and professional articles about human capital performance measurement is a sign of growing interest in the subject. This interest comes with an awareness that human capital policies and practices themselves have material and long-term fiscal and operational effects on organizations (Bassi & McMurrer, 2008, p. 864; Bernstein & Beeferman, 2015, p. 39; Bernstein & Beeferman, 2017, p. 5; El-Ghalayini, 2017, pp. 75-76). Human capital practices are a leading indicator of organizational financial performance (Bassi & McMurrer, 2008, p. 864). Although most studies focus on the private sector, it is not a stretch to believe that the public sector could see similar benefits.

Fitz-enz tells us organizations should explore and understand their people through human capital indicators and take an evidence-based approach to learn how people affect the organization’s business (2009, p. 293). This reflects the importance of measuring the efficiency and effectiveness of human capital through a set of indicators (ratios, performance evaluations, demographics, and timelines) and benchmarking those against other organizations (Schwartz & Murphy, 2008, pp. 166-167).

Benoit and Boudreau found the best performing public sector organizations did a respectable job of gauging their performance with indicators. Conversely, some poorly performing public sector organizations also had adequate performance indicators. This suggests good indicators are necessary but not enough to achieving high-performance levels (2012, p. 593). *Learning* through performance measurement is not enough. Performance measurement can be more than just an indicator telling leaders what happened. It can tell why things happened and what can be done to improve.

d) Human Capital Performance Reporting Systems

Learning that something needs improvement does not necessarily mean it will be improved. Unfortunately, some form of motivation is often needed. Literature suggested that for public sector leaders, performance reporting through consistent performance indicators could provide the *accountability* that may be needed to incent action. However, care should be taken that performance reporting occurs with a constructive performance improvement culture in place.

If efforts are not made to incorporate the value of intangibles into a formalized reporting framework, management reporting and financial statements become increasingly irrelevant as a tool to support meaningful decision-making (Lim & Chan, 2010, p. 686). There have been many different concepts for measuring intangibles and, in particular, human capital, through indicator-based and value-added approaches such as balanced scorecards, strategy maps, and economic value added. However, there has been no consistent understanding of reporting on intangibles or human capital (Gamerschlag & Moeller, 2011, p. 146).

Publicly traded organizations using evidence-based human capital practices to predict financial results give them the ability to use those indicators in internal strategic decision-making. Doing so increases the possibility of positive fiscal and organizational outcomes. It reinforces accountability by encouraging reporting this information to shareholders (Frigo & Ubelhart, 2015, p. 29). It makes sense that public sector stakeholders – the citizenry, among others – would have a similar interest in the human capital workings of the public sector.

Research has provided a few approaches that have been or are starting to be used by organizations to measure and report their human capital potential. These have typically included using an organization's annual report in addition to using a human resources specific balanced scorecard approach.

Annual Report. Including human capital value as part of an organization's annual report has been an objective of the Human Capital Accounting movement since the 1960s (Verma & Dewe, 2008, p. 102). Human capital accounting was defined by the American Accounting Association as "the process of identifying and measuring data about human resources and communicating this information to interested parties" (Verma & Dewe, 2008, p. 103). This system had three goals: (1) to provide organizations with objective information about the cost and value of human capital (*learning*); (2) to provide a framework to guide human resource decision making (*learning*); and (3) to motivate decision-makers to adopt a human resources perspective (*accountability*) (Verma & Dewe, 2008, p. 103). In short, this process looks at "putting people on the balance sheet" by assessing their "asset value".

The benefits of adopting human resource accounting are magnified as it helps an organization make decisions based on the availability and the necessity of human capital. When human capital is quantified, it gives the investor and other client's real insight into the organization and its potential. Proper valuation of human capital helps an organization eliminate the adverse effects of redundant labour (Seth, 2009, p. 107). Even after years of research and application, the concept of human resource accounting is elusive and has not produced a set of generally accepted human resource accounting principles (Boudreau & Ramstad, 1997, p. 344).

Balanced Scorecards. Balanced scorecards are a performance measurement and reporting system that strike a balance between financial and nonfinancial measures, links performance to rewards, and gives explicit recognition to the diversity of organizational goals (Dumitrana, Radu, Glăvan, & Jinga, 2011, p. 464). Developed by Kaplan and Norton, they typically include clustering performance indicators for four dimensions: organizational learning and growth, internal business processes, customers, and the financial perspective (McDavid, Huse, & Hawthorn, 2012, p. 479). They gained popularity in the 1990s as a driver-focused measurement system (Institute of Management & Administration, 2003, p. 4).

The human resource balance scorecard sees human resource management practices as strategic assets and provides a roadmap for organizations to integrate human resource systems with organizational strategy (Douthitt & Mondore, 2014, p. 17). Human resource balanced scorecards slightly modify the initial organizational balanced scorecard model and typically includes four perspectives that follow those of the original. For example, Walker & MacDonald put forth four categories: strategic perspective,

operations perspective, customer perspective, and financial perspective (2001, p. 368) while Douthitt & Mondore use the elements of deliverables, processes, alignment, and results (Douthitt & Mondore, 2014, p. 17). In the end, it is more about having a systematic, analytic, evidence-based, strategically aligned method to measure (*to build learning*) and report the outputs and outcomes (*to build accountability*) of the human resource function and the human capital programs and initiatives.

Deliverology. Deliverology is a new phenomenon developed by UK's Labour government in 2001 as an approach to deliver on its campaign to build effective public services. The Prime Minister's Delivery Unit was set up to ensure promises made to British citizens would be kept during the government's tenure. The Prime Minister's Delivery Unit, under the leadership of Sir Michael Barber, put in place a set of routines and problem-solving techniques that make up the delivery method. Barber defined deliverology as "a systematic process for driving progress and delivering results in government and the public sector" (Barber, Kihn, & Moffit, 2011, p. vii). He went on to write that deliverology "is the emerging science of getting things done in government." (Barber, Kihn, & Moffit, 2011, p. vii). Nordstrum, LeMahieu, and Dodd, in their review of the application of deliverology in the education sector, saw deliverology as a quality improvement method that emphasizes organizational goals and planning for their accomplishment (2017, p. 43). Deliverology leverages and extends vital principles of performance management (Barber, Kihn, & Moffit, 2011, p. 32) through:

- A small, dedicated delivery unit focused on achieving impact and improving outcomes (Barber, Kihn, & Moffit, 2011, p. 33),

- Evidence-based targets and trajectories (Barber, Kihn, & Moffit, 2011, p. 35), and
- Using routines to ensure a focus on performance – such as monthly notes, quarterly stocktakes, and in-depth six-month delivery reports (Barber, Kihn, & Moffit, 2011, pp. 37-38).

The delivery model has been implemented in over 20 jurisdictions around the world (Barber, Kihn, & Moffit, 2011, pp. 37-38) in government, as originally intended, and other areas of the public sector such as education. There does not appear to be evidence of deliverology being used within a business stream such as human resources.

Literature about deliverology is divided. Some see it as a systematic performance measurement approach that helps public sector organizations tackle wicked problems (Franco, 2016, p. 3; Barber, Kihn, & Moffit, 2011, p. 32). Others see it as a method that destroys innovation and leads public sector managers to game the system (Seddon, 2016, p. 2; Loveday, 2008, p. 122). Some recognize that deliverology is simply a tool. Like any tool, its effectiveness depends on the method it is used and the culture within which it operates (Lahey, 2017, p. 8; Nordstrum, LeMahieu, & Dodd, 2017, p. 57).

e) Systematic Literature Review

Systematic literature reviews have garnered interest in literature and textbooks. This research method is a way to pull together a thorough but abridged view of the evidence in a field of inquiry (Jessani & Reid, 2011, p. 1). A predetermined, planned literature review provides a specific and reproducible method to identify, select, and appraise studies of a previously agreed level of quality (Booth, Sutton, & Papaioannou, 2016, p. 11). Taking a systematic approach to the literature review reduces the likelihood

of bias and is a way to ensure a comprehensive body of knowledge on the subject is identified (Booth, Sutton, & Papaioannou, 2016, p. 2).

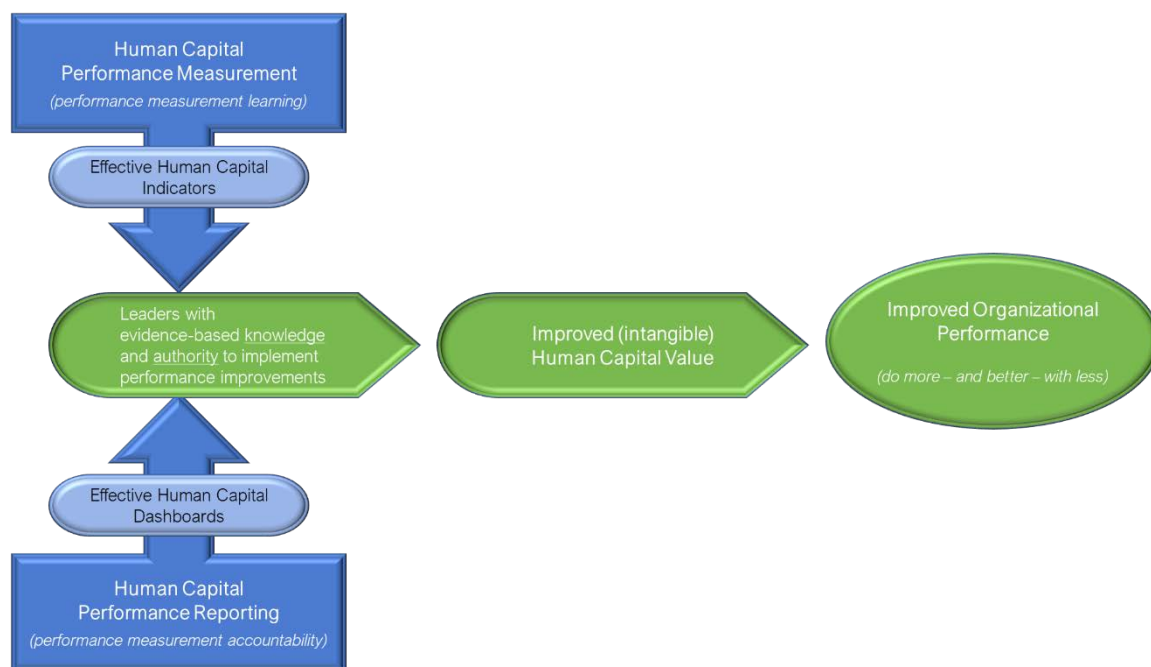
Articles and textbooks about systematic literature reviews stress the importance of using set guidelines, be they the PRISMA^{vii} or others, to gain the advantages of this method. The benefits of this research method include creating:

- A comprehensive body of knowledge that fairly and objectively details all relevant knowledge on the subject at hand on a subject is identified (Booth, Sutton, & Papaioannou, 2016, p. 2; Jessani & Reid, 2011, pp. 1-2);
 - Greater credibility (Booth, Sutton, & Papaioannou, 2016, p. 99)
 - Reduced likelihood of bias (Booth, Sutton, & Papaioannou, 2016, p. 2);
 - A specific, reproducible method to find, select and appraise studies of a previously set level of quality (Booth, Sutton, & Papaioannou, 2016, p. 11); and
 - A test for a specific hypothesis or developing new theories (Xiao & Watson, 2017, p. 1).
-

Chapter 4: Conceptual/Analytical Framework

“Measurement is really an exercise in evaluation. Measures are not the end in themselves. They are simply the language to help us understand the change in value of something.”
(Fitz-enz, 2009, p. 291).”

Figure 3: Conceptual Framework resulting in Improved Human Capital Value



The conceptual framework for the study (Figure 3) explored how strong, consistent human capital performance measurement and reporting could help public sector leaders learn and take accountability to improve human capital management and practices. This, in turn, improves organizational performance (efficiency, effectiveness, and impactfulness) through increasing the (intangible) value of their human capital. This exploration was built on the premise that leaders could seek to improve the value of their people if they (i) understand their people and what is going on with them (learning), and (ii) they have the authority do something about it.

The study was also based on the premise that a culture of performance management is foundational to implement performance measurement and reporting systems effectively. Instances are easy to find where performance reporting has been used negatively. For example, the performance target driven environment in the UK during Prime Minister Blair's tenure drove public sector leaders to game the system (Mears, 2014, p. 293). However, other organizations that built (or are building) cultures where performance management and reporting are tools that develop mutually supportive learning and accountability environments. This study left the investigation of the leadership requirements needed to build such a culture to a later study.

The study conducted parallel, but inter-related, systematic literature reviews. Through these reviews, it was hoped this study provides a better understanding of:

- (i) recent thought on how which human capital performance indicators give a complete, consistent picture of an organization's workforce and its needs, and
 - (ii) what types of human capital performance reporting can motivate improvement in human capital management and practices.
-

Chapter 5: Methodology

Literature is an essential feature of academic research as, fundamentally, knowledge advancement and innovation are built on prior existing work (Xiao & Watson, 2017, p. 1).

a) Research Design:

This report sought to understand how organizational performance could be improved through human capital performance measurement and reporting systems. It used two parallel systematic literature reviews to summarize and build upon the abundance of knowledge in recent literature. Specifically, this study hoped to capture how establishing consistent human capital performance measurement and performance reporting can be practical tools to build the learning and accountability required to help public sector organizations “do more (and better) with less”.

The growing use of systematic literature reviews reflects how this method offers a good grasp of recent knowledge. A systematic approach gives more than a quick summary of a few articles (Booth, Sutton, & Papaioannou, 2016, p. 108). It offers a reliable, valid method to expand knowledge and evidence in a field (Jessani & Reid, 2011, p. 1). This study used this systematic approach to complete a methodical and comprehensive analysis to build on current knowledge. Table 1 describes the report’s research design.

Table 1: Research Design - Parallel Thematic Systematic Literature Reviews

A *systematic literature review* follows a set protocol that defines search strategies, selection criteria, quality assessment, data extraction, and synthesis/analysis.

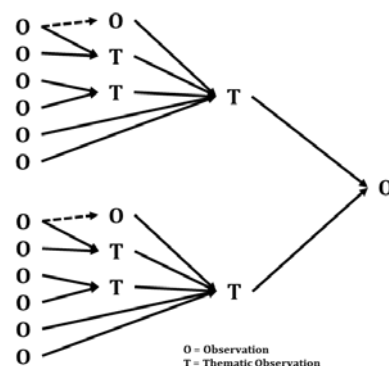
- This study followed a protocol template set out in a PRISMA style statement.

A *parallel approach* conducts two separate but related systematic literature reviews. The results are then reviewed to decide if their conclusions support an overarching hypothesis.

- This study conducted:
 - a systematic literature review on human capital performance indicators, and
 - a systematic literature review on human capital performance reporting systems.

A *thematic synthesis approach* builds on knowledge by pulling themes from recent literature, clustering those, and synthesizing them into analytical themes (Xiao & Watson, 2017, pp. 8-9).

- This study categorized, summarized, and built on the knowledge contained in Level 1 and Level 2 publications^{viii}. The study was open to using Level 3 and Level 4 publications for context.



POTENTIAL LIMITATIONS:

Selection Bias is a threat to literature reviews.

- This study reduced the risk of bias by following a PRISMA style protocol to produce results that are clear, valid, and auditable. Using the predetermined protocol results in a more comprehensive retrieval of literature and resulting in more credible review findings that are less prone to bias (Booth, Sutton, & Papaioannou, 2016, p. 99).

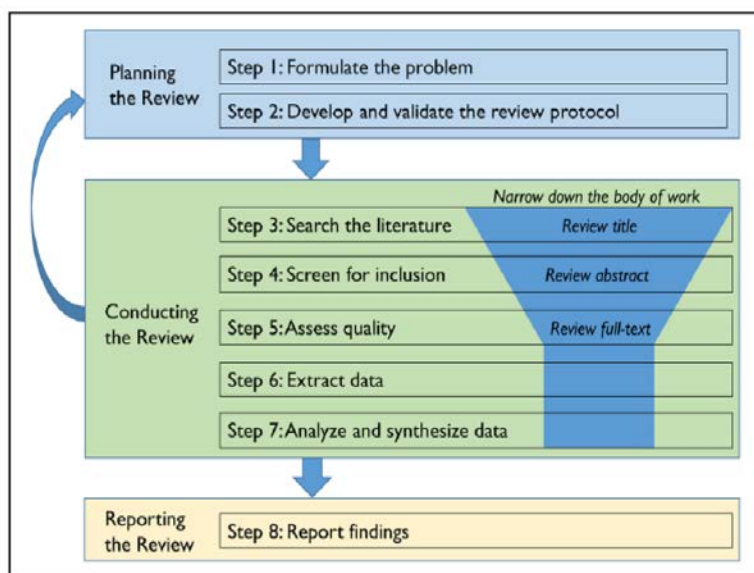
The Volume of Literature is a threat to searches giving too few or too many articles. It is always good to have as many observations (articles) as possible. However, criterion set too tightly can result in too few articles. Criterion set too broadly can result in an onslaught of articles that would not be able to be synthesized in a reasonable timeframe.

- This study reduced the risk of volume issues by limiting the number of articles for each systematic literature review to 20 per database per search string.

Rather than report on literature, this study used thematic synthesis to build upon the literature and extend current knowledge the use of human capital performance measurement indicators and performance reporting systems. A thematic synthesis approach involves extracting themes from the literature, clustering those, and eventually synthesizing them into analytical themes. These analytical themes are then used to answer the research question (Xiao & Watson, 2017, pp. 8-9).

A systematic literature review has three phases (planning the review, conducting the review, and reporting the review) that can be completed in the eight steps shown in Figure 4. Once the study's scope is defined in the planning phase, a review protocol was created. The protocol defines each step of the review process –

Figure 4: Process of Systematic Literature Review (Xiao & Watson, 2017, p. 11)



the methods of review (Booth, Sutton, & Papaioannou, 2016, p. 99).

b) Terminology

Some of the terms used in this study do not have set definitions within the fields of human resources or performance measurement. This presents challenges when conducting a systematic literature review. Therefore, this study sets out consistent usage and definitions for key terms such as ‘human capital’, ‘measures’, ‘metrics’, and ‘indicators’. Fortunately, strong themes appear on how some of the terms are used.

These themes were used to establish definitions used to guide the literature search criteria and provided clarity and consistency within the body of this study.

To build in sufficient reliability into definitions, this study looked to Level 1 (scholarly and research journals) and Level 2 (professional, trade & industry journals) literature. This approach worked well for terms such as ‘human capital’ as there has been much academic and professional discussion about this subject. On the other hand, fewer resources for the definitions of ‘measures’, ‘metrics’, and ‘indicators’ could be found. Therefore, some Level 3 (Popular Magazines and Websites) were included.

Human Capital. Historically, the workforce was seen as the people employed. Adam Smith saw human capital as fixed capital, like machines, buildings, and improvements to land (Spengler, 1977, p. 32). By extending the definition of capital to include people and their labour, Smith changed its meaning to a productive resource, rather than money alone (Hodgson, 2014, p. 1065). According to Smith, the sources of human capital are experience and education (Vittadini, 2010, p. 249). Investment in human capital, at the time, typically turned to experience (Spengler, 1977, p. 33).

The concept of human capital was expanded by Schultz in the 1960s to include the knowledge and skills of employees (Schultz, 1961, p. 1). Further discussion expanded the notion of human capital to include the health and wellness of employees by Becker (Houghton, 2017, p. 5) further intangible value to the definition by including motivation, engagement, and commitment by Fitz-enz (Fitz-enz, 2009, p. 20).

The Oxford dictionary defines human capital as the “skills, knowledge, and experience possessed by an individual or population, viewed regarding their value or cost to an organization or country” (Oxford Living Dictionary, n.d.). The “or

Figure 5: Human Capital Definition

Human Capital = the skills, knowledge, competencies, capabilities, abilities, experience, motivation, and commitment people bring to work or the value a workforce adds to the organization.

country” requires the clarification that this study limited itself to the discussion of how improvements made to human capital *within a public sector organization* can add value.

For this study, human capital was described as the skills, knowledge, competencies, capabilities, abilities, experience, motivation, and commitment people bring to work (Bernstein & Beeferman, 2017, p. 5; Hesketh, 2014, p. 7; Fitz-enz, 2009, p. 20). In short, human capital is the value a workforce adds to the organization (Figure 5).

A more fulsome list of ‘human capital’ definitions can be found in Appendix A: Definitions for Human Capital.

One other related point of clarity required is that researchers, authors, consultants, practitioners, and academics often use the terms “human capital”, “workforce”, “talent, and “people” interchangeably. Gathering data through systematic literature searches recognizes this ambiguity and include all in the search criteria. However, this study referred to an organization’s workforce rather than employees as many public sector organizations employ the knowledge, skills, and labour of certain non-employee groups such as volunteers, physicians (in healthcare), and research employees (in academia). Human capital then refers to the value this broader group of people bring an organization.

Measure, metric, indicator. The use of the terms ‘measure’, ‘metric’, and ‘indicator’ are often used interchangeably, even within the field of performance

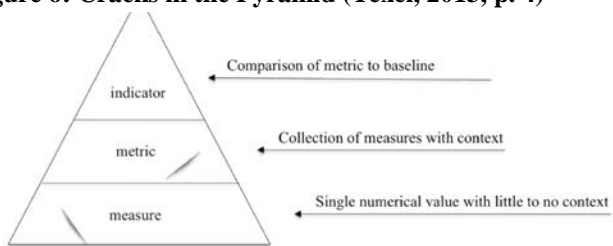
management. Unfortunately, doing so can create misunderstanding. A review of first and second level literature, along with some online blog discussions, draws themes in meanings for these three terms.

One particularly helpful journal article by Texel describes the terms as iterative and hierarchical (2013, p. 3). *Measures* are described as “a quantitative number that objectively represents a single characteristic of a real-world entity in a unit of measure, if applicable.” (Texel, 2013, p. 4). It is something directly observable: the table is one metre long, there are 1,485 employees in the organization, or employees took 256 sick days. *Metrics* represent “a collection of measures that subjectively give context for a less tangible and more abstract attribute of a real-world entity” (Texel, 2013, p. 4). Metrics are often ratios or percentages. In the human capital world, it could be the number of employees per manager (span-of-control) or total overtime hours as a percentage of worked hours. Finally, *indicators* are “based on metrics and a baseline against which a metric is measured” (Texel, 2013, p. 4). Indicators are comparative and directional. These baselines can be internal (targets) or external (benchmarks). In the human capital world, it could be comparing the overtime percent to a stated internal target (reduce by 2 percent) or external benchmark (achieve top quartile compared to a stated market).

Using these definitions sets up a hierarchy of terms. Measures become the atomic units of performance measurement (Texel, 2013, p. 4). Having proper, robust measures are required to build reliable metrics. In turn, these metrics are required to develop performance indicators that can be relied on to relay the performance of an organization

effectively. As Texel explains, if there are cracks in the lower orders of measures or metrics, the chosen performance indicators cannot be relied upon (Figure 6).

Figure 6: Cracks in the Pyramid (Texel, 2013, p. 4)



This study followed Texel's definitions and hierarchy of performance measurement terms. However, as is discussed below, the systematic literature searches recognized the field's ambiguous use of the terms by using all three terms in its searches and filtered appropriately afterwards. A summary listing of current usage of the terms measure, metric, and indicator can be found in Appendix B: Glossary.

c) Protocol Elements:

During the planning phase, this study identified data sources, search criteria, tracking tools, and analysis/synthesis methods. These search criteria were used for the fulsome search of existing literature. Protocol elements are outlined in Appendix C: Protocol Search Criteria.

Levels of Literature Searched. This study looked to Level 1 (scholarly and research journals) and Level 2 (professional, trade & industry journals) literature as the primary source of data. As the field of human capital performance measurement is an emerging one, Level 3 (popular magazines) would have been accepted but was not needed to provide context (Appendix D: Types of Periodicals).

Search Databases. To pull as much relevant data as possible, it was essential to determine which databases to use to search for relevant literature. As the topic of human capital performance measurement is an important one in the field of evidence-based

management, the study used the two databases used by the Center for Evidence-Based Management (CEBMa): ProQuest ABI/INFORM Global and EBSCO Business Source (note: CEBMa members have access to Business Source Elite. This study used the more complete Business Source Complete). To round out the academic journal search, two other databases were tested for the literature search: Web of Science and JSTOR. A summary of the databases used can be found in Appendix E: Literature Search Databases.

Keywords. To find the most relevant data possible, the study started with a broad keyword search. As definitions for terms such as ‘human capital’, ‘measure’ and, ‘dashboard’ are not definitive, a wide keyword net was used initially and be refined after the planning stage of the study.

The first systematic literature review that explored and built on research conducted on human capital performance indicators used the following search terms in the planning stage of the review:

"human capital" AND indicator; "human resource" AND indicator; ("human resources*" OR workforce OR talent) AND (indicator* OR measure* OR metric*); ("human resources*" OR workforce OR HR) AND (indicator* OR measure* OR metric*); and ("human resources*" OR workforce OR HR) AND (indicator* OR measure* OR metric*) AND performance*

Filters were used in three of the four databases to further refine search results (e.g., in JSTOR, the 'business', 'labor & employment relations', 'management & organizational behavior' or 'public policy & administration' categories were used). A full list of search terms and filters applied are in Appendix C: Protocol Search Criteria.

The second systematic literature review that explored and built on research conducted on human capital performance reporting systems used the following search terms in the planning stage of the review:

("human capital" OR "human resources" OR workforce OR HR) AND (dashboard* OR "performance target*" OR "performance report*") AND ("performance improve*" OR "efficient* improve*" OR "effective* improve*" OR "impact* improve*" OR "performance change" OR "efficient* change" OR "effective* change" OR "impact* change" OR "public sector"); ("human capital" OR "human resources*" OR workforce OR HR) AND (dashboard* OR "performance target*" OR "performance report*" OR decision*) AND ("performance improve*" OR "efficient* improve*" OR "effective* improve*" OR "impact* improve*" OR "performance change" OR "efficient* change" OR "effective* change" OR "impact* change" OR "public sector"); and ("human capital" OR "human resources*" OR workforce OR HR) AND (dashboard* OR "performance target*" OR "performance report*" OR "balanced score*" OR deliverology)*

Filters were used in three of the four databases to further refine search results (e.g., in JSTOR, the 'business', 'labor & employment relations', 'management & organizational behavior' or 'public policy & administration' categories were used). A full list of search terms and filters applied are in Appendix C: Protocol Search Criteria.

Exclusion Criteria: A set of exclusion criteria was used to ensure the study focused on human capital performance indicators and dashboards that best improve public sector performance. This included excluding articles that:

- (i) dealt with societal or national human capital;
- (ii) did not deal with human capital performance measurement or reporting (e.g., discussed individual employee performance), or
- (iii) could not be translated into English.

d) Synthesis and Analysis:

Once the literature search was complete, the articles were organized and assessed for their relevance to the research questions using inclusion and exclusion criteria. Four cuts were used to determine the final list of articles for each research question. These cuts were:

Cut 1: Removed duplicates

Cut 2: Applied exclusion criteria and assessed relevance based on a review of article abstract

Cut 3: Applied exclusion criteria and assessed relevance based on a review of article content

Cut 4: Determination of primary and secondary articles

The number of articles included and excluded was tracked at each step. Using a thematic synthesis organized these factors into principle themes followed analysis that includes validity assessment, sensitivity analysis, and gap analysis (Booth, Sutton, & Papaioannou, 2016, pp. 226, 251).

e) Reporting:

The final report presents the synthesized and analyzed conclusions from the parallel literature reviews. This includes an overall status of the literature and conclusions found. The study described the process of systematic literature review in enough detail to allow others to follow the same steps and arrived, hopefully, at the same results (Xiao & Watson, 2017, p. 16).

Chapter 6: Findings

“...performance measurement information is the “life blood of accountability” for public sector organizations” (Hoque, 2008, p. 469)

Considerable research has been completed on the topic of human capital performance measurement and reporting. The systematic literature review used in this study uncovered an abundance of this valuable knowledge. Several significant authors including Ulrich and Boudreau explored and discussed the utility of human capital performance indicators and reporting systems. This study’s first research question sought to discover if recent literature had identified human capital performance indicators that were or could be used as standard, consistent learning tools for leaders and public sector stakeholders. The second looked to see if there was any consensus or recent trends in effective human capital performance reporting systems that could supportively build leaders’ accountability for improving human capital performance.

The systematic literature review methodology described in Chapter 5: Methodology was used to pull Level 1^{viii} and Level 2^{viii} articles for each research question. The resulting 396 articles were then reviewed and went through a series of cuts to determine the level of relevance of the article to each applicable research question. These reviews and cuts were logged in a master tracking spreadsheet where unique identifiers were assigned to each article (i.e., RQ0-000).

The pool of articles for each research question was reviewed first to see if there were duplicate articles (Cut #1). If not, the abstract was assessed (Cut #2). The articles that remained after these cuts went through a review based on their content (Cut #3). As

they were reviewed, subject themes were identified and logged. This also served as a second review based on content (Cut #4) to identify articles that were directly tied to each research question. These articles were referred to as the 'primary articles' for the study. Those articles that were culled through Cut #4 were retained to provide secondary context to the information gathered through the remaining primary articles. These were referred to as the 'secondary articles' for the study. The following provides a summary of research found in these primary and secondary articles about human capital research indicators and the reporting systems that could be used to incite action by public sector leaders.

a) Research Question #1: Human Capital Performance Indicators

The first research question sought to see if recent research identified human capital performance indicators that best signal how well organizations manage or build human capital. It was hoped that if common indicators were found, these could form the basis of a standardized, publicly disclosed set of human capital performance indicators.

Results of Research Question #1 Searches. Using the systematic literature review methodology outlined in Chapter 5: Methodology, an initial 255 articles were pulled from the four databases used. Of these, 17 primary articles directly recommended human capital performance indicators. Another 25 articles (secondary articles) spoke to other important aspects of determining a standard set of human capital performance indicators (Table 2).

Table 2: Number of Articles Reviewed for Research Question #1

<i>Cut</i>		<i>Count</i>	<i>Running Total</i>
#1	<i>Number of Articles/Items pulled from database search:</i>	255	255
	<i>Number of Duplicates Removed</i>	10	245
#2	<i>Number of articles Removed after abstract review</i>	136	109
#3	<i>Number of articles removed after first article review</i>	79	29
	<i>Number of articles added by secondary source</i>	13	42
#4	<i>Number of articles removed after second article review - recommended performance indicators</i>	25 ^{ix}	17 ^x

The primary articles established if common, standardized indicators could or should be used by organizations, and what those indicators should be. The secondary articles identified trends in human capital performance indicator research and provided further context to the primary articles. The review of the primary and secondary articles identified six themes regarding the use of human capital performance indicators.

Research Question #1 Themes. Identifying themes within relevant literature is the cornerstone to using a thematic synthesis approach to systematic literature reviews. Identifying themes allowed the critical messages in the literature to be summarized and analyzed (Booth, Sutton, & Papaioannou, 2016, pp. 226, 251). Six themes relevant to the first research question emerged from the 42 primary and secondary articles:

Theme 1.1 Importance of human capital performance indicators

Theme 1.2 Public sector human capital performance indicators

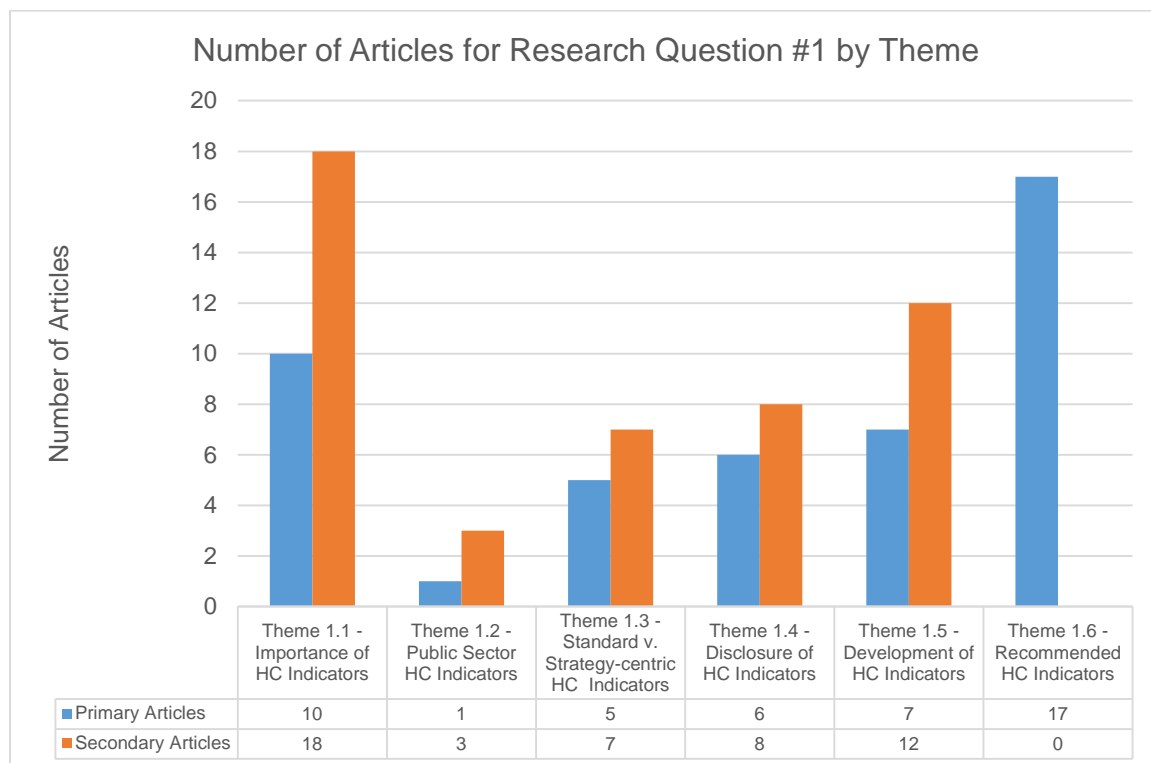
Theme 1.3 Standard v. strategy-centric human capital performance indicators

Theme 1.4 Disclosure of human capital performance indicators

Theme 1.5 Developing workforce human capital performance indicators

Theme 1.6 Recommended human capital performance indicators

Articles could, and often did, contribute to more than one theme (Figure 7).

Figure 7: Number of Articles for Research Question #1 by Theme

Overview of Research Question #1 Findings. Research Question #1's first theme (*Theme 1.1*) spoke of how the use of human capital performance indicators was an essential step to understanding, and after that improving, the programs and initiatives organizations use to build human capital value. The learning human capital performance indicators provide builds the foundation for programs and initiatives by increasing the awareness and understanding of an organization's people: their demographics, motivations, and behaviours. The articles also spoke to how human capital performance indicators need to identify or align with an organization's strategy, evaluate the performance of human capital related programs and initiatives, and evaluate the performance of the organization itself.

The next theme (*Theme 1.2*) that emerged was that, while there were many similarities between the public and private sector in use of human capital performance

indicators, the public sector needed to take special attention and consideration as they developed their indicators. This was driven by public sector organizations having a different purpose or reason for being (Chartered Professional Accountants of Canada, 2017, p. 698), different stakeholders with different expectations (Vandenabeele & Hondeghem, 2008, p. 244), and different level of accountability (Benoit & Bourdeau, 2012, pp. 575-576).

The following theme (*Theme 1.3*) spoke to the need for human capital performance indicators to align with organizational strategies to have value (Sangwa & Sangwan, 2018, p. 49). Only a few articles spoke to the need for standardized human capital performance indicators across organizations (Department of Trade and Industry, 2003, p. 24). *Theme 1.4* took standardization a step further and explored the need for organizations to publicly disclose human capital performance indicators to drive accountability and performance improvement (Chen & Lin, 2003, pp. 472-473).

Within *Theme 1.5*, a significant number of articles, almost half of the primary and secondary articles, spoke to steps organizations could take to develop human capital performance indicators. The papers identified key points, lessons, or approaches human resources and organizations could take to develop strong human capital performance indicators. This included building ties to the organization's strategy (Akhtar & Mittal, 2010, p. 78), determining the viability of data (Wang & Cotton, 2018, p. 761), and reviewing with stakeholders – internal and external.

Finally, in *Theme 1.6* the 17 primary articles listed or recommended human capital performance indicators that organizations could or should use to improve human capital value. Each article provided on average 13 recommended human capital

performance indicators with a range of 1 to 55. Some articles provided a full suite of performance indicators (e.g., (Pereira, Fontinha, Budhwar, & Arora, 2018, p. 56), some focused on a single or few indicators (e.g., Diversity), while others presented categories of indicators, but no indicators themselves (e.g. (Buller & McEvoy, 2012, p. 52).

Appendix F: Summary of Primary Articles provides information regarding these articles.

A full list of the over 200 recommended human capital performance indicators by each article can be found in Appendix G: Recommended Human Capital Performance Indicators. The human capital performance indicators found to be the most common included turnover rates, absenteeism rates, employee satisfaction/engagement, cost per employee/full-time equivalent, and others. However, these articles more importantly identified categories of human capital performance indicators that were recommended to be adopted by organizations as learning tools for organizational performance improvement.

b) Research Question #2: Human Capital Performance Reporting

The second research question sought to find what research has put forward as effective methods to build accountability and therefore incite action from human capital performance measurement. This meant looking at the performance reporting systems organizations have implemented to improve awareness, accountability, and action.

Results of Research Question #2 Searches: Using the systematic literature review methodology as outlined in Chapter 5: Methodology, an initial 141 articles were pulled from the five databases used. Of these, 12 primary articles directly recommended a human capital performance reporting system. Another ten secondary articles spoke to

other important aspects of determining a standard set of human capital performance reporting system (Table 3).

Table 3: Number of Articles Reviewed for Research Question #2

<i>Cut</i>		<i>Count</i>	<i>Running Total</i>
#1	<i>Number of Articles/Items pulled from database search:</i>	141	141
	<i>Number of Duplicates Removed</i>	26	115
#2	<i>Number of articles Removed after abstract review</i>	37	78
#3	<i>Number of articles removed after first article review</i>	55	22
	<i>Number of articles added by secondary source</i>	0	22
#4	<i>Number of articles removed after second article review - recommended performance indicators</i>	10	12

The primary articles determined what performance-reporting systems could or should be used by organizations. The secondary articles helped identify trends in human capital performance reporting research and provide further context to the primary articles. A review of the primary and secondary articles identified five themes.

Research Question #2 Themes: As mentioned earlier, identifying themes is crucial to completing the analysis for a systematic literature review. In the 22 articles found to be relevant to the second research question, five themes emerged:

Theme 2.1 Importance of human capital performance reporting

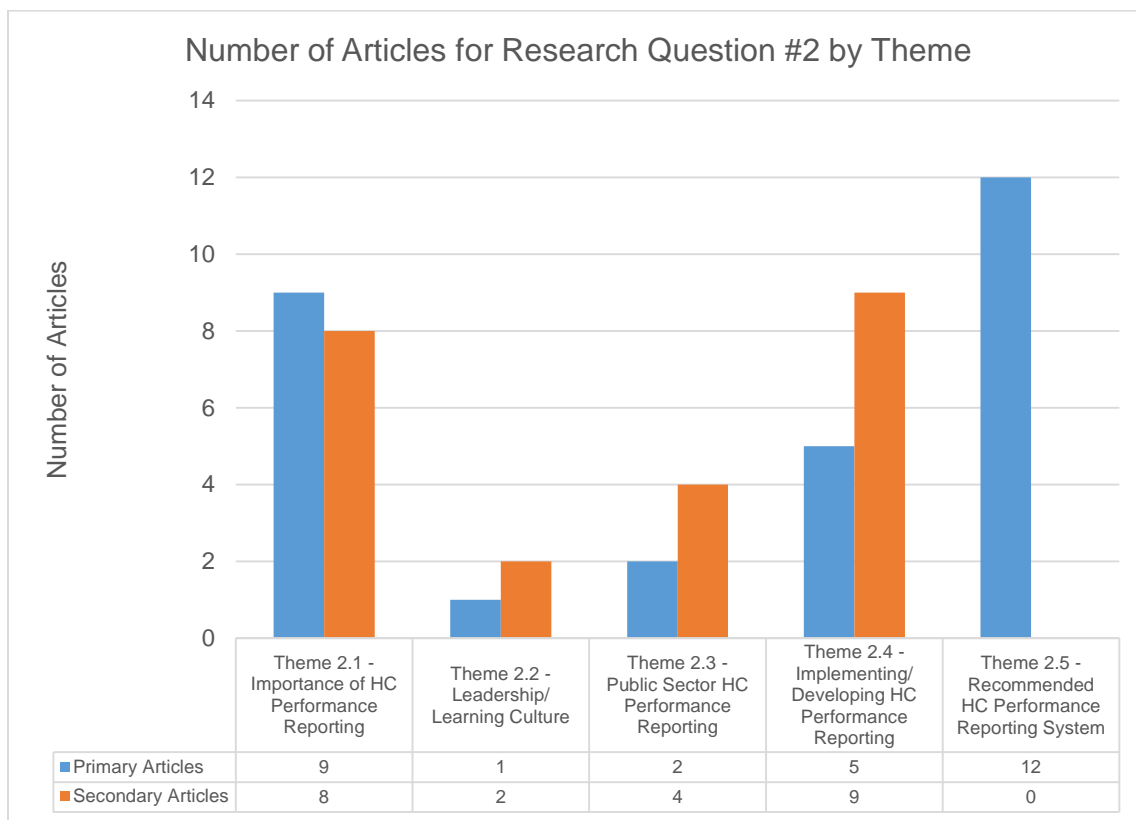
Theme 2.2 Importance of leadership and learning culture

Theme 2.3 Public sector human capital performance reporting

Theme 2.4 Developing and implementing human capital performance reporting

Theme 2.5 Recommended human capital performance reporting systems

Articles could, and often did, contribute to more than one theme (Figure 8).

Figure 8: Number of Articles for Research Question #2 by Theme

Overview of Research Question #2 Findings: The primary and secondary articles found for Research Question #2 revealed five themes. The first of these themes (*Theme 2.1*) included articles that attempted to explain or demonstrate the organizational value of human capital performance reporting and the systems supporting that process to organizational success. These benefits include articles espousing their usefulness for having reliable performance reporting including using the data to implement strategy and as a platform for learning (Srimai, 2015, p. 625), helping an organization maintain focus (Institute of Management & Administration, 2003, p. 4), and defining what it takes for an organization to succeed (Yeung & Berman, 1997, p. 322). Interesting analogies made were that human capital performance reporting systems are like an airplane’s instrument panel (Recardo, 2017, p. 39) or the dashboard of a car (Onley, 2006, p. 109). They

provide organizations with a glimpse of how a workforce is meeting its goals, if human capital initiatives and programs are effective, and if the organization is managing its workforce effectively enough to increase human capital and organizational performance.

A few articles highlighted a vital theme (*Theme 2.2*). According to these articles, to draw out the full value of human capital performance reporting, organizations should develop a culture of leadership and learning. This means fostering an environment where leaders can use their performance reports to identify areas for improvement or learning without having to worry about the ‘shame and blame’ retribution that developed out of the UK’s healthcare’s system (Mears, 2014, p. 293). They also found that leaders require the authority to make the changes needed to improve (Altmayer, 2006, pp. 9-10).

As with Research Question #1, a few articles highlighted the difference between the importance of and how human capital performance reporting occurs in the public sector (*Theme 2.3*). Again, a common point made was that the public sector carries different; some would argue higher, expectations around transparency and accountability.

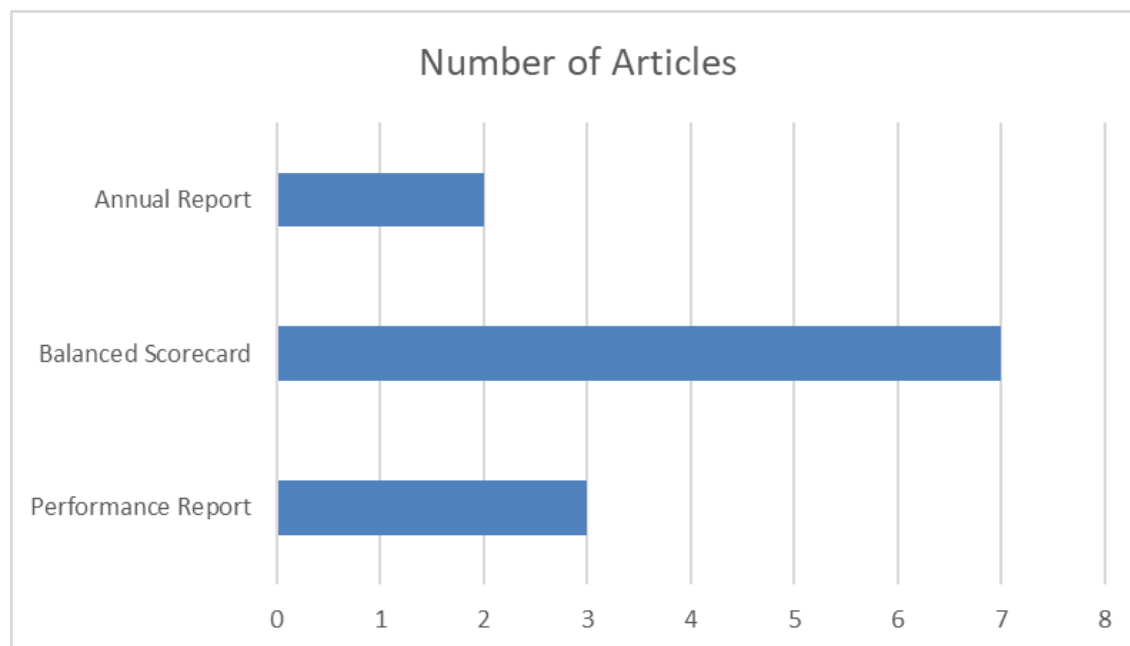
The articles that discussed implementation highlighted the importance of identifying the purpose of developing a human capital performance reporting system (*Theme 2.4*)— these reasons for developing these systems tie to not only the core purpose of *learning*, but also building *accountability* through moving leaders and organizations to action (Altmayer, 2006, p. 9; Moynihan, 2006, p. 79; Recardo, 2017, p. 39), linking to strategy (Altmayer, 2006, p. 9; Recardo, 2017, pp. 30, 35; Walker & MacDonald, 2001, pp. 372-373, 377; Douthitt & Mondore, 2014, p. 18), and addressing stakeholder needs (Ulrich, 1997, pp. 306-308; Yeung & Berman, 1997, p. 332). They outlined steps or processes organizations should take to build effective, strategically aligned human capital

performance reporting systems including their financial and non-financial aspects.

Finally, they also describe potential pitfalls to be avoided (Tonchia & Quagini, 2010, p. 63; McCann, Granter, Hassard, & Hyde, 2015, p. 774).

By far, the human resource performance reporting system discussed or reviewed most often in Research Question #2's primary articles were a human resources variation of the Balanced Scorecard approach (Figure 9). These articles (*Theme 2.5*) highlighted the evolution of human resource balanced scorecards, their focus on financial and non-financial aspects of the reporting system, and how they can be used to build *learning* and *accountability* that can be used to address organizational and stakeholder awareness and concerns.

Figure 9: Recommended Human Capital Performance Reporting System



c) Summary

The parallel systematic literature reviews produced almost 400 articles. The resulting primary and secondary articles included very current articles and articles spread

across the last 30 years. These articles provided valuable research on public sector and private sector organizations, and articles that spoke to Canadian, US, UK, and other organizations from across the world. The 47 primary and secondary articles provided strong themes on which robust analysis and conclusions could be made. These articles and their inherent themes provided a robust, diverse dataset that set the stage for good analysis and conclusions for the study's two research questions.

Chapter 7: Discussion & Analysis

Intellectual capital is a firm's only appreciable asset. Most other assets (building, plant, equipment, machinery, and so on) begin to depreciate the day they are acquired. (Ulrich, 1998, p. 15)

A systematic literature review looks to delve into research to find trends and conclusions that either support or defend a hypothesis or answer a research question. In this study, the answers to two questions are being sought: the first is about consistency in human capital performance indicators and the second is about the effectiveness of human capital performance reporting systems. The review of almost 400 articles led to 29 primary articles that addressed these two questions. Of these, 17 primary articles identified human capital performance indicators (RQ1) and 12 discussed human capital performance reporting systems (RQ2). These articles included a set of themes that were used to tweak out the important role human capital performance indicators and reporting systems play in providing the learning and accountability to public sector managers need to identify and address issues with their workforce and people.

a) Human Capital Performance Indicators

***Research Question #1:** Which human capital performance indicators (performance measurement learning tools) could provide learning that gives a complete, standardized picture of an organization's workforce and its needs?*

This study's first research question sought to understand if the related literature has determined which human capital performance indicators provide public sector leaders with the best measure of human capital performance. The hope is that if there are

consistent outcomes in the literature, this list of human capital performance indicators could form the basis of a standard group of indicators. These indicators can then be reported and compared across organizations providing human resource professionals and other stakeholders an indication of whether that public sector organization manages its human capital well.

i. Theme 1.1: Importance of human capital performance indicators

The most predominant theme found in the articles reviewed for the study's first research question spoke to the importance or value strong human capital performance indicators have on organizational success. Of the 42 articles that were examined after Cut #3: the article review process, 28 (66.7%) addressed how the use of human capital performance indicators can impact the efficiency, effectiveness, and impact human capital can have on an organization's performance. Further, 10 of the 17 (58.8%) articles that directly addressed the research question of which human capital performance indicators should also be used (primary articles) referenced the magnitude these indicators have on organizational performance.

The articles came from a variety of sources and spoke to the value of human capital, the value of measuring it, and then using those indicators to make evidence-based human capital decisions that should increase organizational tangible and intangible value. The articles that spoke to the value of human capital performance indicators included foundational articles from the late 1990s by researchers such as Ulrich, Boudreau, and Ramstad through to more industry-specific contemplations published as recently as 2018. These articles spanned a broad spectrum. They included research that addressed all sectors, as well as research that focused on either the public and private sector

organizations. The following presents and summarizes the 28 articles that spoke to the value and importance of measuring organizational human capital, why those indicators were used, their value, and some of the conditions that should be in place to best exploit that value.

Why do we use performance indicators? Performance indicators provide decision-makers evidence-based information and learning. Unfortunately, the Center for Evidence-Based Management (CEBMA) found that most leaders are not making decisions based on the best available evidence. Instead, decisions are often made solely on personal experience. The risk these leaders take is that personal judgment alone is not a reliable source of evidence. It is highly susceptible to systematic errors. Cognitive and information-processing limits make these leaders prone to biases that have adverse effects on the quality of the decisions they make (Barends, Rousseau, & Briner, 2014, p. 5). Establishing performance indicators can provide these same leaders with evidentiary and systematically solid information and learnings on which to base decisions. Establishing performance indicators enables leaders and stakeholders to step out of potentially risky experiential decision-making and evaluate the organization's results and achievements based on evidence they learned.

Benbrahim, Sefiani, Meddaoui, and Reklouï (2017, p. 22) appeared to concur with CEBMA when their review identified performance indicators as the information that enables decision-makers or teams to evaluate and learn about an organization's results and achievement. These indicators are tools that contribute to decision making. The researchers also identified performance indicators as quantified data that measures the whole or part of a process tied to a predetermined objective of the organization's strategy.

Performance indicators are answers to questions (Becker & Huselid, 2006, p. 920). Vandenabeele and Hondelghem (2008, pp. 243-244) told us that performance measurement had been an essential tool in nearly every public management reform, including the introduction of New Public Management^{xi}. In their article, they identified eight reasons leaders might have for building performance indicators (and subsequently reporting them): evaluation, control, budgeting, motivation, promotion, celebration, learning, and improvement. For these reasons, establishing and using human capital performance indicators are an essential and vital method of communicating strategy, providing evidence-based learnings needed for decision-making, and supporting public sector reform.

Why do we use human capital performance indicators? The articles gathered reflected the extensive research that has identified human capital – an organization’s people – as the most significant contributor to organizational success. Almost all articles in this review spoke to how human capital affects an organization’s value, the positive relationship between human capital and origination performance (Lim & Chan, 2010, p. 674), and that human capital has significant influences over performance indicators such as return on assets and return on equity (Lim & Chan, 2010, p. 674).

Gates and Langevin highlight that, given human capital’s role in performance and value creation, there is a challenge to achieve tangible results from these intangible resources (2010, p. 113). Because of increasing attention placed on human capital, there was keen interest in designing reliable indicators for human capital (Lim & Chan, 2010, p. 674). Human capital is the most critical asset of intellectual capital since it is the source of creativity in the organization. Knowledge of employees holds one of the most

crucial elements that affect the work performance of an organization (Bozbura, Beskese, & Kahraman, 2007, p. 1101).

Similar to findings of Fitz-enz, the sixth principle of the quality improvement process TQM^{xi} stipulated that, “people are the organization’s primary resource and these resources execute the organization’s processes” (Dumitrana, Radu, Glăvan, & Jinga, 2011, p. 458). Machines are tools and contribute to the productivity of people and have no meaning without people using them to create an organization’s outputs and delivering their outcomes (Dumitrana, Radu, Glăvan, & Jinga, 2011, p. 458). For organizations to effectively execute their operational strategy, they must develop a much better understanding of the causes and consequences of human capital performance. Through this, organizations can do a better job of holding leaders accountable for the most expensive resource assigned to them (Becker & Huselid, 2006, p. 920).

Human capital indicators potentially can and often should influence the development and implementation of organizational strategies. Those strategies that make incorrect assumptions about the ability of an organization to staff critical jobs and develop new areas of strategy supporting expertise would fail (Lawler, Levenson, & Boudreau, 2004, p. 29). For example, Verma and Dewe found that measuring organizational human capital is crucial. It reflects issues around accountability, strategic planning, and building a competitive advantage (2008, pp. 108-109). Good human capital performance measurement can provide organizations with objective information about the cost and value of human capital; provide a framework to guide human capital decision making; and motivate decision makers to adopt a human capital perspective (Verma & Dewe, 2008, p. 103).

The value of human capital performance indicators to an organization.

Measuring the performance of its human capital provides an organization and its leaders with the information and learning needed to make evidence-based decisions that could lead to higher organizational performance and value. Gates and Langevin identified the following benefits an organization can gain through human capital performance measurement. First, this measurement could help formulate strategy by identifying and paying attention to the critical competencies held by the organization's human capital. This can be used to build a competitive advantage (private sector) and societal impact (public sector). It improves the evaluation of how a strategy was carried out. Finally, in some private and public sector organizations, it can play a role in a leader's pay (pay-for-performance and performance management) or continued employment (Gates & Langevin, 2010, p. 115).

Seth found that the benefits of adopting human resource accounting, an early form of human capital performance measurement, are significant. The concept of human resource accounting developed to give leaders an accurate estimation of the value organizational human capital (2009, p. 112). Using this approach helped organizations learn to make managerial decisions based on the availability and necessity of human capital. Among other benefits, he found that the proper valuation of human capital helps organizations eliminate the adverse effects of redundant labour (2009, p. 107).

When human capital practices and processes are strategically managed, organizations can gain a competitive advantage and greater societal impact by better optimizing their most significant assets, namely their people. Research cautioned that when managing the organization's human capital, it is essential to take note of the

metrics and indicators used to determine if an organization is succeeding. The use of inaccurate or inappropriate metrics or indicators may result in incorrect learnings, or even measuring and learning the wrong thing, thus adversely affecting potential performance gains (Nienaber & Sewdass, 2016, p. 11).

The value of human capital performance indicators to stakeholders. Managing, measuring, and reporting intangible resource information such as human capital is of interest to internal and external audiences who need different knowledge to achieve their goals (Lim & Chan, 2010, p. 675). Human capital performance indicators can be a significant source of information and learning to external stakeholders such as the public, government, clients, and employees.

External stakeholders may require information to assess the quality of management and the reliability of organizations as potential partners. Internal audiences may require information on operations and progress to determine how their contributions can lead to increased organizational performance (Lim & Chan, 2010, p. 675). Reporting human capital indicators informs stakeholders about the knowledge management activities in an organization (Mouritsen et al. 2001), helps to improve employee morale and improves understanding of the crucial factors for growth and development. Failure to value an intangible resource can undervalue an organization (Lim & Chan, 2010, p. 675). The benefits of adopting human capital performance indicators are demonstrated when human capital is quantified. It gives internal and external stakeholders true insight into the organization and its potential (Seth, 2009, p. 107).

Theme 1.1 Summary: Briner and Barends of the CEBMa pointed out that the human resource discipline is about cause and effect. It aims to change things through

leaders' actions. Therefore, learning through scientific thinking and research should be at the heart of how human resources is practiced (Briner & Barends, 2016, p. 17). The value of human capital performance indicators comes from them being evidence-based, focused on outcomes, and directed toward improving human capital efficiency, effectiveness, and impact. With this in place, the human resource function can provide the learning needed by public sector leaders to improve workforce and thereby organizational performance. One of the precursors to this learning is the use of human resource analytics capability to fully understand and exploit the evidence the performance indicators present (Sen & Haque, 2016). The use of analytics in order to understand the impact of human capital practices and policies on organizational performance and, therefore, is a powerful way for human resource functions to add value (Lawler, Levenson, & Boudreau, 2004, p. 29).

ii. Theme 1.2: Public Sector human capital performance measurement

Of the articles pulled for the study's first research question, very few (only 4 out of 42 or 9.5%) discussed public sector performance measurement in a significant way. However, within these articles, some critical observations were made about the beginnings of performance measurement – and especially human capital performance measurement – in the public sector, the differences between performance measurement in the public sector compared to their private sector counterparts, and the effect public sector stakeholders have on what is measured and how. The following highlights the findings and observations made in the limited research found on this theme.

New Public Management and public sector performance measurement. The need for better understanding of an organization's human capital was underlined by the

increased pressure for public accountability public sector organizations face as they are called to be more efficient, effective, and impactful in the face of fiscal constraints and public demand for more services or services that are more complex and integrated.

Public sector organizations were expected to improve efficiency as initiatives such as New Public Management^{xii} called for governments to adopt entrepreneurial practices (Osborne & Gaebler, 1993). These initiatives drove leaders to find ways to provide more services for less cost or to “do more with less.” Benoit & Bourdeau found that government reforms introduced through New Public Management increased their accountability, placed a greater emphasis on results, and introduced the use of performance indicators (2012, pp. 575-576). In the 1980s, Sword and Cutsinger observed that public sector employers had been slower at adopting human resource planning, and therefore measurement, whereas it had long been a concern of private sector organizations (1984, p. 174). New Public Management pushed public sector organizations to adopt private sector practices, including the idea of incorporating human capital performance indicators and targets into public sector executive performance plans (Sword & Cutsinger, 1984, p. 174). Unfortunately, there was little knowledge about the practice of measuring human capital performance in government. Most of the knowledge came from the private sector and was often applied in the public sector without much consideration the differences brought about by the public sector’s purpose, stakeholders, and objectives (Vandenabeele & Hondeghem, 2008, p. 244).

Public sector performance measurement differs from that in the private sector.

The introduction of goals and targets was a significant change for public sector organizations. It became a visible component of a shift of focus from conforming to

process and policy to a focus on achieving outputs and outcomes efficiently and effectively (Benoit & Bourdeau, 2012, p. 577). With the adoption of New Public Management, performance management became one of the core elements public organizations actively implemented. Unfortunately, not recognizing the different effect performance measurement could have in the public sector led to cases of gaming and ‘targets of terror’ as demonstrated during the Blair government of the UK.

Public sector performance is complex and multidimensional. In the private sector, it may be comparatively straightforward to use financial criteria of success and failure – an organization makes money and survives, or it does not. In the public sector, performance is judged by multiple stakeholders such as taxpayers, employees, and politicians (Andrews & Boyne, 2010, p. 445). The public sector environment also provides different motivations for measuring performance. While there is a concern with productivity and the use of financial capital, public sector organizations also need to provide citizens, government, and clients with efficient and effective services. This efficiency is crucial for public sector organizations and is likely measurable by non-financial indicators (Pereira, Fontinha, Budhwar, & Arora, 2018, p. 48).

Public sector stakeholders drive public sector performance measurement. Most human capital performance research examines the private sector. The public sector is often ignored or a second thought. This is unfortunate as the public sector provides a distinct and complex study. In the public sector, decision-making is influenced by demands of varying external stakeholder groups such as other levels of government, citizens, clients, and politicians (Perry and Porter, 1982; Rainey, 2009), as well as more traditionally involved internal groups such as unions, employees, and leaders.

Interestingly, there has been an increased focus on measuring performance in government and public organizations. Performance measurement is an essential issue in nearly every public management reform. This is reflected in the growing research and literature that pays attention is paid to an aspect of public sector performance measurement. For example, Vandenaabeele & Hondeghem listed some reasons public sector organizations might have had for introducing performance management systems. These included evaluation, control, budgeting, motivation, promotion, celebration, learning, and improvement. External stakeholders such as unions and legislative bodies could also benefit from the introduction of such systems and may have, therefore, promoted their introduction (2008, pp. 243-244).

The complex and multidimensional nature of the public sector means that it cannot rely on traditional private sector performance measurement approaches. In the private sector, as mentioned, the use financial criteria of success and failure are standardized and accepted (rightly or wrongly, as the private sector is not immune to the increased impact human capital has on organizational outcomes). In the public sector, the different interests of various stakeholder groups affect every stage of performance measurement. This includes how public sector organizations determine which criteria to select, how these should be weighted, which indicators should be used, and whether scores on these indicators are interpreted as evidence of strong or weak performance. This implies it is possible to gain a comprehensive overview of the performance of public sector organizations by considering and addressing the assessments of different internal and external stakeholders (Andrews & Boyne, 2010, p. 445).

Theme 1.2 summary. Benoit and Boudreau found the best performing public sector organizations did an excellent job of gauging their performance with indicators (2012, p. 593). However, performance measurement should be more than just an indicator telling what happened. They should be the tools to help determine what should be done. They can be the tools (e.g., through a deliverology approach) that organizations can use to drive their performance – that is, build on the learning and accountability. For that to happen in a non-reign-of-terror manner, an organization – especially the leadership that drives that accountability – should build and foster a culture of learning, accountability, and support. Performance reporting needs to be supportive – what resource deficiencies, priorities, or barriers need to be addressed – rather than punitive.

Conversely, some poor performing public sector organizations also had adequate performance indicators, which suggested that good indicators are a necessary, but not sufficient condition for achieving high-performance levels (Benoit & Bourdeau, 2012, p. 593). This was an important finding for this research. Performance measurement needs a driver to enact or action performance improvement. Public sector leaders, employees, and organizations are not going to do it altruistically – there should be a motivator. Also, in the public sector, extrinsic motivators are continually limited. Therefore, intrinsic motivators such as a performance deliverology approach in a learning culture are needed.

iii. Theme 1.3: Standard v. Strategy-centric human capital performance indicators.

Having standardized measuring and reporting for human capital information may encourage greater investment (financial, political, &c.) and influence the operational and financial performance of an organization, whether public or private sector (Lim & Chan, 2010, p. 675). However, a question arises about what is the most appropriate to provide

stakeholders – internal and external – the information and evidence they need to do so. Of the articles pulled for the study's first research question, a few (12 of the 42 or 29% of the primary and secondary articles) discussed whether human capital performance indicators should be standardized across industries or if they should be customized to each organization's strategy.

Within these articles, some observations were made in the context that managing, measuring, and reporting intangible resource information is of interest to internal and external audiences who need different knowledge to achieve their goals. The discussion included identifying if standardized performance indicators could address how external stakeholders required information to assess the quality of leadership and the reliability of organizations as potential partners. It also included identifying what information internal stakeholders required on operations and progress to determine how their contributions lead to increased organizational performance (Lim & Chan, 2010, p. 675).

Using standardized human capital performance indicators. In 2003, the UK Department of Trade and Industry set up the Accounting for People taskforce to explore the case for encouraging organizations to report on performance in four areas: size and composition of the workforce; employee motivation; staff training and development; and remuneration and fair employment (Verma & Dewe, 2008, p. 105). The task force reported in November 2003. The report recognized that the skills and commitment of employees (human capital) are essential in creating value in organizations and that human capital measurement was generally supported. It also recognized that there were particular concerns that needed to be overcome to be able to achieve standardized measurement. These concerns included revealing data to competitors, misinterpretation

by analysts and media, lack of clarity on what and how to measure, a lack of standard definitions, wide industry differences and requirements, not being able to reflect their circumstances through an overly prescriptive approach, and reporting requirement making comparison difficult (Verma & Dewe, 2008, p. 105).

In 2005, the government issued a statutory regulation that required organizations under the UK's Company Act to prepare an operating and financial review that should include reporting on employee matters for all financial years commencing after 2005. However, the government decided not to implement these regulations and in January 2006, it repealed the requirement for these organizations to prepare operating and financial reviews as part of the financial statements, indicating that further work on this issue was needed (Verma & Dewe, 2008, p. 105).

A principal recommendation in the Accounting for People report was that information on human capital management should be included in any expanded operating and financial review that might become mandatory for UK companies. As well as contributing to increased transparency in financial and operational reporting, the taskforce found that mandatory reporting on human capital measures would provide considerable support to those organizations who believed that human capital is the most valuable resource available to leadership (Roslender & Stevenson, 2009, p. 855).

The 2003 Accounting for People report made five recommendations based on the findings of three commissioned studies. Two of these recommendations are relevant to this study. The first relevant recommendation is the most significant and complex. It would have required "all public and other bodies that produce operating and financial reviews or reports with similar aims, should include within them information on [human

capital management] within the organization, or explain why it is not material.” (Department of Trade and Industry, 2003, p. 24). The taskforce recommended that human capital measurement reports should adopt a strategic focus in communicating a business’s current understanding of the links between human capital policies and practices, its strategy, and its performance. These reports should include information on the size and composition of the workforce, retention, and motivation of employees, details of skills and training initiatives, compensation, and leadership and succession practices. The taskforce also included a requirement that the process used to produce human capital measurement reports be both “balanced and objective” and “susceptible to review by auditors” (Roslender & Stevenson, 2009, p. 858) (See Appendix H: Accounting for People Recommendation 1 & 2 for the full recommendation). By establishing a standardized framework for measuring human capital performance, the taskforce recognized “there are cogent reasons to encourage consistency of approach: it could improve comparability and reliability and provide a common framework that companies might find helpful.” (Department of Trade and Industry, 2003, pp. 3-4) The second relevant taskforce recommendation identified the proposed expanded operating and financial review (annual report) as the vehicle for communicating human capital performance (Roslender & Stevenson, 2009, p. 858).

The goals of the Accounting for People initiative and its supporting regulatory framework died. This occurred, in part, due to the UK accountancy profession’s opposition to the initiative. In their review of the demise of Accounting for People initiative, Roslender & Stevenson concluded that although the demise of the Accounting for People initiative came as no surprise, the existence of a renewed interest in

accounting for people through a focus on intellectual capital ultimately provided grounds for a degree of optimism. However, the debate surrounding Accounting for People did not occur in a vacuum. Research in the intellectual capital field was being pursued against a background of growing interest in developing a strong critical orientation across the whole spectrum of management studies (Roslender & Stevenson, 2009, p. 867).

In another part of Europe, Swedish companies had taken the lead in human capital performance disclosure by requiring the publishing of statements about companies' human capital in their annual reports as an addition to the conventional financial statements. To this extent, Scandinavia has become a leader in the field of intellectual capital measurement (Toulson & Dewe, 2004, p. 76). Researchers suggest a need to develop a standardized, universal set of adoptable action plans or critical metrics that could drive the financial performance of an organization based on the results of human capital performance indicators (Sen & Haque, 2016, p. 178).

Using human capital performance indicators aligned with organizational strategy. Datta, Guthrie, & Wright found that an organization's industry is an integral part of the mix within which policies and practices are framed and executed (2006, p. 135). Their research found organizations that have a generally positive and understood relationship between "best-practice" human capital performance and organizational performance often took a universal approach to human capital performance measurement. However, those organizations that see a material effect of how industry context or environmental conditions affect the extent or direction of human capital performance on organization performance are more inclined to rely on human capital performance

indicators tailored to their own organizational strategy. Their results provided some support for both perspectives (Datta, Guthrie, & Wright, 2006, p. 142).

Iwu, Kapondoro, Twum-Darko, & Lose put forth that human capital indicators should be based on the general system or total internal and external environment an organization exists within (2016, p. 20). Sangwa and Sangwan took a similar view. They identified eight criteria that should be used to key critical human capital performance indicators. The first of these eight is that human capital performance indicators should be dedicated to organizational goals. Their view was that the improvement of every key performance indicator (KPI), human capital or otherwise, should reflect the improvement of organizational goals (2018, p. 49).

PricewaterhouseCoopers as the current owners of the Saratoga Institute – a line of business started by Jac Fitz-enz that developed the first set of human capital performance metrics, measures, and indicators nearly 40 years ago (PricewaterhouseCoopers, n.d.) – advocated that organizations derive their own human capital performance indicators and targets (PricewaterhouseCoopers Česká republika, 2013, p. 8). Gates & Langevin take a similar view as they confirmed that human resource managers should develop their human capital performance indicators to be consistent with the organization's strategy (2010, pp. 123-124). Based on their research, they concluded human resource professionals could contribute to creating or customizing strategic human capital indicators and implement them within the organization's strategic performance measurement system to enhance performance. The more knowledge human resource professionals have about what human capital enablers help implement strategy, the more

they can focus on customizing human capital measures aligned with strategy (Gates & Langevin, 2010, p. 124).

Sen & Haque support a strategy-centric view as they saw the most potent action human resource managers can take to ensure their strategic contribution to an organization is to develop human capital performance indicators that convincingly displays human capital's, and the programs and policies that affect human capital's, impact on organizational performance. They saw the need to develop an innovative assessment system that measured human capital's and related policy and practices' contribution to organizational success (profitability and shareholder value) (2016, p. 177). Buller & McEvoy supported this view by identifying that the specific human capital management practices and their configuration are unique, complex, and dynamic in each organization because each environment and resulting strategy are also unique, complex, and dynamic. They acknowledge this is not comforting to those who are intent on finding standardized human capital performance indicators (2012, p. 53).

Theme 1.3 Summary. From the above, it can be seen that the route for human capital performance indicators (standardized v. strategic) comes down to the old human resources answer, "it depends". It depends on the purpose of the performance reporting. If the purpose is to build constructive accountability by benchmarking to other organizations (and allowing easy benchmarking for external stakeholders), the advantages of consistency in methodology and reporting style win the day. However, if the purpose is to incent action from internal decision makers – and provide a picture of how those decisions improved or detrimental the organization – then aligning the performance indicators with organizational strategy is preferred. However, the question

should be asked of why organizations and stakeholders cannot have the best of both worlds – a hybrid using core measures that can be standardized and supplemented by others aligned to strategy?

*iv. **Theme 1.4: Disclosure of human capital performance indicators***

Another theme that arose from the systematic literature review was whether organizations should or should not be required to publicly disclose human capital performance indicators. This theme was addressed by 14 of the 42 primary and secondary articles (33%). This avenue of thought appeared to have arisen from and supported the increasing view that human capital is as necessary to disclose to investors and other stakeholders as financial capital. Therefore, this information should not be held to an organization's executives alone (Lim & Chan, 2010, p. 673). The Australian Accounting Standards Board ranked the revaluation of intangible resources such as human capital as one of their highest priority projects. They saw that this could help Australian companies compete globally for investors by creating increased external stakeholder learning (Lim & Chan, 2010, p. 675). The UK's Accounting for People taskforce also found widespread agreement on the need for better human capital performance reporting for similar reasons (Department of Trade and Industry, 2003, p. 3).

For disclosure (as part of financial statements). There are suggestions that adequate reporting, measuring, and disclosure of human capital indicators need to appear in financial statements. However, such practices are still uncommon as traditional accounting methods have no consistent measure of human capital as a resource or asset (Lim & Chan, 2010, p. 674).

However, Chen & Lin suggested four ways to overcome this limitation and have human capital disclosed in financial statements and related documents:

1. *Disclose human capital in the president's (CEO's, deputy minister's, &c.) letter in the organization's annual report:* For example, this could include describing how an organization invested in human capital and its possible effects on critical employee turnover.
2. *Present human capital as notes in the financial statements:* The financial statement notes are supplementary and supportive information to financial numbers. Using the notes section provides an opportunity to explain how human capital has affected the organization's financials. This may also be a good fit as the notes section of the financial statement provide more of an ability to less quantitative (if needed) and more of an ability to provide a narrative.
3. *Record human capital as an intangible or another asset in financial statements:* The role of human capital in high-tech companies is as important as hard assets in the traditional industries. Chen & Lin saw the only difference as the invisibility of human capital. Just like goodwill (e.g., copyright and franchise), they saw that human capital could be recorded in the financial statements as intangible assets (2003, pp. 472-473).

The arguments against the human capital disclosure methods described above come from recording human capital as assets. An asset must demonstrate three characteristics: (i) it must be owned by the business, (ii) have future benefit, and (iii) can be valued in monetary units (Chen & Lin, 2003, p. 473). Chen & Lin found three rules found when presenting human capital as an asset are (1) the benefit results from human

capital must meet the future profit of business, (2) human capital accounts and numbers can be observed by the independent party objectively, and (3) the businesses have a good control on human capital (2003, p. 473).

The UK's Accounting for People taskforce recognized that the skills and commitment of employees are essential to organizational value by improving human capital performance. The taskforce found that human capital performance measurement and reporting was generally supported but also recognized there were particular concerns that would need to be overcome. These included concerns that disclosing human capital performance would reveal data to competitors, create misinterpretation by analysts and media, result in a lack of clarity on what and how to report, not deal with vast industry differences and requirements, and generate concerns against an overly prescriptive approach that would not allow organizations to reflect their circumstances and make comparisons difficult (Verma & Dewe, 2008, p. 105). Unfortunately, the report concluded by recommending an evolutionary approach to developing standard human capital performance indicators and reporting methods that employee matters should be incorporated in financial reports (Verma & Dewe, 2008, p. 105). Taking this approach would likely have led to a patchwork of reporting that would not have achieved the lofty goals of their report.

A principal recommendation in the Accounting for People report was that information on human capital management should be included in any expanded operating and financial review that might become mandatory for UK organizations. The taskforce saw this as contributing to increased transparency in financial reporting. They saw that mandatory reporting on human capital management afforded considerable support to

those who believed that people (as human capital) are now the most valuable resource available to management (Roslender & Stevenson, 2009, p. 855). This, if applied to the public sector, could also address calls from the public for greater transparency.

The taskforce recommended that leaders of organizations producing financial reports, and organizations that produce similar reports with similar aims, should include information on human capital performance within the organization, or explain why it is not material (Department of Trade and Industry, 2003, p. 24). They believed that greater transparency on how value is created through effective human capital policies and practices would benefit organizations and their stakeholders. Internal and external stakeholders all have an interest in knowing if an organization is striving to adopt those features of human capital management policies and practices that are associated with high performance. The taskforce also saw clear strategic value for organizations themselves. They saw the process of identifying those aspects of human capital performance that drive organizational performance and enhance value should itself lead to better management (Department of Trade and Industry, 2003, p. 3). However, through their evolutionary approach, they recognized there are arguments both for giving organizations a free hand to decide what and how to report and for encouraging the adoption of standard measures and definitions (Department of Trade and Industry, 2003, p. 3).

The taskforce recognized that organizations vary widely. An attempt to prescribe standardized human capital indicators might lead to reports that fail to capture the links between human capital and critical organizational performance (Department of Trade and Industry, 2003, p. 3). At the same time, the taskforce saw convincing reasons to encourage consistency. Mainly, consistency could improve comparability and reliability

and also provide a common framework that organizations might find helpful. The taskforce believed an evolutionary approach combining a strategic focus with safeguards to ensure balance, objectivity, and progressive improvements in comparability offer the best way of reconciling these conflicting views (Department of Trade and Industry, 2003, pp. 3-4). They agreed with the widespread view that since human capital performance is a material factor in organizational performance, reporting on it would fit naturally into operating and financial reviews for those bodies producing them, and identify a number of additional advantages to reporting on human capital management in operating and financial reviews (Department of Trade and Industry, 2003, p. 5).

In other parts of Europe, Swedish companies have taken the lead in disclosing human capital performance indicators by publishing statements about their human resources in annual reports as an addition to the conventional financial statements (Toulson & Dewe, 2004, p. 76). However, in Spain, Alvarez examined the voluntary disclosure of information on human capital in annual reports. This paper took a broad approach and examined all information related to the human element disclosed in the annual report. The results showed that Spanish organizations were far from complying with the recommended level of human capital disclosure. First, approximately 20 percent of firms in the sample did not include any voluntary information related to human resources in their annual report (2015, p. 316). Second, the disclosing firms tended to focus their attention on the description of the staff, training and health and safety. Information on these three items represented more than 50 percent of all human capital disclosure. Other items were rarely disclosed. It is interesting that there was a low

number of firms providing information on staff performance, an item that would be helpful in assessing corporate financial performance (Alvarez, 2015, p. 316).

Against disclosure. Organizations may measure human capital indicators for their use but may be reluctant to publicize it. Lim & Chan supported the view that if efforts were not made to incorporate the value of intangibles into a formalized reporting framework, the management reporting and financial statements would become increasingly irrelevant as a tool to support meaningful decision-making (2010, p. 686). Lim & Chan saw part of the reason as the accounting system believing over-optimistic estimates made by organizations could distort the ‘reality’ of the accounting reports. They treat human capital cost as an expense, not an asset or resource. Under these circumstances, the importance of proper disclosure and measurement of human capital is ignored. This makes the usefulness and content of the information provided by the present accounting system are limited (Chen & Lin, 2003, p. 470).

Theme 1.4 Summary. In the end, the debate on whether human capital performance indicators should be disclosed – as part of an annual report, financial statements, or special report – was inconclusive. Arguments against disclosure centred on a fear that too much information would be provided to competitors and that there is not a consistent way to present the information. To the first argument, establishing a consistent set of human capital performance indicators should present no more threat to organizational secrets than providing financial indicators through financial statements does. Secondly, disclosing consistently applied human capital performance indicators (i) provides more significant opportunity for an organization’s leaders to learn what needs to be done to increase human capital value by benchmarking to other external organizations,

and (ii) provides stakeholders the opportunity to learn if an organization is a good human capital manager or not – just as the financial statements demonstrate if an organization is a good financial manager.

v. **Theme 1.5: Developing workforce human capital performance indicators**

When identifying or developing human capital performance indicators, it is important to keep in mind their *purpose*. As best, human capital performance indicators exist to help an organization's decision makers (frontline leaders, executive, human resource professionals, &c.) learn about their people (human capital) by giving evidence needed to make effective, efficient, and impactful human capital decisions that hopefully increase the value of the organization.

The research uncovered through the systematic search identified key points, lessons, or approaches human resources and organizations should take to develop strong human capital performance indicators. The specifics are outlined in Appendix I: Key Points or Lessons in Developing Human Capital Performance Indicators. However, in short, this research shows that performance indicators should:

- Be tied to strategic impacts,
- Be built on reliable, available, consistent, and relevant data,
- Be easy to understand and communicate, and
- Be able to demonstrate change over time and across the organization based on human capital management performance.

An essential and practical test of the appropriateness of human capital performance indicators pointed out by Akthar is the “why” test. When a potential

outcome variable (e.g., an aspect of human capital performance) is considered, it is useful to ask why the organization is interested in that particular outcome. If the answer is because it impacts another variable that in turn influences an important outcome, for example, profitability in the private sector or service quality in the public sector, then care must be taken to assure that changing that intermediate outcome also affects the ultimately desired outcome (Akthar, 2013, p. 78).

Even though research is establishing that human capital outcomes relate to better organizational performance, measuring the human capital contribution has remained a challenge. The quantification and measurement of human capital (and the human resource function) had not met the expectations of organizational leaders and human resource practitioners. Specific questions continue to exist on what should be measured to identify human capital performance and how to measure it (Iwu, Kapondoro, Twum-Darko, & Lose, 2016, p. 8). Too often senior human resource leaders are left with relying on or presenting results from an organization's latest employee survey or turnover rates (Becker & Huselid, 2006, p. 920). When an organization's executive leadership, "Why is this important?" human resource leaders do not have good, concise, simple answers. One potential answer to this issue is to make a distinction between human capital performance and the performance of the human resource function (Becker & Huselid, 2006, p. 920). The development of robust human capital indicators is likely to build value for an organization and its stakeholders through human capital learning. This, in turn, may then encourage greater investment – financial, political, or otherwise – in an organization (Lim & Chan, 2010, p. 674).

Developing human capital performance indicators. The development of human capital performance indicators, according to Boudreau and Lawler and reinforced by Rogers & Write and Sen, should speak to the efficiency, effectiveness, and impactfulness of an organization's human capital and how human resource programs increase human capital value. A discussion of human capital value requires the inclusion of all three of these elements simultaneously. Efficiency refers to rates of resource usage in achieving objectives. Effectiveness refers to the achievement of objectives (Rogers & Wright, 1998, pp. 318-319). Impactfulness refers to the practical influence on organizational performance and sustainability.

Organizations can use efficiency, effectiveness, and impactfulness indicators to better understand and evaluate the effect human capital and the human resource function have on organizational strategy and performance. The first level of indicator, efficiency, is the easiest to collect. These provide learning about the efficiency of an organization's human capital and the human resource function. In particular, these describe how fast human capital may perform as well as how well the human resource function performs its basic administrative tasks. These indicators can be collected to assess efficiency include productivity and cost metrics for human capital (such as the number of social welfare files closed per month) and the human resource function (such as time to fill open positions, human resources headcount ratios, and administrative cost per employee). A comprehensive set of measures and indicators can be produced to evaluate an organization's human capital and human resource function's administrative activities (Lawler, Levenson, & Boudreau, 2004, p. 28).

The second kind of human capital performance indicator focuses on effectiveness: whether human capital programs and practices have the intended effect on the people or talent pools toward which they are directed. In the case of training and development, for example, true effectiveness indicators should offer information on whether employees build needed skills not just on participation in training programs but also on employee and management satisfaction with the training provided (Lawler, Levenson, & Boudreau, 2004, p. 28). This level of measurement can also describe the effectiveness of leaders in their efforts to improve human capital performance. These indicators can include absenteeism and a number of quality-related indicators.

The third kind of human capital indicators looks to impact. This identifies if learnings applied by organizational leaders have a measurable and identifiable effect on organizational outcomes. Often these measures are ones that have human capital and operational ties. For example, in healthcare reviewing staff safety indicators and patient quality indicators can demonstrate to leaders (help them learn) that by focusing on staff safety, patient outcomes can improve.

When trying to develop methods to measure human capital, leaders often initially find they do not have good human capital indicators. However, as Boudreau & Ramstad point out, they are typically using many human capital indicators already (e.g., salary costs, separation rates, time to fill vacancies, absenteeism, attitudes) (1997, pp. 344-345). One reason this might occur is there may be a tendency to frame human capital indicators too much in the light of financial measurement systems, and not enough regarding their ultimate purpose (Boudreau & Ramstad, 1997, p. 344), which is to provide learnings about an organization's people.

Developing skills to use human capital performance indicators. Within this theme, many articles discussed the needed to develop capacity within human resources to analyze performance indicators. This is a necessary step as the human resource function of an organization exists to enable leaders to get full value out of their human capital. Analytics is becoming another facet through which human resources professionals can do this – not unlike how human resource professionals enable leadership through labour relations, compensation, or learning & development sub-disciplines.

Even though human resources can make a strong case for being an important part of strategy development and implementation because of the significance of human capital, it is often seen as falling short of being a strategic partner. One possibility of why this occurs is because the human resource function lacks the analytic and data-based decision-making capability needed to influence human capital learning for leaders and then, in turn, the organization's strategy. This may be because it lacks the right indicators and analytic models. In comparison to finance and marketing, human resources can fall short when it comes to providing indicators that assess human capital capability and the human resources processes and practices that support building human capital from a strategic perspective. Human resources also lacks analytic models that show the relationship between human capital practices and the effectiveness of the organization (Lawler, Levenson, & Boudreau, 2004, p. 28).

The use of analytics in order to understand the impact of human capital and supporting human resource practices and policies on organizational performance is a powerful way for human resource functions to add value to organizations (Lawler, Levenson, & Boudreau, 2004, p. 29). Several things are required to perform the kind of

analytics that show a relationship between human capital practices and business outcomes. First, Lawler, Levenson, & Boudreau suggest that the right human capital indicators are required. However, indicators by themselves are not enough. Good analytic models and valid indicators of organizational performance are required. Human resource functions need to be able to bring data and data analysis to the strategy table that show how human capital management decisions affect organizational performance. It needs to go far beyond merely showing that human resource function can reduce their cost and improve the quality of service. Doing this is not a high-value-added function in most organizations. Providing data about the strategic readiness of an organization to execute a strategy is high-value-added, as is identifying what an organization needs to do to implement a strategy (Lawler, Levenson, & Boudreau, 2004, p. 29).

People or workforce analytics refers to the processes involved with understanding, quantifying, managing, and improving the role of talent in the execution of strategy and the creation of value. It includes not only a focus on metrics, measures, or indicators (e.g., what is needed to be measured to learn about the workforce?), but also analytics (e.g., how does an organization take these learnings to manage and improve the indicators it deems to be critical for organizational success?) (Huselid, 2018, p. 680). The use of workforce analytics is increasingly seen as critical to demonstrating the human resource function's capability and human capital's value-added impact. In particular, the human resource function's ability to provide strategically relevant analytics to organizational leaders increasingly outweighs the importance of providing data on the human resource function (Wang & Cotton, 2018, p. 761). Predictive analytics has been defined as the use of quantitative methods to extract insight from data and then

using these insights to assist organizations to make informed decisions and to forecast and improve their final business performance (Nienaber & Sewdass, 2016, p. 11). The use of analytics to understand how human capital practices and policies impact organizational performance is a powerful way for human resource functions to add value to their organization (Sen & Haque, 2016, p. 178).

Theme 1.5 Summary. The research revealed through the systematic literature review shows that organizations should pay close attention to the human capital performance indicators they use. These indicators need to be based on sound methodology and data. They need to be grounded in an organization's strategy. Some argue these indicators also need to be broad enough to be benchmarked externally to assess comparative performance. Human capital indicators should, when developed fully, provide learning on (i) the efficiency, effectiveness, and impactfulness of the human resource programs designed to enable leaders to improve human capital and, (ii) the efficiency, effectiveness, and impactfulness of an organization's human capital itself.

Organizations also need to develop the analytics capacity within their human resource function and frontline leaders. This provides the ability to understand better what can be learned from human capital indicators. Diagnostic and predictive modelling capacity is also needed. Through these, a people analytics sub-discipline of human resources can facilitate human capital learnings for leaders and organizations.

vi. Theme 1.6: Recommended human capital performance indicators

By definition, all primary articles provided recommended human capital performance indicators or at least categories of these. In total, there were over 200 recommendation indicators (Appendix G: Recommended Human Capital Performance

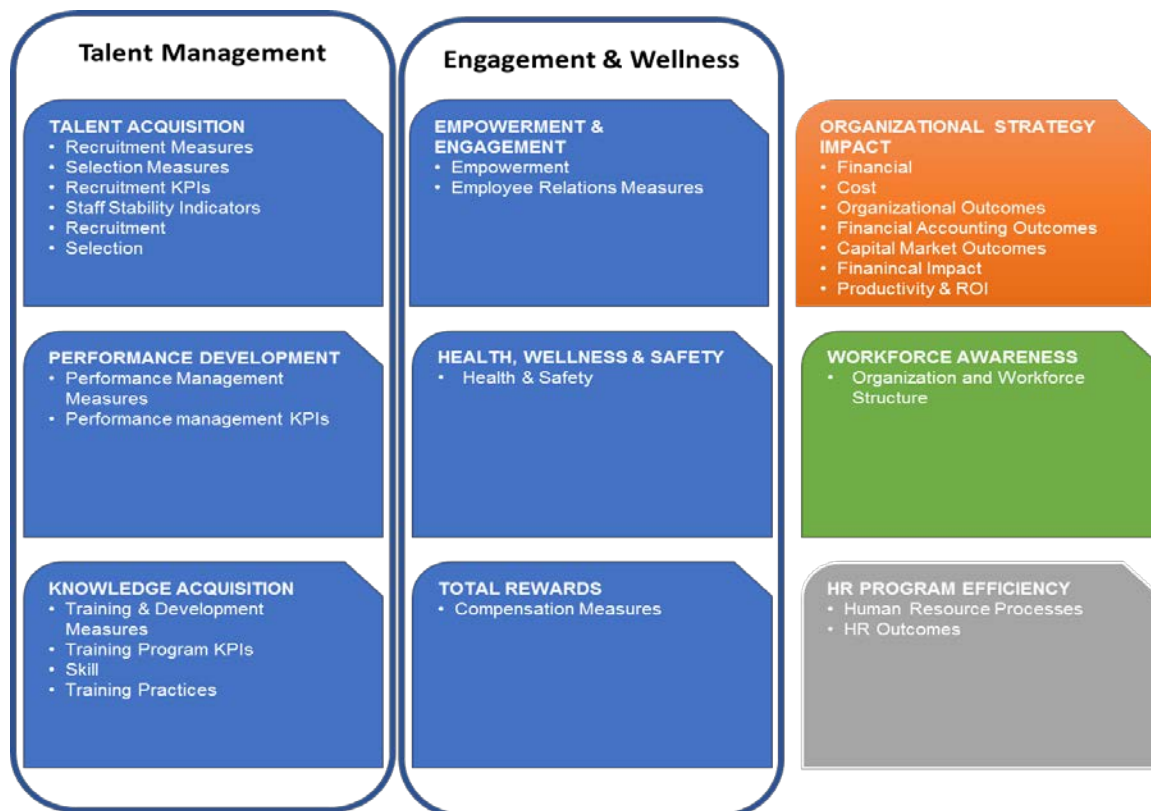
Indicators), although many were duplicated across articles. What was surprising was (i) the variety of indicators that were suggested, and (ii) the sheer number some articles proposed. For example, about half (8 of the 17 articles) recommended more than ten indicators with Srimannarayana recommending 55 (2009, pp. 268-272). This alone did not bode well for the adoption of standardized performance indicators across organizations, let alone across industries.

Lim & Chan provided an extensive inventory of potential human capital measures. They present solid arguments on the value of reporting standardized human capital indicators. However, using 15 measures may be too many for leaders and stakeholders to pay attention to and learn from as they attempt to build organizational value through improving human capital performance. Unfortunately, the indicators identified are general, and some theoretical. Some would need significant work to provide workable definitions (e.g., Ratio of Value Added per Employee). Within the vast number of human capital performance indicators listed, it was comforting to see that most elements of human capital value and human resource functions were represented except for indicators that deal with an organization's leadership.

Standardized human capital performance indicators. Due to the large number of recommended human capital performance indicators identified in the primary articles, a grouping exercise was conducted to determine the most prevalent. The first step was looking to the seven (of 17) primary articles that categorized their recommended human capital performance indicators. These categories were then themselves grouped and aligned into nine groups: six groupings that addressed the effectiveness of human capital programs, one grouping that addressed the organizational outcomes/impacts of human

capital programs, one grouping that addressed the efficiency of human capital programs, and one grouping that addressed building an awareness of an organization's workforce (Figure 10). The first six categories could be further grouped into two larger groupings. The first is Talent Management that deals with building human capital value through building the knowledge, skills, and performance of employees. The second is Engagement & Wellness that deals with building human capital performance through organizations developing safe and engaging workplaces. Note that the Total Rewards category is included in this larger grouping as compensation can often be a significant dissatisfier to employee engagement if not managed and delivered appropriately.

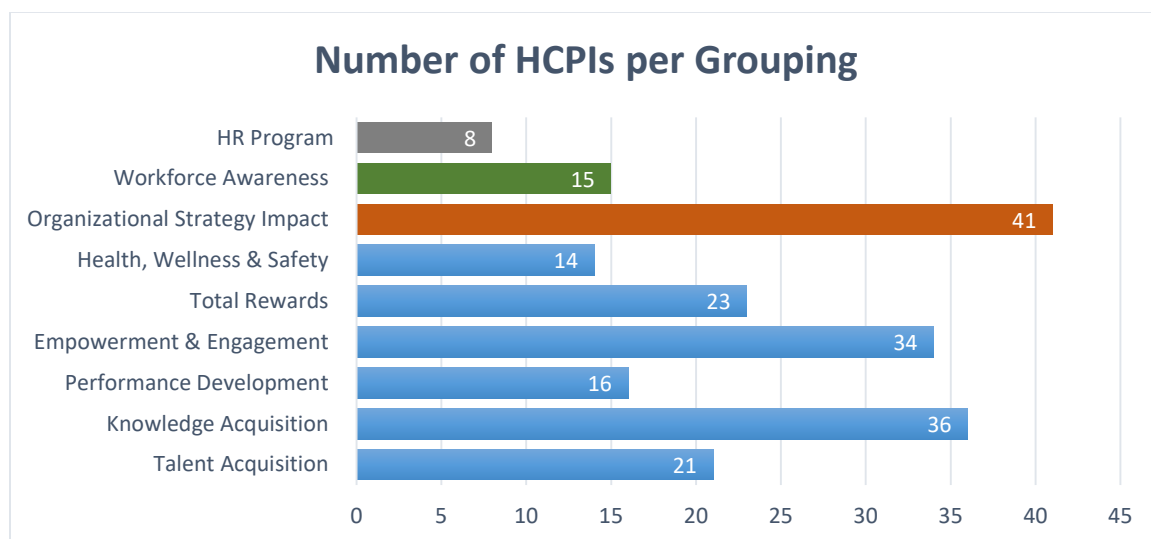
Figure 10: Human Capital Performance Indicator Groupings



It is notable that out of the 17 primary articles, no grouping of recommended human capital performance indicators related to leadership within the organization.

With these groupings established, the human capital performance indicators were then clustered within them (Appendix J: Grouped Human Capital Performance Indicators). Most indicators fell within the organizational strategy impact grouping (41 recommended indicators). The next most populous groupings were knowledge acquisition (36 recommended indicators) and engagement & empowerment (34 recommended indicators) (Figure 11). The top three groupings demonstrated that interest on behalf of the researchers on the effect human capital has on organizational performance, the growing nature and value of knowledge-based workforces, and a recent focus on employee engagement and local decision-making.

Figure 11: Number of Human Capital Performance Indicators per Grouping



The top two human capital performance indicators for each group and any notable observations are included in Table 4.

Bias to Efficiency. In reviewing the complete list of human capital performance indicators, there was a bias towards those that spoke to the efficiency of human capital programs developed and implemented by human resources and carried out by organizational leadership. These included indicators such as ‘time to fill vacancies’, ‘HR

Table 4: Top Human Capital Performance Indicators

HCPI Grouping	Top Human Capital Performance Indicators
ORGANIZATIONAL STRATEGY IMPACT	
	<ul style="list-style-type: none"> • Labour Cost (efficiency) • Revenue/Value per Headcount/FTE (impact)
TALENT MANAGEMENT	
Talent Acquisition	<ul style="list-style-type: none"> • Cost of Recruitment (efficiency) • Acceptance Rate (effectiveness)
Knowledge Acquisition	<ul style="list-style-type: none"> • Cost of Training/Training Days (efficiency) • Career Path Ratio (effectiveness)
Performance Development	<ul style="list-style-type: none"> • Percentage of Employees with Development Plans (efficiency) • Percentage of Low Performers (effectiveness)
ENGAGEMENT & WELLNESS	
Empowerment & Engagement	<ul style="list-style-type: none"> • Turnover (effectiveness) • Engagement/Satisfaction (effectiveness)
Health, Wellness & Safety	<ul style="list-style-type: none"> • Absenteeism (effectiveness) • Accident Rate (effectiveness)
Total Rewards	<ul style="list-style-type: none"> • Average Salary (efficiency) • Percentage of Employees paid based on Performance (efficiency)
WORKFORCE AWARENESS	
	<ul style="list-style-type: none"> • Workforce Diversity (demographic) • Average Age/Service (demographic)
HR PROGRAM EFFICIENCY	
	<ul style="list-style-type: none"> • Time to Fill Vacancy (efficiency) • HR Ratio (efficiency)

Ratio' and 'labour cost'. They describe how fast or how often or how much. Efficiency indicators are useful to leaders and human resources as they provide learnings on how well a program or initiative is producing outputs. It was also not surprising that they were the most plentiful as they are often the easiest to identify, measure, and understand.

The next frequent type of human capital performance indicator was those that addressed program effectiveness. They identify if human capital programs having the desired effect. These include indicators like 'employee turnover'. While there are some factors that influence this measure (like the economy and compensation programs), it is commonly seen as a bell-weather indicator for employee engagement – lower engagement can lead to higher turnover. Effectiveness indicators are found less often as

the data to produce them can be harder to come by, and direct correlations are more challenging to determine.

Indicators that addressed the impact human capital is having on an organization's ability to carry out its strategy are the most difficult to establish, and therefore the least found – including within the human capital performance indicators included in the primary articles. These include indicators such as 'revenue per headcount' and specific indicators that establish a connection between human capital and quality.

Lack of consistency. The human capital performance indicators identified in the primary articles had some commonality in groupings. A few indicators were identified in more than one article. However, there was a notable lack of consistency in the human capital performance indicators identified. This diversity of indicators did not bode well for moving forward with Research Question #1's desire to establish complete, standardized human capital performance indicators. This was a sign that there is a lot of work and dedication needed by human resource leaders, professionals, researchers, and academics to bring a goal of standardization about.

Recommended human capital performance indicators as instruments of learning.

It is notable that the human capital performance indicator groupings in this study aligned reasonably with the Chartered Professional in Human Resources (CPHR) Canada's competency framework (Chartered Professionals in Human Resources – Alberta, 2017, p. 3) (Figure 12). This alignment was an indication that the human capital performance indicator groupings from this study should be able to be supported by human resource professionals as (i) they should be familiar with the theory and practice of each of the human capital performance indicator groupings, and (ii) they should have some base

knowledge of analytics and performance measurement. The human capital performance indicators included in the primary articles should – with due diligence provided to their definition, data sourcing, and communication – provide leaders with information needed to learn about their workforce and the programs in place to build their capacity and the organization’s success.

Figure 12: Comparison of HCPI Groups and CPHR



Theme 1.6 Summary. Based on the grouping exercise, a standardized set of human capital performance indicators could include those described in Table 5: Potential Standardized Human Capital Performance Indicator (by frequency). However, one thing the study shows through the grouping exercise is that the identification of strong, standard human capital performance indicators cannot be pulled based on “most popular” or “most frequent”. This is akin to the quote often attributed to Henry Ford that “If I had asked people what they wanted, they would have said faster horses.” (Walsh, 2017). If we look at the human capital performance indicators most often identified or used by organizations, there may not be the innovation needed to establish standardized indicators. It may be that human resource professionals and leaders have to take a visionary approach to establish standardized human resource performance indicators that

would provide organizations with the learning needed to improve human capital performance – be it in the private sector or the public.

Table 5: Potential Standardized Human Capital Performance Indicator (by frequency)

TALENT MANAGEMENT		
Talent Acquisition	Knowledge Acquisition	Performance Development
1. Acceptance Rate 2. Cost to Fill a Vacancy	3. Career Path Ratio 4. Cost per Training Day	5. Percentage of Employees with Development Plans 6. Percentage of Low Performers
ENGAGEMENT & WELLNESS		
Empowerment & Engagement	Total Rewards	Health & Wellness
7. Voluntary Turnover Rate 8. Engagement Rate	9. Average Base Salary 10. Percentage of Employees paid based on Performance	11. Absenteeism Rate 12. Accident Rate
ORGANIZATIONAL STRATEGY IMPACT	WORKFORCE AWARENESS	HR Program Efficiency
13. Labor Cost Percentage 14. Operating Expense Headcount	15. Workforce Diversity 16. Average Tenure	17. Time to Fill a Vacancy 18. HR Ratio

vii. Research Question #1 Conclusion

Boudreau & Ramstad suggest that future human resource systems must focus on measuring how human capital investments affect significant organizational value creation and its associated processes instead of focusing on measuring the level or volume of expenditures on human capital (1997, p. 344). Focusing on value creation is somewhat imprecise, but this imprecision can be reduced by careful attention to performance measurement design, evaluation, and the use of modelling tools to quantify human capital. However, human capital measurement systems can be as credible as their financial counterparts. Indeed, in Boudreau & Ramstad's view, such systems should become even more essential in meeting future organizational challenges with the increasing importance of human factors in future organizations (1997, pp. 344-355).

The systematic literature review has shown that there is significant interest in learning more about how human capital affects organizational success. Through the primary and secondary articles discovered through the review, it was found that finding this connection is important (Theme 1.1). Doing so, amongst other benefits, provides leaders in the organization the opportunity to discover, to learn what is broken in their human capital world – or at least, what can be improved. However, as an organization looks to identify these connections, the study showed that organizations must pay attention to their industry. There are particular factors that must be considered – including the special nature of their stakeholders – in the public sector (Theme 1.2). There emerged a debate about whether a standardized approach should be used to measure human capital performance or if such efforts should be customized to accommodate each organization's strategy (Theme 1.3) and if these should be publicly disclosed (Theme 1.4). Finally, the systematic review of the recent literature provided considerations organizations should use in capturing human capital performance (Theme 1.5) through a set of recommended indicators (Theme 1.6). However, the review has shown that there is little or no consensus on what, if any, indicators could form a standardized set of human capital performance indicators. In parallel to observations Boudreau & Ramstad made about human capital measurement in general, we can only hope that by focusing attention on the reasons behind the development of human capital performance indicators, future leaders and researchers may find principles to guide the development of systems for measuring human and intellectual capital (1997, p. 355) thereby providing valued learning human capital learning opportunities to leaders.

b) Human Capital Performance Reporting Systems

Research Question #2: What types of human capital performance reporting platforms (performance reporting accountability tools) can provide accountability that motivates improvement in human capital management and practices?

Human capital performance indicators are tools to help leaders learn about their workforce and if the efforts they take to improve human capital performance are leaving an effect on the organization. However, knowing something needs to be fixed and doing it are two different things. Human capital performance reporting is one way of bringing motivation to leaders by building accountability for their actions through transparency.

The systematic literature search for Research Question #2 reviewed 141 articles. Twelve articles directly recommended the use of a specific method for reporting human capital performance (the primary articles). Reviewing this research revealed five themes:

- the importance of human capital performance reporting,
- the importance of leadership and learning culture,
- public sector human capital performance reporting,
- developing and implementing human capital performance reporting, and
- recommended human capital performance reporting systems.

These themes spoke to how organizations could effectively build and use human capital performance reporting systems and use them as tools to build a culture and accountability needed to motivate the improvement of human capital performance.

i. Theme 2.1: Importance of human capital performance reporting

Nine of the primary articles spoke to the significance of human capital performance reporting systems as tools organizations can use to build accountability. Another eight secondary articles also supported this theme. Through this accountability, in the right environment, leaders could be motivated to build human capital performance. For example, Ahyaruddin & Akbar found that several studies have shown that, through the appropriate measurement and management of performance, organizations obtain various benefits, such as: (i) the motivation of the employees at all levels of the organization, (ii) the creation of a performance improvement culture, (iii) the formulation, implementation, and review of organizational strategy, and (iv) an overall improved performance by the organization (2016, p. 2).

An early benefit of human capital performance reporting has been that it provided a process for organizations to focus on a clear and common objective: to establish a common strategy for human capital in support of organizational objectives (Walker & MacDonald, 2001, pp. 372-373). This was a factor as public sector organizations, particularly governments in western countries such as Australia, U.K., U.S., and Canada, chose to use performance measurement to improve management strategies as a way to provide the most value to taxpayers (Mucciarone & Neilson, 2011, p. 37).

The systematic literature review found that articles associated with this theme listed the benefits of using human capital performance reporting systems (Table 6). In short, they identified that using human capital performance reporting systems identifies purpose, increases transparency, and promotes continuous improvement by clarifying a

leader's accountability. This, in turn, provides the interest in leaders to fix what they have learned through performance indicators what needs improvement.

Table 6: Benefits of Human Capital Performance Reporting

Author	Benefits of using human capital performance reporting systems
(Heinrich, 2004, pp. 322-323)	<ul style="list-style-type: none"> • Establishing performance standards levels (or targets) is a key task that shapes the nature of incentives in the performance management system. • In decentralized government programs, imparting a role to state and local officials in the determination of performance standards or targets should improve their validity and fairness. • In promoting “continuous performance improvement,” it is important to adjust in expectations over time to account for changes in external conditions that might constrain or accelerate performance advancements. • Customer satisfaction measures should be specific in the dimensions of satisfaction that they measure and should be measured at the point of service, (i.e., linking customer satisfaction to the agency or local office at which services were received by the customer). • “High stakes” performance management systems need to incorporate adequate buffers for errors and imprecision in performance measurement to balance risks and rewards for managers.
(Institute of Management & Administration, 2003, p. 4)	<p>A well-designed human capital performance reporting system could help human resources:</p> <ul style="list-style-type: none"> • Clearly articulate human resources strategy. • Develop a common set of metrics to manage human resources strategy. • Provide a framework to align human resources with the company's business units. • Develop a common language for communication. • Create a line-of-sight (something near and dear to the pay-for-performance cause). • Provide a framework to assess the strategic relevance of human resources initiatives (in these days of shrinking budgets, this is a boon).
(Douthitt & Mondore, 2014, p. 17)	<p>Their approach to measuring and demonstrating the value and impact of HR investments centers on four basic principles:</p> <ul style="list-style-type: none"> • HR processes and investments must be directly linked to critical business outcomes (e.g., sales, productivity, customer satisfaction, safety) to understand how they drive those outcomes. • By quantifying the relationship between HR processes and critical business outcomes in the past (lagging indicators), organization-specific algorithms (not generic best practices) can be created to predict the future impact of HR investments (leading indicators).

Author	Benefits of using human capital performance reporting systems
	<ul style="list-style-type: none"> • Like other lines of business and/or functions, HR must look holistically at all HR processes and potential investments to identify priorities and make strategic investment decisions. • When the above principles have been followed, an expected ROI can be calculated to help HR leaders make informed investment decisions.

Building Accountability: Research found there are different levels of accountability. There is accountability for performance as well as accountability for correctness (auditability) and legal matters (Mucciarone & Neilson, 2011, p. 44). Therefore, the type of performance measurement that is reported should vary according to need. The benefits of having strong human capital performance indicators are that they can be used as a foundation for learning driven by the performance accountability of leaders as they seek to improve organizational performance.

In 2007, Herawaty & Hoque found that with the prevailing financial crisis of the state, and poor economic performance in Australia, there was a demand in that country for greater accountability requirements, with citizen expectations of a more transparent and open government (2007, p. 147). These were not unlike demands facing other western public sectors. Australian citizens were seeking answers to questions such: what is it that the government wishes to achieve? How will it attain those achievements? How does it know if it is succeeding? (Herawaty & Hoque, 2007, p. 147)? They found that a public sector organization's annual report was an important source of information about performance (2007, p. 148). It was also a key mechanism by which public sector bodies were held accountable to the government and public for the efficiency, effectiveness, and impactfulness of the public resources they manage (Herawaty & Hoque, 2007, p. 148).

Human capital performance reporting in the public sector supports the idea that performance reports should be designed to provide information to users. Various stakeholders demand the provision of information about the public sector's performance because these organization's activities have significant economic and social implications. While the private sector serves customers and shareholders, the public sector serves the public or taxpayers (McAdam and Salters, 2000). Public sector organizations provide not only economic services to business and the public, but they also provide social services. Good performance reporting, therefore, enables the use of performance information to be broadened to various stakeholders to promote the public interest. However, it is impossible to meet all the demands of each group of stakeholders, and the public sector must balance various stakeholder interests (Herawaty & Hoque, 2007, p. 150).

Srimai's said that the idea that "what gets measured gets done" is only a half-truth. This article found that it was more realistic to say, "What gets measured has greater opportunity for getting done." (2015, p. 635). This may apply to the idea of building accountability through human capital performance reporting as well as the intention is to motivate rather than dictate.

The concepts of New Public Management and public sector corporate governance are closely related. Accountability is an essential component of corporate governance. Performance measurement, in turn, is an important element of New Public Management and is viewed as a means to discharge accountability (Mucciarone & Neilson, 2011, p. 36). An important aspect of accountability is reporting. Accountability is exchanged for trust or empowerment. By definition, it involves an obligation to explain an employee's actions and to justify these actions to those who have responsibility for them. It is an

obligation to report, which is different from the obligation to act (Mucciarone & Neilson, 2011, p. 44). Accountability should mean more than obligation. Through constructive accountability, leaders take the responsibility to learn how to improve performance. In turn, leaders support these efforts through coaching and removing barriers – if possible.

Building transparency. Human capital performance reporting strives to build accountability in part by encouraging transparency. The significant public demand for transparency and accountability prompted a new paradigm in the management of organizations that led to the adoption of the New Public Management concepts (Ahyaruddin & Akbar, 2016, p. 1). Herawaty & Hoque's study of Australian government departments shows these departments provided adequate transparency tools in line with the New Public Management. Similarly, the Malaysian government recognized the need for public sector entities to improve their efficiency and effectiveness in the provision of services and to provide better accountability and transparency as they too implemented the New Public Management model (Mucciarone & Neilson, 2011, pp. 35-36).

This increased transparency was led by citizen and other stakeholder expectations. New Public Management was fostered by the idea that taxpayers should know for what and how their tax dollars were spent. There were expectations that governments and other public sector bodies would be more open about the results achieved through various programs. In short, was the public receiving good returns on their tax investments? In the start of New Public Management, this was often driven by financial crises in government and struggling economies that heightened the awareness that there were limited resources to achieve what governments set out to do. This prevailing thought was captured by Herawaty & Hoque as they found that Australian citizens were demanding

greater accountability and expectations of transparency and openness. That country's citizens wanted to know what the government wanted to achieve, how will it achieve this, and importantly, did it succeed (2007, p. 147). Transparency leads to accountability if departments provide adequate access to departmental information (Heraway & Hoque, 2007, p. 162). Studies in the systematic literature review suggest that this transparency (which reinforces accountability) can be achieved by using performance reporting as one of its foundational components.

Theme 2.1 Summary: A organization can improve human capital learning and decision making, improve human capital performance, and build a performance-based culture that leads to performance improvement by creating a learning environment in which performance indicators are regularly reviewed and discussed (Altmayer, 2006, p. 9). Yeung & Berman found that, in part, human capital performance reporting defines what it takes for an organization to succeed. For organizations to succeed in the long run, internal and external stakeholders – politicians, citizens, employees – need to have their expectations satisfied (1997, p. 322). Human capital performance reporting makes it possible for human resource functions and leaders to understand how to align human capital programs and policies with organizational objectives. Through performance reporting, leaders can explain not only what they are tracking but also how they are performing on essential strategies. The environment in which an organization operates, and its objectives and strategies evolves. The organization's leaders and the human resource function that supports them need to be to be flexible and creative in supporting the changes. Human capital performance reporting is a tool that allows these leaders that flexibility. Human capital performance reporting provides the foundational knowledge

about who the workforce (human capital) is, how they are performing, and how they are reacting to various environmental changes – be they internal (policy or strategy changes) or external (market or political changes). This view is supported by Walker & MacDonald as they see the value of human capital performance reporting as a tool is that it can get organizations to new goals and measures and through the process ensure continued learning and change management (2001, p. 377).

ii. Theme 2.2: Importance of leadership and learning culture

While a small theme – only one primary and two secondary articles– this is an extremely important one. As a leader in evaluative culture Mayne, stated that a weak evaluative culture undermines many attempts at building an effective evaluation and results in what could be seen as an oppressive management regime (2015, p. 1). The same can be said of a weak performance culture. This undermines attempts at building the learning and accountability needed for a genuinely performance-based culture. One that is not built on fear, but rather on a desire to improve. Mayne went on to point out that leadership is probably the most critical factor in organizational culture (2015, p. 1). Leadership is needed to provide a safe, supportive environment for performance improvement – not one of shame and blame. He said that organizational structures and a learning focus are needed to build an evaluative culture. The same holds for the performance improvement culture.

Performance measurement has become increasingly prevalent in the public sector, yet Altmayer found that most leaders struggle with what to do with performance measurement data when they have it. Managers want to know how to incorporate performance measurement and reporting into their management and decision-making

process (2006, p. 9). Rather than simply reporting performance results, a performance-based culture focuses on linking performance measurement to strategic planning and using it as a lever for cultural change (Altmayer, 2006, p. 9). As mentioned in the last theme, Altmayer concluded that by creating a learning environment in which performance indicators are regularly reviewed and discussed, organizations could improve the pace of learning and decision-making, improve performance, and facilitate broader cultural change (Altmayer, 2006, p. 9).

Organizations may have approached performance reporting and performance management in the wrong way if they are struggling to determine what they are to do with the various performance reports and processes that are in place. Altmayer found that when organizations begin with the question "What should I measure?" instead of "What do I want to achieve?" they have entered a world where the reporting and processes lead the culture rather than the learning and accountability (2006, p. 9). This, in turn, can create an environment in which the feared pitfalls of performance reporting and management can germinate – gaming, management by targets, &c. To move to truly performance-based management, Altmayer concludes that organizations need to start with what they want to achieve and then consider how to measure their progress toward that goal using three parallel tracks that can be championed by leadership – awareness, development, and integration (2006, pp. 9-10). Focusing on these tracks can help organizational leadership build a performance improvement culture where learning through performance reporting and building action through accountability focus on the goal rather than the process.

Without a supportive performance culture, performance reporting can degenerate an organization into a world of ‘shame and blame’ at best, or at worst one where leaders are gaming the system to achieve targets. In their study, McCann, Granter, Hassard, & Hyde found that junior and middle National Health Trust managers across the UK struggled as they confronted the public service dilemma of often-clashing imperatives of organizational efficiency and integrity of patient care. These competing priorities often manifested most sharply in the form of performance targets (2015, p. 778). Decisions and actions at local levels were characterized by a sense of enforced gaming. Without a culture that valued performance improvement over achieving targets, leaders, and thereby the organization, choose targets it believed were the most important to meet based on an informal and experience-based rationalization of which have the most onerous penalties for being missed (McCann, Granter, Hassard, & Hyde, 2015, p. 780).

Theme 2.2 Summary. To avoid situations found in the National Health Trust, and other public sector organizations, leaders would have to make a reasoned and conscious decision to create a culture that supports performance improvement rather than blind target achievement. In the end, human capital performance reporting provided strategic and managerial control (accountability) while operational control of knowledge work occurred through bureaucratic means (learning).

iii. Theme 2.3: Public sector human capital performance reporting

Public sector performance has often been seen as a “black box” where information was limited to internal administration, and what performance reporting was in place was not fully exploited (Herawaty & Hoque, 2007, p. 147; Srimai, 2015, p. 625).

Two primary and four secondary articles spoke to the state of human capital performance reporting in the public sector and how it can improve the use of this tool.

Human capital performance reporting has practical implications for public sector organizations. Performance reporting systems are an essential component in the structure of a management control and performance improvement system. Public sector leaders should consider, learn, and be accountable for various aspects of performance to achieve efficiency and effectiveness in their organizations. They should consider what to measure, how to measure it, and how they should use the performance information (Ahyaruddin & Akbar, 2016, p. 18). Public sector organizations also need to pay greater attention to their leaders' commitment to learning through performance reporting as this can provide a substantial contribution to the improvement of performance and accountability. This includes encouraging government agencies to improve the accountability and performance of public services to realize their effectiveness and, therefore, improve social welfare (Ahyaruddin & Akbar, 2016, p. 18).

One struggle the public sector faced when building accountable performance reporting is that it is possible that even if increased managerial accountability accompanied the creation of performance reporting systems, the positive benefits claimed by these still would not emerge on their own (Moynihan, 2006, p. 84). Public sector leaders may feel there are better ways to spend their time than seeking to re-engineer processes, or perhaps they would see reengineering as a waste of time if they are not rewarded for cost savings. Without clear supporting organizational goals and a performance improvement culture to support accountability, leaders who have spent their

careers in a culture of tight managerial controls may struggle to make sense of and fully use the new freedoms (Moynihan, 2006, p. 84).

Another challenge in public sector performance reporting is that it can be infeasible to distinguish the contributions of program services and leadership have on customer outcomes from the influence of other internal and external factors that can help or hinder program performance. Thus, Heinrich found, as the standards and expectations for performance outcomes are increased, public leaders could turn to counter-productive means of achieving higher levels of measured performance at the expense of other program goals (e.g., gaming). She found that it is likely that no matter how advanced an organization's performance reporting system and supporting statistical models are, there is some degree of both bias and error in the measures and reporting (2004, p. 348).

These articles show that public sector organizations face challenges particular to their environment. The variety and interest of internal and external stakeholders, the qualitative, social welfare focused nature of the services it provides, and the historic management control nature of its leadership places particular obstacles in the way of effective, learning and accountability based human capital performance reporting. These are the challenges policymakers and public sector leaders should overcome in their ongoing efforts to improve public program outcomes with performance reporting systems (Heinrich, 2004, pp. 348-349).

New Public Management. Public demand for transparency and accountability prompted a new paradigm in the management of organizations that led to the adoption of the New Public Management concepts (Ahyaruddin & Akbar, 2016, p. 1). The effects of the New Public Management movement are often raised with the topic of public sector

performance is raised. Some studies found that the refocus on performance reporting in public sector organizations has served as an adequate transparency tool to support the goals of New Public Management. Herawaty & Hoque found that this transparency leads to accountability if public sector organizations provide adequate access to organizational information (2007, p. 162).

New Public Management had a goal to improve the efficiency of the public sector, enhance the responsiveness of public agencies to their clients and customers, and improve accountability (Ahyaruddin & Akbar, 2016, p. 1). One tool that lent itself to supporting these goals was performance reporting – including human capital performance reporting. However, reporting was not itself a solution as the system of target setting, performance evaluation, and incentives provision can be problematic. Two causes Ahyaruddin & Akbar found for these problems were that New Public Management's exclusive focus on the role of performance measurement systems in accountability and incentive provision was too narrow and that it focused on the role of performance measurement systems in incentive-oriented work (2016, p. 2). They found that the second can only be done in conditions when goals are clear and unambiguous, performance indicators are consistent with organizational goal achievement, and organizational leaders actors have the accountability and authority transform processes and predict likely outcomes. If these conditions are not met, they concluded that performance reporting could create too strong of an emphasis on result targets leading to dysfunctional consequences (Ahyaruddin & Akbar, 2016, p. 2).

Performance reporting was a foundational element of New Public Management (Ahyaruddin & Akbar, 2016, p. 4). Part of the rationale for implementing New Public

Management methodologies, including human capital performance reporting was that traditional public performance reporting systems provided only limited types of information that can discourage efficiency. Leaders were provided lists of inputs – there budgeted allocations – that they were obliged to spend (i.e., spend it or lose it). Financial controls were centred on controlling these inputs and ensured the budget was spent for the purpose for which it was allocated. Leaders lacked the discretion to reallocate budget, even if reallocation meant more effective and efficient achievement of goals. Human capital controls reinforced financial controls, restricting the ability to make decisions about a leader’s workforce (Moynihan, 2006, p. 79). By providing accountability (and hopefully authority) supplemented with the learning provided by strong performance indicators, the performance reporting aspect of New Public Management could foster organizational human capital performance improvements – provided a true performance improvement culture was in place.

Theme 2.3 Summary. The introduction of New Public Management was a significant driver to instituting performance measurement, reporting, and management in public sector organizations. This led to the development and adoptions of tools, methods, and systems used to learn about, measure, and discover ways to improve the performance of public sector organizations’ human capital. This was brought about by the approach focusing on providing external stakeholders increased transparency and public sector leaders more accountability. While the merits of the New Public Management approach may be debated as beneficial or detrimental to public sector organizations, one benefit was that it led to a stronger ability to learn, and through greater accountability, improve a public sector organization’s human capital.

iv. **Theme 2.4: Developing and implementing human capital performance reporting**

Speaking specifically to a human resource balanced scorecard approach, but having application to human capital performance reporting in general, Recardo found that human resource leaders could improve their chances of successfully developing and deploying human capital performance reporting through the following steps:

- Identify three to four key categories of measures, such as financial performance, customers, and process efficiency. Measures can also be taken of core human resource functions such as talent management, organizational and employee development, compensation, and benefits administration,
 - Identify a concise list of leading and lagging indicators for each category,
 - Develop specific targets for each indicator,
 - Cascade the indicators down the organization,
 - Link the human capital performance reporting system to the performance management, recognition, and compensation processes to improve the organization's talent pool, making sure to precisely define outstanding, average, and poor performance, and the tangible consequences of each, and
 - Align the scorecard to related systems like management reporting and budgeting.
- (Recardo, 2017, pp. 39-40)

Performance measurement is the process of assessing progress toward achieving predetermined goals (Akhtar & Mittal, 2010, p. 1). Traditional performance reporting systems were based on financial and cost parameters. These did not provide an accurate picture of how organizational improvement and lacked strategic focus (Akhtar & Mittal,

2010, p. 2). Performance measurement, including that for human capital, has more of an effect on organizational improvement when leading indicators of quality, efficiency, and impactfulness are employed (Akhtar & Mittal, 2010, p. 2). To be particularly effective, performance reporting should include financial and non-financial leading indicators with greater consideration of human resources (Akhtar & Mittal, 2010, p. 2).

An interesting view supported by Verma & Dewe was that there was a need to explore further how the views of those involved in accounting and finance can be reconciled with those involved in the management of human capital. Human resource leaders needed the support of their accounting colleagues to be able to develop and initiate human capital performance reporting. To gain this support they needed to be able to convince their accounting colleagues that such reporting was essential, reliable, and valid (2008, p. 118). It is becoming accepted that an organization's value depends less and less on tangible assets (equity on the balance sheet) and increasingly more on its intangible resources (Tonchia & Quagini, 2010, p. 69). An organization's performance cannot be directly explained through traditional indicators (e.g., through balance sheet items). That is, organizations with similar balance sheets may have very different levels of performance (Tonchia & Quagini, 2010, p. 70). By collaborating with their finance counterparts, human resource leaders could develop new human capital performance reporting tools to measure an organization's value, considering the intangible component of its capital. These systems should consider non-accounting human capital data. As Tonchia & Quagini mentioned, "If we measure the new with the tools of the old, we won't be able to perceive the new" (Tonchia & Quagini, 2010, p. 70).

Theme 2.4 Summary. In short, there are some important factors to consider when a public sector organization develops effective and impactful human capital performance reporting. These organizations should be willing to break from traditional, financial based reporting and the systems in place that reinforce a ‘command and control’, ‘spend it or lose it’ culture. The positive accountability that can come from a human capital performance reporting is fostered when the system is focused on organizational goals and vision, uses predictive or leading performance indicators tied to those objectives, and a culture exists that provides leaders with the accountability and authority to incorporate innovative solutions to performance improvement without fear of reprisal or punishment. While the tenants of New Public Management are founded on the use of performance reporting, public sector organizations today need to go beyond and build an effective truly performance improvement focused culture.

v. **Theme 2.5: Recommended human capital performance reporting systems**

This theme explored preferred human capital performance-reporting tools. As will be discussed, of the 12 primary articles, two put forth the inclusion of human capital performance indicators in an organization’s annual report, seven espoused the benefits of a human resource balanced scorecard approach, and three put advocated for another form of performance reporting (Figure 9).

Human Resource Balanced Scorecard. Most of the articles retrieved in this study that addressed the second research question advocated for the use of a modified balanced scorecard approach as an effective human capital performance measurement tool. The balanced scorecard approach was popularized by Robert Kaplan, a Harvard professor, and David Norton. It was adopted by many by major companies such as Sears, AT&T,

Eastman Kodak, American Express, and Taco Bell (Yeung & Berman, 1997, p. 322). It has also been adopted by public sector organizations including Alberta Health Services (Alberta Health Services, n.d.). The balanced scorecard approach presented an approach to performance measurement that claimed to overcome the weaknesses with existing practices of the time and provide a control mechanism for knowledge-based activities (Wake, 2015, p. 590). It provided a link between the strategic, managerial, and operational control systems within an organization. It provided strategic and managerial control while operational control of knowledge work occurred through bureaucratic means (Wake, 2015, p. 600).

Yeung & Berman told that the balanced scorecard framework defines what it takes an organization to succeed. The strength of the balanced scorecard framework is that it provides a simple conceptual and diagnostic tool to ensure that companies utilize the right processes and people to drive customer and business performance (Yeung & Berman, 1997, p. 324). In their study, Yeung & Berman explain how Eastman Kodak developed three clusters of HR measures:

- *Internal operational measures*: How well do we design and deliver our HR practices?
- *Internal strategic measures*: How effectively do our HR practices build desired organizational capabilities? How effectively do our HR practices increase employee satisfaction?
- *External strategic measures*: How well do our HR practices increase customer and shareholder satisfaction?

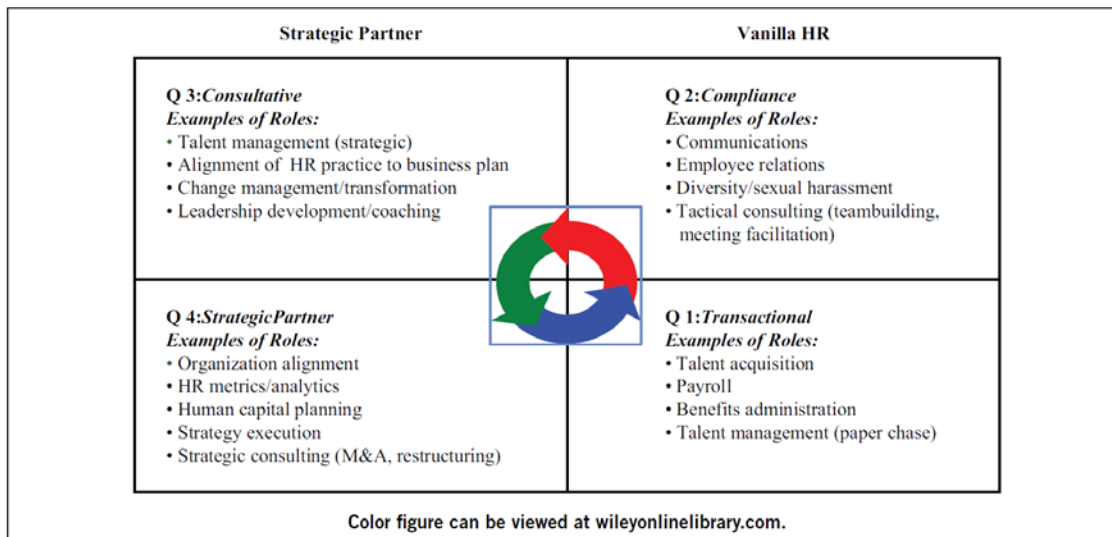
(Yeung & Berman, 1997, p. 330)

In a review conducted by the Institute of Management & Administration, National City Bank of Cleveland offered six good reasons for how a well-designed balanced scorecard could help their human resource department. Through this performance reporting system, human resources could:

- Articulate their human capital strategy,
- Develop a standard set of indicators to manage human capital strategy,
- Provide a framework to align human resources with the company's business units,
- Develop a common language for communication,
- Create a line of sight, and
- Provide a framework to assess the strategic relevance of human resource initiatives. (Institute of Management & Administration, 2003, p. 4)

Recardo found that one of the best practices that should be incorporated into a human capital planning process to build its effectiveness includes developing a balanced scorecard of leading and lagging indicators. These indicators should be aligned to the organization's human capital strategy at a macro level and at a human resource functions' operational plan and service level agreements at the micro level. The scorecard should help human resources and organizational leaders assess the value of human capital processes and policies. This, in turn, helps learn whether new programs, services or a shift human resource support or leader is needed to provide more value to the organization (Recardo, 2017, p. 30). Recardo discussed the Catalyst Consulting Group's strategic service quadrants model (Figure 13) to depict the capability of any human resource function and the categories of human capital performance indicators an organization follows.

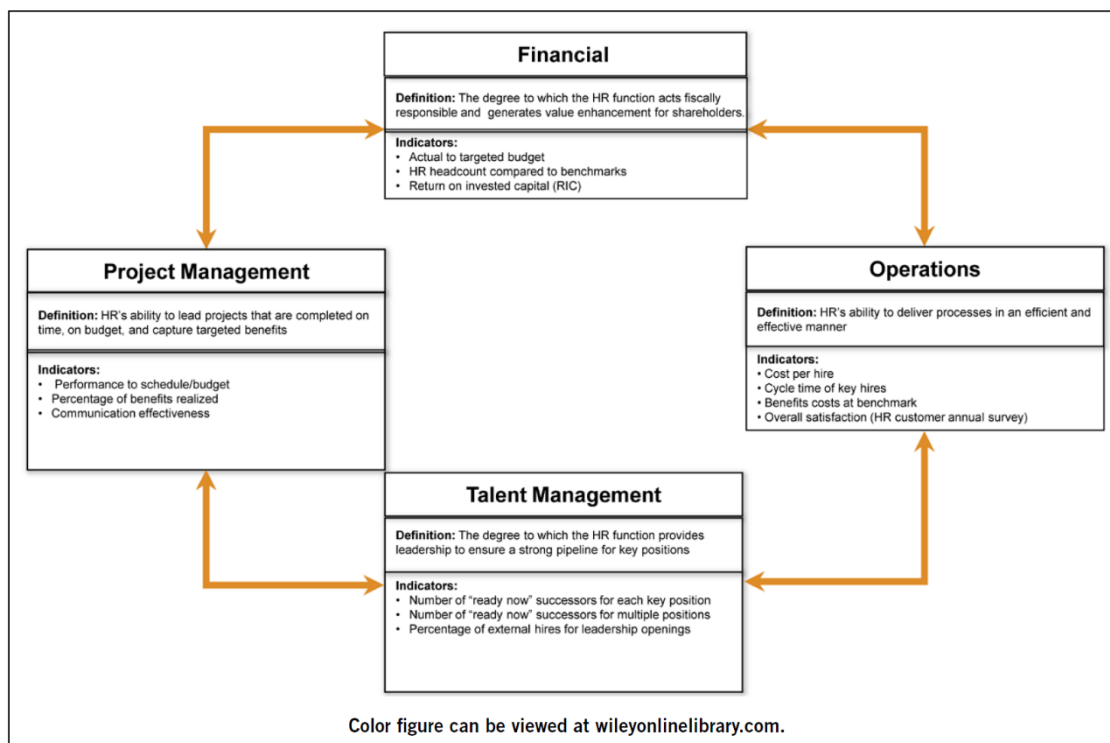
Figure 13: HR Strategic Service Quadrants (Recardo, 2017, p. 35)



When carefully designed, a human capital balanced scorecard (see Figure 14 as an example) can serve as a powerful tool for optimizing organizational human capital's impact on performance. It allows the organizational and human resource leadership to learn and assess how human capital and the human resource function are adding value to the overall organization, identify capability gaps, and suggest opportunities for refining human capital programs and policies (Recardo, 2017, p. 40). Akin to an airplane's instrument panel, a human resource scorecard enables organizational leaders and the human resource function to monitor some variables simultaneously toward ensuring optimum performance (Recardo, 2017, p. 39).

Walker & MacDonald described how Verizon used the human resource balanced scorecard. From their study, we learned that the human resource balanced scorecard approach slightly modified the initial balanced scorecard most commonly used at the

Figure 14: Example of an HR Scorecard (Recardo, 2017, p. 40)



corporate level (Walker & MacDonald, 2001, p. 368). The human resource balanced scorecard used at Verizon included four perspectives:

- Strategic Perspective:** Measured success in achieving the five strategic goals. Since the basis for the human resource balanced scorecard was achieving business goals, the aligned human resource balanced scorecard was the drivers for the entire model.
- Operations Perspective:** Measured human resources' success in operational excellence. The focus here was primarily in three areas: staffing, technology, and human capital processes and transactions
- Customer Perspective:** Included measures of how human resource functions are viewed by our key customer segments. Survey results were used to track

customer perceptions of service as well as assessing overall employee engagement, competitive capability, and links to productivity.

- **Financial Perspective:** Addressed how the human resource function adds measurable financial value to the organization through improving human capital performance, including measures of ROI in training, technology, staffing, risk management, and cost of service delivery.

(Walker & MacDonald, 2001, p. 368)

An early benefit of the human resource balanced scorecard work was that it provided a process for the Verizon senior human resources team to focus on a clear and common objective: to establish a common human capital strategy for the human resource function as it supported business objectives (Walker & MacDonald, 2001, pp. 372-373). Communicating the human resource balanced scorecard across the organization was a critical aspect of successful implementation (Walker & MacDonald, 2001, p. 373). The human resource balanced scorecard has made it possible for human resource leaders to learn and understand how their work helped align human capital improvements with business objectives. With this tool, organizational and human resource leaders could explain not only what they were tracking (learning) but also how they were performing on essential strategies for the business (accountability). External environments and organizational objectives and strategies continue to evolve. The value of the human resource balanced scorecard is that it can get organizations to the new goals ensuring continued learning and change management (Walker & MacDonald, 2001, p. 377).

Ulrich described that the balanced scorecard is built on the logic that for a business to be considered successful, it must satisfy the requirements of three

stakeholders: investors, customers, and employees. Employees of an organization want that organization to be a healthy place to work as measured by employee and organizational actions (1997, p. 306). Some organizations began to use the balanced scorecard to assess overall organizational performance. As they did so, of the three stakeholders, human capital was often the most difficult to measure. Human capital indicators are often less accepted and less rigorous than are investor and customer indicators. As a result, much experimentation occurred in integrating human capital indicators into the balanced scorecard. Ulrich saw this experimentation categorized into three efforts which measured: productivity (measures generally take the form of output divided by input), people (assessing what people do, how they feel, and what they know), and process (focuses less on people and more on the systems and dynamics within the organization) (1997, pp. 306-308).

Most human resource functions developed their own human capital-focused indicators (i.e., the HR balanced scorecard). The human resource scorecard pioneered by Huselid and others saw human resource management practices as a strategic asset and provided a roadmap to help organizations integrate human capital systems with organizational strategy. Human resource scorecards included each of the elements presented in Figure 15. Within each of these scorecard elements, it was possible to measure both lagging and leading indicators (Douthitt & Mondore, 2014, p. 17)

Douthitt & Mondore's approach to measuring and demonstrating the value and impact of human capital investments centred on four basic principles:

Figure 15: Critical Elements of the HR Scorecard (Douthitt & Mondore, 2014, p. 17)

TABLE 1. CRITICAL ELEMENTS OF THE HR SCORECARD	
HR Scorecard Element	Definition
Deliverables	The key HR deliverables that will help to leverage HR's role in your company's overall business strategy (e.g., pipeline of talent, succession plan)
Processes	The key HR processes (e.g., selection, performance management, compensation)
Alignment	Clear alignment between the HR deliverables/processes and the overarching business strategy
Results	Indicators of the effectiveness with which the deliverables are executed

- Human capital processes and investments must be directly linked to critical business outcomes (e.g., sales, productivity, customer satisfaction, safety) to understand how they drive those outcomes.
- By quantifying the relationship between human capital processes and critical business outcomes in the past (lagging indicators), organization-specific algorithms (not generic best practices) can be created to predict the future impact of human capital investments (leading indicators).
- Like other lines of business and functions, human resources must look holistically at all human capital processes and potential investments to identify priorities and make strategic investment decisions.
- When the above principles have been followed, an expected return-on-investment can be calculated to help human resources and organizational leaders make informed investment decisions.

(Douthitt & Mondore, 2014, p. 17)

In this way, the balanced scorecard approach should provide a holistic, strategically focused performance dashboard that draws out learnings and builds accountability that spurs organizational performance improvement.

Annual Report. Two articles uncovered through the systematic literature review put forth that those reporting human capital indicators in an organization's annual report to build accountability and transparency to improve human capital performance. Herawaty & Hoque claimed the annual report is a crucial mechanism by which public sector organizations are held accountable to government and public for the efficiency, effectiveness, and economy of the public resources they manage (2007, p. 148). However, the problem with annual reports was a lack of public interest. Information in the annual report may not have been used directly by the taxpayers. Therefore, interest in government annual reports and the quality of disclosures in those reports is really, as Herawaty & Hoque described, "a chicken and egg situation". The lack of user interest in the annual reports could have been due to the limited relevance of information disclosed in the reports (Herawaty & Hoque, 2007, p. 149). At the same time, their findings suggested that public leaders would be more responsive and accountable in exercising public resources if they are under surveillance (e.g., mandatory reporting) (Herawaty & Hoque, 2007, p. 162). Their findings also suggest that the mandatory requirement had less influence on the overall disclosure level, compared to the external requirement of disclosures (Herawaty & Hoque, 2007, p. 162). Public sector organizations have provided adequate transparency in line with the New Public Management. Transparency leads to accountability if adequate access to information is provided (Herawaty & Hoque, 2007, p. 162). Taken together, the findings highlight inadequate disclosures in both mandatory and voluntary levels. Inadequacy in performance reporting within government departments highlights the need to improve access to performance information to enhance public accountability (Herawaty & Hoque, 2007, p. 162).

In Finland, the average number of employees, wages and salaries, pension costs and other personnel-related expenses are disclosed in official accounts of the organization (Vuontisjärvi, 2006, p. 334). While other human capital information can be disclosed, Vuontisjärvi found that the disclosures were uneven and lacked overall comparability. None of the measured indicators were reported by the majority of companies. Quantitative performance indicators were by few and not always in a comparable form. There was a need to reach an agreement in which form the information would be disclosed and what was the basic unit for disclosure (company group, parent company, subsidiaries, or a specific country) (Vuontisjärvi, 2006, p. 344). Commonly agreed guidelines and criteria for measurement, reporting, and assurance at the European level could provide more consistency between disclosures. However, after 20 months a multi-stakeholder forum failed to make concrete proposals on the issue, due to stakeholders' differences on opinion on reporting and transparency issues (Vuontisjärvi, 2006, p. 345). The question also remained on whether voluntary guidelines would be enough. Poorly performing organizations are unlikely to disclose information unless it is made compulsory. Recent developments indicate, that steps, even if cautious, to this direction might well be taken at the European level in the future (Vuontisjärvi, 2006, p. 346).

Other Reporting Systems. Srimai told us that the Thai government had used the performance agreements to satisfy two primary purposes. First, it is a way to create public accountability by enforcing external reporting. In implementing the performance agreements, the Thai government was responding to a demand for external scrutiny of public sector performance. Accountability of chief officials is reflected in their having performance agreement with the Thai government. Second, it was instituted to support

the implementation of policies and strategies of the Thai government as well as to attain desired levels of achievement on the part of public services (Srimai, 2015, p. 626). This study showed that the idea that “what gets measured gets done” is only a half-truth at best. Practical solutions are dependent upon how information produced by the performance agreement is used (Srimai, 2015, p. 635).

Finally, Onley described a custom dashboard used by Ford. Just as the dashboard of a car gives a driver an indication of how the car is performing, digital dashboards give an organization a glimpse of how a workforce is meeting its goals, using whatever areas a business decides to measure. Human resource professionals were using these interactive graphing tools to monitor and manage their organization's workforce and chart human capital's and the human resource function's progress toward meeting strategic and tactical objectives (Onley, 2006, p. 109). However, despite the growing use of dashboard technology, some critics argue that the acceptance of dashboards could create a Big Brother atmosphere by opening a virtual window into various aspects of a workforce's successes and failures.

Theme 2.5 Summary. In short, research suggests that the human resource balanced scorecard provides a holistic, strategically focused, but operationally aware way to measure and report human capital performance in an organization. It is a tool that, through integrated human capital indicators, builds learning – for organizational leaders as well as for human resource functions. It also builds accountability by reporting these human capital indicators in a consistent manner – at least within an organization. The Institute of Management & Administration described the human resource balanced scorecard as one way to make a dramatic change in an organization's focus. They saw it

as a driver-focused measurement system that was used by many organizations. However, they also saw the adoption of this performance reporting system losing steam (Institute of Management & Administration, 2003, p. 4).

vi. Research Question #2 Conclusion

The review of the primary articles showed that the balance scorecard approach had been the favoured tool for building accountability through transparency. The benefit authors saw included the opportunity to align human capital programs and policies with organizational strategy and the ability to review human capital performance in both the financial and non-financial perspective needed to gain a full understanding of its performance. With these advantages and its apparent widespread acceptance, the human resource balanced scorecard could be the closest thing the public sector and human resource profession has to a foundation on which to build a standardized human capital reporting system.

Performance-based management is markedly different from performance reporting. Performance reporting focuses on communicating results. Performance-based management uses resources and information to achieve and demonstrate measurable progress toward agency and program goals (Altmayer, 2006, p. 9). It is now widely accepted that an organization's value depends less and less on its tangible resources (equity on the balance sheet) and increasingly more on its intangible resources (Tonchia & Quagini, 2010, p. 69). Akin to an airplane's instrument panel, a human capital performance reporting system, and human resource balanced scorecard, in particular, enables human resource leaders to monitor some variables simultaneously toward ensuring optimum human capital performance (Recardo, 2017, p. 39). This, in turn,

allows them to guide organizational leaders and human capital programs and policies in a manner that should improve human capital performance.

Adopting human capital performance reporting through a human resource balanced scorecard approach could, as seen through the research found in through the primary and secondary articles, could address the significant public demand for transparency and accountability that prompted New Public Management. This, in turn, addresses a need for the targeted learning and supported accountability that results in improving the efficiency of the public sector, enhanced the responsiveness of public agencies to their clients and customers, and improved accountability.

The usefulness of the scorecard is directly proportional to having the right indicators and creating meaningful consequences to enhance the deployment of the human capital strategy (Recardo, 2017, p. 40). When carefully designed, a human resource balanced scorecard can serve as a powerful tool for optimizing human capital's impact on organizational performance. It allows human resource leadership to assess the degree to which their function is creating an environment where learning and accountability support human capital adding value to the overall organization, identifying capability gaps, and suggesting opportunities for refining human capital's contribution to the organization (Recardo, 2017, p. 40).

It is essential to capture that two important subjects were not discussed in Research Question #2's the primary or secondary articles. The first was discussed in the articles of Research Question #1: the need for human resource professionals to develop the analytic capacity and capability to develop, implement, maintain, and interpret the human capital performance reporting systems an organization might have in place.

Without these skills, human resource leaders would be at a loss to provide strategic value-added analysis and guidance to organizational leaders. The second gap was, surprisingly, the lack of discussion around what methods or tools could be used to promote action. The articles described the systems, how they could align with organizational strategy, and drive changes in human resource functions. However, they did not describe tools or methods that could be effective at constructively motivating organizational leaders (through their accountability) to do something to improve performance. One such method is to use a deliverology approach. However, even with using ‘deliverology’ as a specific search term, no such articles were included in the data pull. This may identify a significant gap in current human capital performance reporting research.

Chapter 8 – Opinions, Recommendations, and Conclusion

*"Those companies that get the 'people equation' will win.
Those that don't won't survive."
(Institute of Management & Administration, 2003, p. 4).*

The purpose of this study was to find out if research had any insight into how a standardized approach to human capital performance measurement and reporting could be developed. That is, has research completed so far identified:

- (i) A standardized, strong set of human capital performance indicators that could provide a holistic picture of an organization's human capital that would provide leaders with the learning needed to understand their workforce and, therefore, learn what would be needed to be done to improve human capital performance?
- (ii) A robust human capital performance reporting system that could be used across the public sector to build constructive accountability that would motivate leaders and organizations to improve human capital performance as had been identified the standardized human capital performance indicators?

The conclusion brought about by this study is “almost, but no”. Part of what this study had hoped to determine was if there was enough of a basis for the public sector to start building standardized, published human capital statements – not unlike the published financial statements public sector organizations are required to complete. The premise was that if standardized financial statements can be used to determine and report the financial health of an organization – how well do an organization's leaders manage their

budget – then a standardized human capital statement could be used to determine and report the human capital health of an organization – how well an organization’s leaders manage their people.

Almost, but not quite ready. This study demonstrated that the issue of measuring human capital performance through indicators is an important one. Researchers and organizations increasingly recognize the importance of human capital and the value of measuring that human capital’s performance so that leaders can learn ‘what is broken’. This research also recognizes that human capital performance reporting systems are important and needed to align efforts to improve human capital performance with an organization’s strategy, stakeholder expectations, and build accountability for leaders, so they are motivated to improve human capital performance. However, the study also demonstrated that there is no clear direction on what a set of standardized human capital indicators should be nor what performance reporting system is best suited to use.

Common approaches. The results found for this study’s first research question unearthed over 200 recommended human capital performance indicators from 17 primary articles. At first glance, this seems far from identifying a standardized performance indicators. However, what was found was that there were common groupings or themes of indicators including absenteeism, turnover, engagement, and some human capital program efficiency indicators (See Table 5). These could, with leadership from the human resources profession and the public sector, be the basis for establishing a standardized set of indicators. Work like this has been started by the Chartered Institute of Personnel and Development (CIPD) through the development of their Valuing your Talent framework.

This study found a similar conclusion when it reviewed prevailing research on human capital reporting systems. Most of the research found recommended the human resource balanced scorecard approach for performance reporting. They advocated that this system provided the opportunity to align human capital performance measurement with organizational strategy, presents performance in a balanced financial/non-financial approach, and that it builds the accountability for leaders and organizations need to be able to address areas that need attention to improve performance. However, even with the prevalence of research on the balanced scorecard, there was little detail on how this could be used as a standardized performance reporting approach.

Moving forward. As organizations, the public sector, and the human resource profession move to establish standardized human capital performance measurement and reporting, research uncovered through this study provides some learnings on how this could move forward:

- *Keep it simple.* Many articles advocated the uses of many human capital performance indicators. In doing so, organizations face a complicated mosaic and a daunting task if they were required to report on these. It is recommended that any effort to establish a standardized approach should start small and simple. A few permeating indicators should be established as standardized indicators. These indicators should have simple, easy to understand definitions. They need to be relatively easy for organizations to gather data. These can include common indicators such as absenteeism, turnover, engagement, and cost of labour.
- *Keep it balanced.* The resulting human capital performance indicators need to present a picture of how well an organization is managing its human capital.

They need to present how human capital efficiency, effectiveness, and impactfulness is impacting an organization's performance presented in a reporting system that balances financial and non-financial accountability.

- *Keep it constructive.* Some articles, through both research questions, identified that one of the risks in moving to a performance improvement environment using performance measurement and reporting. This risk is that, without the right supports and culture, leaders can feel threatened and start managing to performance targets rather than performance improvement. This can result in gaming performance or reporting. It can also result in a “targets of terror” or “shame and blame” environment where leaders are punished for not meeting targets rather than provided supports for improving performance. The need here is to support an organization's leadership to build a culture where performance measurement is seen as a learning tool and performance reporting that provides the accountability (and authority) to understand what changes are needed and make those changes.
- *Keep it focused.* Striving to establish standardized human capital performance measurement and reporting would take discipline to achieve. Research uncovered through this review tended to focus these tools on an individual organization's strategy. The indicators used in specified dashboards would be set accordingly. A standardized approach would need to align with common ideals found across organizations and potentially across industries. By drawing on the research uncovered through this study, these common ideals could include measuring and reporting on improvements in human capital organizational impact, talent

management (talent acquisition, knowledge acquisition, performance development), engagement and wellness (engagement, total reward, health and safety, total rewards), and workforce awareness. Simple, one or two (at the most) generic performance indicators can be provided for each.

Public sector as a leader. The question then turns to, how far is the public sector from being able to establish standardized human capital performance measurement and reporting and what should happen to reach that goal. Is the public sector (or the private sector) ready for published human capital statements? From this study, it is evident there is a long way to go before then. However, the public sector may be an ideal place to start this work.

As was revealed through this study, the public sector faces unique pressures and relationships that may provide an environment for standardized human capital performance measurement and reporting. New Public Management and increased public demand are pushing the public sector towards establishing greater transparency, efficiency, and accountability. As seen, performance measurement and reporting exist to provide all three. This, in part, has led to several public sector organizations publishing organizational performance reports (e.g., the Government of British Columbia's Service Plans, the Alberta government's Measuring Up, and Alberta Health Services' Performance Measures Overview). With these in place, the public sector may be more open and capable of establishing and using a standardized human capital statement.

Professional and regulatory infrastructure. One barrier to standardized human capital performance measurement and reporting is the professional and regularly infrastructure that needed support it. On the financial reporting side, the accounting

profession is guided by standards such as the International Financial Reporting Standards and Canada's Public Sector Accounting Standards. These standards and their predecessors have been in place for decades, if not longer. Creating a similar framework for human capital would take time, perseverance, and a sense of purpose. New Public Management may provide some of this instigation in the public sector. However, unless security commissions see the need for publicly traded organizations to release a human capital statement, there could be little motivation there.

Analytic support. Human capital analytics is becoming a more sophisticated, accepted, and necessary part of the human resource discipline. Research reviewed in the study identified that a strong analytic capability is required in a human resource function so support human capital performance measurement and reporting. This becomes even more necessary for a standardized environment to exist.

Finally, what it could look like. While there is a long way to go to establish a standardized human capital performance report, the research uncovered through this study and the resulting analysis provides an indication of what such a report could look like and the human capital performance indicators that could be included – or at least the categories of indicators that could be included. Based on what was seen through the review of the 29 primary articles and 35 secondary articles, a standardized human capital performance report (or dashboard) would:

1. Follow the balanced scorecard approach. It would include a balance of human capital financial, operational, and awareness components,
2. Measure and address human capital efficiency, effectiveness, and impactfulness, and

3. Include a set of human capital performance indicators that could report and translate across organizations.

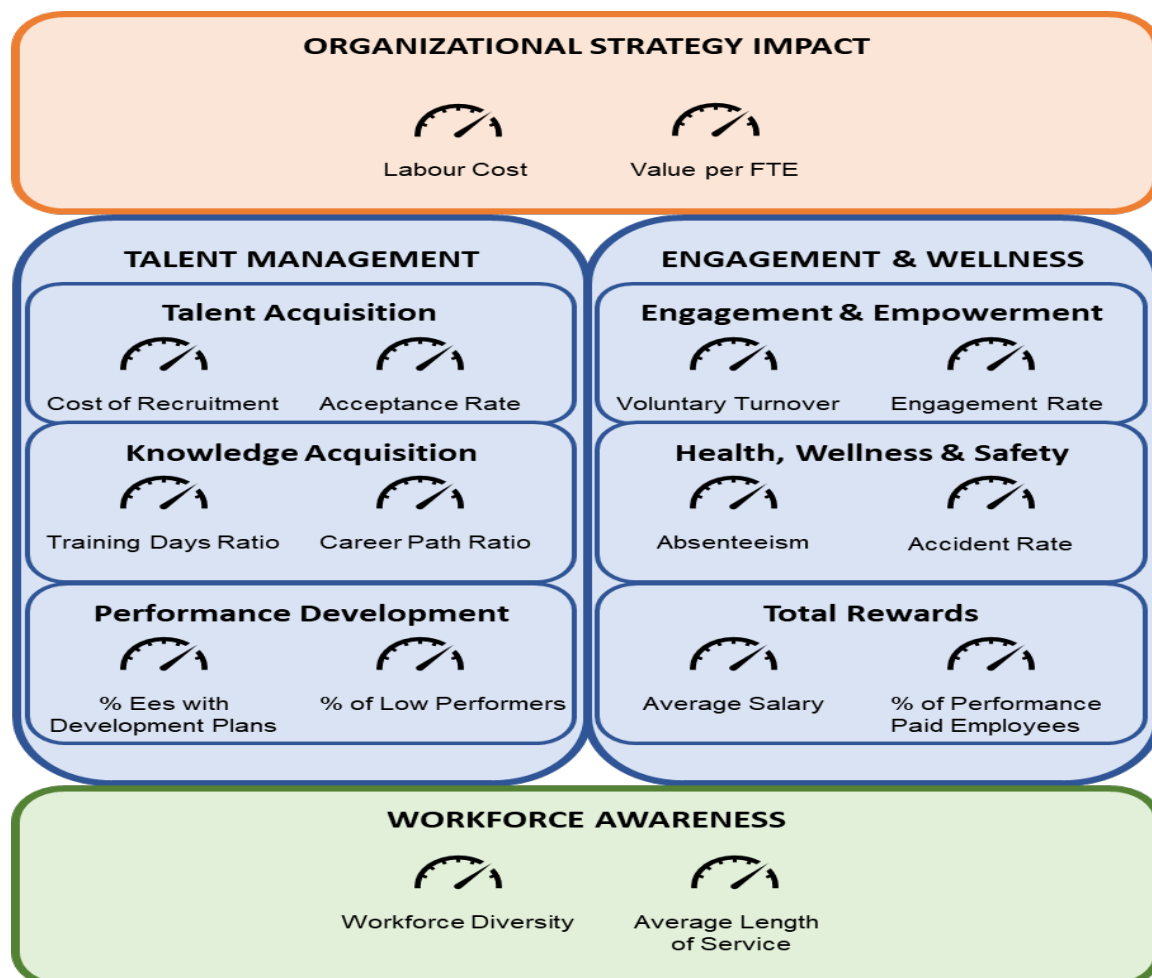
Using these parameters could result in a human capital performance dashboard such as the one illustrated in Figure 16. Through this study, there is some confidence in the human capital performance indicator groupings identified in the study's analysis – organizational strategy impact, talent management, engagement and wellness, and workforce awareness. However, there is less confidence that the illustrative indicators included in the sample dashboard. This ties back to the conclusion that popularity may not be the best way to identify standardized indicators. Further research, calibration, and collaboration would be needed to identify the appropriate indicators and reporting vehicle. (Note: Although identified in the study, human resource program efficiency indicators would not be included. Rather, those could be used internally.)

As described earlier, a standardized human capital performance dashboard on its own will not increase organizational performance. Even though a dashboard such as Figure 16 could provide the learning and accountability leaders need to understand “what is broke” and accountability “to fix it”, two further elements are needed: a supportive performance culture fostered by leaders that value an evidence-based approach to building organizational value, and a system to drive action needed to improve performance.

Many benefits could come from the implementation of standardized human capital performance measurement and reporting. These include greater understanding, accountability, transparency, and eventually increased organizational performance. However, this study has shown that even if there has been a good start, there is a

potentially long and arduous road to get there. Further research, determination, and resilience would support this journey.

Figure 16: Illustrative Human Capital Performance Dashboard



Chapter 9: Future Research Opportunities

While yesterday's data was used to understand what was happening, HR measures are now allowing organization to better understand why it is happening and provide input into predicting what could happen.
(Fineman, 2016)

Reviewing almost 400 academic and professional articles about human capital performance indicators and reporting provided the chance to identify areas where there is a need for further research. Three of these areas include further research that is needed to move towards standardized human capital performance measurement and reporting. These include identifying a professional and regulatory infrastructure for a standardized approach, determining the value if applying the CIPD Valuing your Talent framework to the public sector can move towards a standardized approach, and how adopting a human capital focused deliverology approach can motivate performance improvements.

Professional and regulatory infrastructure. Systematic literature reviews are a good approach to determine what recent research has determined, what conclusions can be made, and what next steps should be taken. However, further qualitative research that involves reviews of organizational practices and the needs of organizational leaders is required to determine what type of regulatory infrastructure is needed from the human resource profession and government entities. This research could investigate the demise of the UK's Accounting for People taskforce to pry what learnings could be offered to subsequent standardization attempts. Reviews of the approaches in Sweden, Spain, and other European countries to require or encourage some form of human capital reporting could be included as well. Finally, this research could look for parallels with

standardized financial reporting and the infrastructure provided there. This study has done some work to identify some of the needed infrastructures. However, this needs to be further tested with experts, leaders, and practitioners.

CIPD Valuing Your Talent framework. To some surprise, none of the over 400 articles pulled for this study referred to the CIPD Valuing Your Talent framework. This collaborative research and engagement program encourages organizations to better understand their human capital through understanding and measuring the impact of people on business performance (Chartered Institute of Personnel and Development, n.d.). Research is needed to determine if this work can be used in the Canadian public sector to further the cause of standardizing human capital performance measurement and reporting.

Human Capital Deliverology. Human capital deliverology is an evidence-based human capital management tool that can be used to increase public sector organizations' intangible resource value by actioning learnings and accountability gained through human capital performance measurement. Deliverology compels action using qualitative program evaluation and quantitative performance measurement assessments. It implements policy and program improvements through a focused team. As Franco stated, deliverology "is a system that helps governments keep their promises" (2016, para. 1) through the adage that "what gets measured gets managed^{xiii}". Lahey warns that while deliverology can build capacity for systematic evaluation, diligence is needed to ensure a coordinated and integrated approach is needed to have a significant effect (Lahey, 2017, p. 8).

Human capital deliverology could provide action to human capital performance management. It could contribute to evidence-based human resource management and intangible resource growth by driving improved performance, results, and therefore outcomes. Research into this positivity is needed.

Bibliography

- ADMN 582 Content. (n.d.). *ADMN 582 Unit 2 Course Content*. Retrieved May 7, 2017, from ADMN 582: Topics in Program Evaluation, Performance Measurement, Performance Management and Knowledge Management.
- ADMN 582 Discussion. (n.d.). *ADMN 582 Unit 2 Discussion*. Retrieved May 7, 2017, from ADMN 582: Topics in Program Evaluation, Performance Measurement, Performance Management and Knowledge Management.
- Afiouni, F. (2013). Human capital management: a new name for HRM? *International Journal of Learning and Intellectual Capital*, 10(1), 18-34.
- Ahyaruddin, M., & Akbar, R. (2016, January). The Relationship Between the Use of a Performance Measurement System, Organizational Factors, Accountability, and the Performance of Public Sector Organizations. *Journal of Indonesian Economy and Business*, 31(1), 1-22. Retrieved from Journal of Indonesian Economy and Business
- Akhtar, M., & Mittal, R. K. (2010, Oct-Dec). Enterprise Performance Management and Flexibility: Factors of Effectiveness in Upstream Oil Industry in India. *Global Journal of Flexible Systems Management*, 11(4), 1-10. Retrieved from <https://search.proquest.com/abiglobal/docview/913405601/fulltext/7D38C6A4789B45BAPQ/1?accountid=136762>
- Akhtar, P. (2013, October). Importance of Measuring HR'S Effectiveness: A Drive To HR Metrics. *International Journal of Research in Commerce & Management*, 4(10), 78-81. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.uvic.ca/bsi/pdfviewer/pdfviewer?vid=3&sid=86d5df42-21e6-421a-9ca8-5ec8e88a4fe9%40pdc-v-sessmgr02>
- Alberta Health Services. (n.d.). *2017-2020 Health Plan & Business Plan - Year 2*. Retrieved November 18, 2018, from Alberta Health Services: <https://albertahealthservices.ca/about/page13365.aspx>
- Alberta Health Services. (2017a). *The 2017–2020 Health Plan and Business Plan: A healthier future. Together*. Edmonton: Alberta Health Services. Retrieved from <http://www.albertahealthservices.ca/assets/about/org/ahs-org-hpbp-2017-2020.pdf>
- Alberta Health Services. (2017b). *Our People Results: 2017-18 Q1*. Edmonton: Alberta Health Services.
- Altmayer, C. (2006, June). Moving to Performance-Based Management. *Government Finance Review*, 22(3), 8-14. Retrieved from <https://search.proquest.com/abiglobal/docview/229701366/8258EE013C6A4D29PQ/6?accountid=136762>

- Alvarez, A. (2015). Corporate response to human resource disclosure recommendations. *Social Responsibility Journal*, 11(2), 306-323. Retrieved from <https://search.proquest.com/abiglobal/docview/1683570530/190BD41D15394361PQ/1?accountid=136762>
- Andrews, R., & Boyne, G. A. (2010, May/June). Capacity, Leadership, and Organizational Performance: Testing the Black Box Model of Public Management. *Public Administration Review*, 70(3), 443-454. doi:www.jstor.org/stable/40606402
- Annable, K. (2017, October 17). *Public-sector wage freeze doesn't violate workers' Charter rights: Manitoba government*. Retrieved from CBC News > Manitoba: <http://www.cbc.ca/news/canada/manitoba/wage-freeze-public-manitoba-rights-1.4359101>
- Barber, M., Kihn, P., & Moffit, A. (2011, Spring). Deliverology: From idea to implementation. *McKinsey on Government*, pp. 32-29. Retrieved from https://www.mckinsey.com/~media/McKinsey/Industries/Public%20Sector/Our%20Insights/Deliverology%20From%20idea%20to%20implementation/Deliverology_From_idea_to_implementation.ashx
- Barends, E., Rousseau, D. M., & Briner, R. B. (2014). *Evidence-Based Management: The Basic Principles*. Amsterdam: Center for Evidence-Based Management. Retrieved from <https://www.cebma.org/wp-content/uploads/Evidence-Based-Practice-The-Basic-Principles-vs-Dec-2015.pdf>
- Bassi, L. J., & McMurrer, D. P. (2008). Toward a Human Capital Measurement Methodology. *Advances in Developing Human Resources*, 10(6), 863-881. doi:[10.1177/1523422308325611](https://doi.org/10.1177/1523422308325611)
- BBC News. (2018, February 8). *US House set for budget battle ahead of shutdown deadline*. Retrieved from BBC News > US & Canada: <http://www.bbc.com/news/world-us-canada-42992908>
- Becker, B. E., & Huselid, M. A. (2006, December 1). Strategic human resources management: Where do we go from here? *Journal of Management*, 32(6), 898-925. doi:[10.1177/0149206306293668](https://doi.org/10.1177/0149206306293668)
- Benbrahim, C. F., Sefiani, N., Meddaoui, A., & Reklouli, K. (2017). Assessment of human resource competence and performance indicator. *International Journal of Process Management & Benchmarking*, 7(1), 20-37. doi:[10.1504/IJPMB.2017.080937](https://doi.org/10.1504/IJPMB.2017.080937)
- Bennett, A. C. (2018, October 1). *Moving People Analytics Out of the HR Silo: Power to the People*. 4th Annual People Analytics Summit. Toronto: Strategy Institute.

- Bennett, D. (2018, January 8). *Alberta nurses union strikes tentative deal with two-year wage freeze*. Retrieved from Calgary Herald: <http://calgaryherald.com/news/local-news/alberta-nurses-union-strikes-tentative-deal-with-two-year-wage-freeze>
- Benoit, A. A., & Bourdeau, S. (2012, December). Public sector performance and decentralization of decision rights. *Canadian Public Administration*, 55(4), 575–598. doi:10.1111/j.1754-7121.2012.00238.x
- Bernstein, A., & Beferman, L. (2015). *The Materiality of Human Capital to Corporate Financial Performance*. Harvard University. New York: Investor Responsibility Research Center Institute.
- Bernstein, A., & Beferman, L. (2017). *Corporate Disclosure of Human Capital Metrics*. Harvard Law School, Labor and Worklife Program. New York: Pensions and Capital Stewardship Project. Retrieved from <https://lwp.law.harvard.edu/publications/corporate-disclosure-human-capital-metrics>
- Bogaert, P., Wouters, K., Willems, R., Mondelaers, M., & Clarke, S. (2013, October). Work engagement supports nurse workforce stability and quality of care: nursing team-level analysis in psychiatric hospitals. *Journal of Psychiatric and Mental Health Nursing*, 679-686. doi:10.1111/jpm.12004
- Booth, A., Sutton, A., & Papaioannou, D. (2016). *Systematic Approaches to a Successful Literature Review* (2nd ed.). (M. Steele, Ed.) Thousand Oaks, CA, USA: SAGE Publishing Inc.
- Boudreau, J. W., & Ramstad, P. M. (1997, Fall). Measuring intellectual capital: Learning from financial history. *Human Resource Management*, 36(3), 343-356. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.uvic.ca/ehost/detail/detail?vid=0&sid=a3be5a92-4660-4581-b043-e4a0b6673d5a%40sessionmgr103&bdata=JnNpdGU9ZWwhvc3QtbGl2ZSZzY29wZT1zaXRl#AN=12494920&db=bth>
- Boudreau, J. W., & Ramstad, P. M. (2007). *Beyond HR: The New Science of Human Capital*. Boston: Harvard Business School Press.
- Bozbura, F. T., Beskese, A., & Kahraman, C. (2007, May). Prioritization of human capital measurement indicators using fuzzy AHP. *Expert Systems with Applications*, 32(4), 1100-1112. doi:<https://doi.org/10.1016/j.eswa.2006.02.006>
- Briner, R. B., & Barends, E. (2016, Spring). The Role of Scientific Findings in Evidence-Based HR. *People + Strategy*, 39(2), pp. 16-20. Retrieved from <https://www.cebma.org/wp-content/uploads/Briner-Barends-The-Role-of-Scientific-Findings-in-Evidence-Based-HR.pdf>

- Budget Process Review Panel. (2009). *Report of the Budget Process Review Panel*. Victoria: British Columbia Ministry of Finance. Retrieved from http://www.fin.gov.bc.ca/tbs/enns_bprr09.pdf
- Bukowitz, W. R., Williams, R. L., & Mactas, E. S. (2004, May-June). Human capital measurement: the centrality of people to knowledge-intensive organizations makes it important to measure the ROI on human capital. A new metric is designed to help. *Research-Technology Management*, 47(3), 43-.
- Buller, P. F., & McEvoy, G. M. (2012, March). Strategy, human resource management and performance: Sharpening line of sight. *Human Resource Management Review*, 22(1), 43-56. doi:10.1016/j.hrmr.2011.11.002
- Buttner, E. H., & Tullar, W. L. (2018). A representative organizational diversity metric: a dashboard measure for executive action. *Equality, Diversity and Inclusion*, 37(3), 219-232. doi:10.1108/EDI-04-2017-0076
- Center for Evidence-Based Management. (n.d.). *Members Area*. Retrieved June 11, 2018, from CEMBa: <https://www.cebma.org/portal/>
- Chartered Institute of Personnel and Development. (n.d.). *Valuing your Talent*. Retrieved November 20, 2018, from CIPD: <https://www.cipd.co.uk/knowledge/strategy/analytics/valuing-talent>
- Chartered Professional Accountants of Canada. (2017, March 1). Public Sector Accounting Standards. *Chartered Professional Accountants of Canada Handbook*, Section: PS1100. Chartered Professional Accountants of Canada.
- Chartered Professionals in Human Resources – Alberta. (2017). *Competency Framework: For Chartered Professionals In Human Resources*. Retrieved from CPHR Alberta: <https://www.cphrab.ca/cphr-competency-framework>
- Chen, H.-M., & Lin, K.-J. (2003, December). The measurement of human capital and its effects on the analysis of financial statements. *International Journal of Management*, 20(4), 470-478. Retrieved from <https://search.proquest.com/abiglobal/docview/233230662/fulltext/74880B4DC70944F2PQ/1?accountid=136762>
- Cooper, J., & Jackson, S. (2018). *Scaling the Wall: From HR Metrics to Evidence-Based Analytics*. Conference Board of Canada. Ottawa: Conference Board of Canada. Retrieved from https://www.conferenceboard.ca/temp/6c57fac0-24ad-4dfd-8b4a-71af14699392/9532_Scaling%20the%20Wall_RPT.pdf
- Cunningham, J. B. (2016). HRM's strategic pressures. In J. B. Cunningham, *Strategic Human Resource Management in the Public Arena: A Managerial Perspective* (pp. 1.1 - 1.43). Palgrave-MacMillan.

- Datta, D. K., Guthrie, J. P., & Wright, P. M. (2006, February). Human Resource Management and Labor Productivity: Does Industry Matter? *The Academy of Management Journal*, 48(1), 135-145. doi:10.2307/20159645
- De Rugy, V. (2018, February 6). *Time to Talk about Government Austerity Again*. Retrieved from National Review: <http://www.nationalreview.com/corner/456115/government-austerity-spending-cuts-tax-increases-more-effective>
- Department of Trade and Industry. (2003). *Accounting for People: A report of the Task Force on Human Capital Management*. Department of Trade and Industry. London: Department of Trade and Industry. Retrieved from <http://webarchive.nationalarchives.gov.uk/20121106105451/http://www.bis.gov.uk/files/file38839.pdf>
- Diefenbach, T. (2009). New Public Management in public sector organizations: the dark side of managerialistic 'enlightenment'. *Public Administration*, 87(4), 892-909. doi:10.1111/j.1467-9299.2009.01766.x
- Douthitt, S., & Mondore, S. (2014). Creating a Business-Focused HR Function with Analytics and Integrated Talent Management. *People & Strategy*, 36(4). Retrieved from <http://go.galegroup.com.ezproxy.library.uvic.ca/ps/i.do?ty=as&v=2.1&u=uvictoria&it=DIourl&s=RELEVANCE&p=ITBC&qt=TI~%22Creating+a+business-focused+HR+function+with+analytics+and+integrated+talent+management%22~SP~16~IU~4~SN~1946-4606~VO~36&lm=&sw=w>
- Dumitrana, M., Radu, G., Glăvan, M. E., & Jinga, G. (2011). Effective and Efficient Tools in Human Resources Management Control. *Proceedings of the International Conference Accounting and Management Information Systems (AMIS 2011), 6th Edition* (pp. 458-465). Bucharest : EDITURA ASE. Retrieved from http://apps.webofknowledge.com.ezproxy.library.uvic.ca/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=6EqDD5zegGGGMJROptC&page=1&doc=1
- El-Ghalayini, Y. (2017). Human Resource Management Practices and Organizational Performance in Public Sector Organization. *Journal of Business Studies Quarterly*, 8(3), 65-80. Retrieved from http://jbsq.org/wp-content/uploads/2017/03/March_2017_4.pdf
- Fineman, D. (2016). *Enabling business results with HR "Measures that Matter"*. Boston: Deloitte Development LLC. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/human-capital/us-hc-enabling-business-results-with-hr-measures-that-matter.pdf>

- Fitz-enz, J. (2009). *ROI of Human Capital: Measuring the Economic Value of Employee Performance*. New York: AMACOM.
- Franco, L. (2016, October 7). *Delivering on Deliverology*. Retrieved March 5, 2017, from Canadian Government Executive:
<http://canadiangovernmentexecutive.ca/delivering-on-deliverology/>
- Free Management Library. (n.d.). *Total Quality Management (TQM)*. Retrieved November 23, 2018, from Free Management Library:
<https://managementhelp.org/quality/total-quality-management.htm>
- Frigo, M. L., & Ubelhart, M. C. (2015, November 1). CFO + CHRO = power pair: working together, strategic finance and human resources executives can create great value for their companies by developing and analyzing human capital metrics. *Strategic Finance*, 97(5), pp. 26-33.
- Gamerschlag, R., & Moeller, K. (2011, Summer). The Positive Effects of Human Capital Reporting. *Corporate Reputation Review*, 14(2), 145-155. doi:10.1057/crr.2011.11
- Gates, S., & Langevin, P. (2010, January). Human capital measures, strategy, and performance: HR managers' perceptions. *Accounting, Auditing & Accountability Journal*, 23(1), 111-132. doi:10.1108/09513571011010628
- Heinrich, C. J. (2004). Improving Public Sector Performance Management: One Step Forward, Two Steps Back? *Public Finance & Management*, 4(3), 317-351.
Retrieved from
<http://web.b.ebscohost.com.ezproxy.library.uvic.ca/ehost/viewarticle/render?data=dGJyMPPp44rp2%2fdV0%2bnjisfk5Ie46bNOtaiwSq6k63nn5Kx68d%2b%2bT62ntUewpq9QnqewUrCruE2vls5lpOrweezp33vy3%2b2G59q7RbWpsE%2bXpq9Rr5zqeezdu33snOJ6u9jygKTq33%2b7t8w%2b3%2bS7SbOns0i2>
- Henderson, R. (2015, June 8). *What Gets Measured Gets Done. Or Does It?* Retrieved from Forbes: <http://www.forbes.com/sites/ellevate/2015/06/08/what-gets-measured-gets-done-or-does-it/>
- Herawaty, M., & Hoque, Z. (2007). Disclosure in the annual reports of Australian government departments: A research note. *Journal of Accounting & Organizational Change*, 3(2), 147-168. doi:10.1108/18325910710756159
- Hesketh, A. (2014). *Managing the value of your talent: A new framework for human capital measurement*. London: Chartered Institute of Personnel and Development. Retrieved from <https://www.hrpa.ca/Documents/Public/Human-Capital-Reports/Managing-value-of-talent.pdf>
- Higgins, J., Cooperstein, G., Peterson, M., & Colletto, K. (2012). *Top Five Metrics for Workforce Analytics*. Saba Software. Retrieved from
<http://www.hrbrief.com/index.php>

- Hodgson, G. M. (2014, April 4). What is capital? Economists and sociologists have changed its meaning: should it be changed back? *Cambridge Journal of Economics*, 38(5), 1063-1086. doi:doi: 10.1093/cje/beu013
- Hoque, Z. (2008). Measuring and reporting public sector outputs/outcomes: Exploratory evidence from Australia. *International Journal of Public Sector Management*, 21(5), 468-493. doi:10.1108/09513550810885787
- Houghton, E. (2017). *Human capital analytics and reporting: exploring theory and evidence*. London: Chartered Institute of Personnel and Development. Retrieved from <https://www.cipd.co.uk/knowledge/strategy/analytics/human-capital-analytics-report>
- Huselid, M. A. (2018, May/June). The science and practice of workforce analytics: Introduction to the HRM special issue. *Human Resource Management*, 57(3), 679-684. doi:10.1002/hrm.21916
- Institute of Management & Administration. (2003, February). Balanced Scorecards Give Performance & Change Management a Very Timely Boost. *IOMA's pay for performance report*, p. 4. Retrieved from http://go.galegroup.com.ezproxy.library.uvic.ca/ps/retrieve.do?tabID=T004&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=AdvancedSearchForm¤tPosition=1&docId=GALE%7CA96847555&docType=Article&sort=RELEVANCE&contentSegment=&prodId=I
- Iwu, C. G., Kapondoro, L., Twum-Darko, M., & Lose, T. (2016). Strategic Human Resource Metrics: A Perspective of the General Systems Theory. *Acta Universitatis Danubius: Oeconomica*, 12(2), 5-24. Retrieved from <http://web.a.ebscohost.com.ezproxy.library.uvic.ca/bsi/detail/detail?vid=8&sid=79a5a639-cb3c-4162-93b7-94d148cd714a%40sessionmgr4009&bdata=JnNpdGU9YnNpLWxpdmU%3d#AN=115253596&db=bth>
- Jessani, N., & Reid, G. (2011). Systematic Reviews. In I. D. Centre, *Knowledge Translation, a 'research matters' toolkit* (pp. 1-12). Hamilton, ON, Canada: McMaster University. Retrieved from <https://www.cebma.org/wp-content/uploads/Jessani-Reid-Systematic-Reviews-what-is-it-and-how-does-it-work.pdf>
- Joyce, L. (2017, June 14). *There's a Limit to Doing More With Less, And Many Feds Have Reached It*. Retrieved from Government Executive: <https://www.govexec.com/excellence/promising-practices/2017/06/theres-limit-doing-more-less-and-many-feds-have-reached-it/138685/>
- Kim, T., Henderson, A. C., & Ho Eom, T. (2015). At the front line: examining the effects of perceived job significance, employee commitment, and job involvement on

- public service motivation. *International Review of Administrative Sciences*, 81(4), 713–733. doi:10.1177/0020852314558028
- Lahey, R. (2017, January). Connecting the Dots between M, E, RBM....and Deliverology. *Canadian Government Executive*, 23(1), 6-8. Retrieved from http://canadiangovernmentexecutive.ca/dig/23_01/
- Lahey, R., & Nielsen, S. B. (2013, Spring). Rethinking the Relationship Among Monitoring, Evaluation, and Results-Based Management: Observations From Canada. *Performance management and evaluation. New Directions for Evaluation*, 137, 45-56. doi:10.1002/ev.20045
- Lala Popa, I., & Demyen, S. (2012). Indicators of Effective Human Resource Assessment in Management. *Annals of Eftimie Murgu University Resita, Fascicle II, Economic Studies*, 408-412. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.uvic.ca/bsi/detail/detail?vid=9&sid=f8b8843d-747e-4853-87a9-6c1aa1d25eca%40pdc-v-sessmgr01&bdata=JnNpdGU9YnNpLWxpdmU%3d#AN=92535233&db=bth>
- Lapsley, I. (2009, March). New Public Management: The Cruellest Invention of the Human Spirit? *Abacus*, 45(1), 1-21. doi:10.1111/j.1467-6281.2009.00275.x
- Lawler, E. E., & Boudreau, J. W. (2015). *Global Trends in Human Resource Management: A Twenty Year Analysis*. Stanford: Stanford Business Books.
- Lawler, E. E., Levenson, A., & Boudreau, J. W. (2004, December). HR metrics and analytics: use and impact. *Human Resource Planning*, 27(4). Retrieved from <http://go.galegroup.com.ezproxy.library.uvic.ca/ps/i.do?ty=as&v=2.1&u=uvictoria&it=DIourl&s=RELEVANCE&p=ITBC&qt=TI~%22HR+metrics+and+analytic+s%3A+use+and+impact%22~~SP~27~~IU~4~~SN~0199-8986~~VO~27&lm=&sw=w>
- Learning Resources Centre. (2007, January). Types of Periodicals. Edmonton: MacEwan University.
- Lim, L. L., & Chan, C. C. (2010, December). Perceptions of Human Capital Measures: From Corporate Executives and Investors. *Journal of Business and Psychology*, 25(4), 673–688. doi:<https://doi-org.ezproxy.library.uvic.ca/10.1007/s10869-009-9150-0>
- Loveday, B. (2008, January). Performance Management and the Decline of Leadership within Public Services in the United Kingdom. *Policing: A Journal of Policy and Practice*, 1(1), 120–130. doi:[doi-org.ezproxy.library.uvic.ca/10.1093/police/pam070](http://org.ezproxy.library.uvic.ca/10.1093/police/pam070)
- Mayne, J. (2015, Fall). Useful Theory of Change Models. *Canadian Journal of Program Evaluation*, 30(2), 119–142. doi:10.3138/cjpe.230

- McCann, L., Granter, E., Hassard, J., & Hyde, P. (2015, September-October). 'You Can't Do Both-Something Will Give': Limitations of the Targets Culture in Managing UK Health Care Workforces. *Human Resource Management*, 54(5), 773–791. doi:10.1002/hrm.21701
- McDavid, J. C., Huse, I., & Hawthorn, L. R. (2012). *Program Evaluation and Performance Measurement: An Introduction to Practice* (2 ed.). Thousand Oaks: Sage Publications.
- Mears, A. (2014). Gaming and Targets in the English NHS. *Universal Journal of Management*, 2(7), 293-301. doi:10.13189/ujm.2014.020705
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (n.d.). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med*, 6(7). doi:10.1371/journal.pmed.1000097
- Moynihan, D. P. (2006). Managing for Results in State Government: Evaluating a Decade of Reform. *Public Administration Review*, 66(1), 77-89. Retrieved from <https://onlinelibrary-wiley-com.ezproxy.library.uvic.ca/doi/epdf/10.1111/j.1540-6210.2006.00557.x>
- Mubarik, M. S., Chandran, V. G., & Devadason, E. S. (2018, June). Measuring Human Capital in Small and Medium Manufacturing Enterprises: What Matters? *Social Indicators Research*, 137(2), 605-623. doi:<https://doi-org.ezproxy.library.uvic.ca/10.1007/s11205-017-1601-9>
- Mucciarone, M. A., & Neilson, J. (2011). Performance Reporting in the Malaysian Government. *Asian Academy of Management Journal of Accounting & Finance*, 7(2), 35-77. Retrieved from <http://web.a.ebscohost.com.ezproxy.library.uvic.ca/bsi/pdfviewer/pdfviewer?vid=3&sid=d8327abd-7e2f-42fc-9706-ad7ff5babf09%40sessionmgr4006>
- Nienaber, H., & Sewdass, N. (2016). A reflection and integration of workforce conceptualisations and measurements for competitive advantage. *Journal of Intelligence Studies in Business*, 6(1), 5-20. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.uvic.ca/bsi/pdfviewer/pdfviewer?vid=4&sid=b196199f-a656-489f-b104-5f3e8cc57696%40pdc-v-sessmgr06>
- Nordstrum, L. E., LeMahieu, P. G., & Dodd, K. (2017). Deliverology. *Quality Assurance in Education*, 25(1), 43-57. doi:doi.org/10.1108/QAE-11-2016-0078
- Onley, D. S. (2006, April). Using dashboards to drive HR: HR is finding that information on key performance indicators is just a click away. *HR Magazine*, 51(4), pp. 109-115. Retrieved from <http://web.a.ebscohost.com.ezproxy.library.uvic.ca/ehost/viewarticle/render?data=dGJyMPPp44rp2%2fdV0%2bnjisk5Ie46bNOtaiwSq6k63nn5Kx68d%2b%2bT62>

nt0ewpq9QnqeuUrGvuEqwlr9lpOrweezp33vy3%2b2G59q7RbaotUuwpq9LsZzq
eezdu33snOJ6u9jygKTq33%2b7t8w%2b3%2bS7Sq6qr0mwr

- Osborne, D., & Gaebler, T. (1993). *Reinventing government: how the entrepreneurial spirit is transforming the public sector*. New York: Plume.
- Oxford Living Dictionary. (n.d.). *human capital*. Retrieved June 8, 2018, from Oxford Living Dictionary > British & World English:
https://en.oxforddictionaries.com/definition/human_capital
- Pal, L. A. (2014). *Beyond Policy Analysis: Public Issue Management in Turbulent Times* (Fifth ed.). Toronto: Nelson Education.
- Pereira, V. E., Fontinha, R., Budhwar, P., & Arora, B. (2018). Human resource management and performance at the Indian Railways. *Journal of Organizational Change Management*, 31(1), 47-61. doi:10.1108/JOCM-04-2017-0157
- Plemmons, J. (2018, March 13). *2 Remedies for Reducing Burnout Among Healthcare Workers*. Retrieved from GALLUP:
http://news.gallup.com/opinion/gallup/228305/remedies-reducing-burnout-among-healthcare-workers.aspx?g_source=link_NEWSV9&g_medium=TOPIC&g_campaign=item_&g_content=2%2520Remedies%2520for%2520Reducing%2520Burnout%2520Among%2520Healthcare%2520Workers
- PricewaterhouseCoopers Česká republika. (2013). *HR Controlling 2013: Final Report*. Praha: PricewaterhouseCoopers Česká republika. Retrieved from
<https://www.pwc.com/cz/cs/poradenstvi-pro-lidske-zdroje/assets/hrc-zaverecna-zprava-en.pdf>
- PricewaterhouseCoopers. (n.d.). *Saratoga benchmarking*. Retrieved November 1, 2018, from pwc - United States: <https://www.pwc.com/us/en/services/hr-management/people-analytics/benchmarking.html>
- Recardo, R. J. (2017, March/April). Beyond the Administrivia: Incorporating Best Practices to Strengthen Your Human Resources Strategic Plan. *Global Business & Organizational Excellence*, 36(3), 29-41. doi:10.1002/joe.21778
- Rogers, E. W., & Wright, P. M. (1998, Autumn). Measuring organizational performance in strategic human resource management: Problems, prospects and performance information markets. *Human Resource Management Review*, 8(3), 311-331. doi:10.1016/S1053-4822(98)90007-9
- Roslender, R., & Stevenson, J. (2009, October). Accounting for People: A real step forward or more a case of wishing and hoping? *Critical Perspectives on Accounting*, 20(7), 855-869. doi:10.1016/j.cpa.2007.02.003

- Runhaar, P., Sanders, K., & Konermann, J. (2013). Teachers' work engagement: Considering interaction with pupils and human resources practices as job resources. *Journal of Applied Social Psychology, 43*, 2017–2030. doi:10.1111/jasp.12155
- Sáenz, J. (2005, September). Human capital indicators, business performance and market-to-book ratio. *Journal of Intellectual Capital, 6*(3), 374-384. doi:<https://doi.org/10.1108/14691930510611111>
- Sangwa, N. R., & Sangwan, K. S. (2018, January). Development of an integrated performance measurement framework for lean organizations. *Journal of Manufacturing Technology Management, 29*(1), 41-84. doi:10.1108/JMTM-06-2017-0098
- Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review, 51*(1), 1-17. doi:www.jstor.org.ezproxy.library.uvic.ca/stable/1818907
- Schwartz, J. L., & Murphy, T. E. (2008, April). Human Capital Metrics: An Approach To Teaching Using Data and Metrics To Design and Evaluate Management Practices. *Journal of Management Education, 32*(2), 164-182. doi:10.1177/1052562907307638
- Seddon, J. (2016, November 30). Deliverology: The "Science of Delivery" Or A Pernicious Disease? *Canadian Government Executive*. Retrieved from <https://canadiangovernmentexecutive.ca/deliverology-the-science-of-delivery-or-a-pernicious-disease/>
- Sen, A., & Haque, S. (2016, July–Sept.). HR Metrics and the Financial Performance of a Firm. *Journal of Management Research, 16*(3), 177-184. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.uvic.ca/bsi/pdfviewer/pdfviewer?vid=6&sid=57f804b3-238a-4380-affc-8fdc420768a4%40pdc-v-sessmgr04>
- Seth, N. (2009). Human Resource Accounting Practices Adopted in Indian Industries. *ASBM Journal of Management, 2*(2), 103-113. Retrieved from <https://search.proquest.com/abiglobal/docview/503505969/EEF1C51D6D7E41D6PQ/18?accountid=136762>
- Spengler, J. J. (1977, February). The Invisible Hand and Other Matters: Adam Smith on Human Capital. *The American Economic Review, 67*(1), 32-36. doi:<http://www.jstor.org/stable/1815877>
- Srimai, S. (2015). Performance agreement in Thai public sectors: A call for reconsideration at the provincial level. *International Journal of Productivity and Performance Management, 64*(5), 625-639. Retrieved from <https://www-emeraldinsight-com.ezproxy.library.uvic.ca/doi/full/10.1108/IJPPM-06-2013-0112>

- Srimannarayana, M. (2009, October). Measurement of Human Resource Activities in India. *Indian Journal of Industrial Relations*, 45(2), 265-276. doi:<https://www-jstor-org.ezproxy.library.uvic.ca/stable/20788265>
- Sword, D. M., & Cutsinger, J. (1984, April - May). Human Resource Planning and Budgeting: The Dallas Perspective. *Public Administration Review*, 44(2), 174-176. doi:10.2307/975870
- Texel, P. P. (2013). Measure, Metric, and Indicator: An Object-Oriented Approach for Consistent Terminology. *2013 Proceedings of IEEE Southeastcon* (pp. 1-5). Jacksonville: IEEE. doi:10.1109/SECON.2013.6567438
- The Guardian. (2018, February 4). *The Guardian view on council spending: a crisis unfolding*. Retrieved from The Guardian > Local government opinion: <https://www.theguardian.com/commentisfree/2018/feb/04/the-guardian-view-on-council-spending-a-crisis-unfolding>
- Tonchia, S., & Quagini, L. (2010). Design and Integration of the PMS. In *Performance Measurements: Linking Balanced Scorecard to Business Intelligence* (pp. 61-80). Berlin, Heidelberg: Springer. doi:doi-org.ezproxy.library.uvic.ca/10.1007/978-3-642-13235-3_5
- Toulson, P. K., & Dewe, P. (2004). HR accounting as a measurement tool. *Human Resource Management Journal*, 14(2), 75-90. Retrieved from <http://web.a.ebscohost.com.ezproxy.library.uvic.ca/ehost/detail/detail?vid=0&sid=f4bcb116-0598-4d18-a0ab-8661fef2de5e%40sessionmgr4007&bdata=JnNpdGU9ZWWhvc3QtbGl2ZSZzY29wZT1zaXRl#db=bth&AN=13223202>
- Ulrich, D. (1997, Fall). Measuring Human Resources: An Overview of Practice and a Prescription for Results. *Human Resource Management*, 36(3), 303-320. Retrieved from <http://web.a.ebscohost.com.ezproxy.library.uvic.ca/ehost/pdfviewer/pdfviewer?vid=1&sid=6ef84ff1-52c3-42c5-a485-afca25f107e6%40sessionmgr4008>
- Ulrich, D. (1998, Winter). Intellectual Capital = Competence x Commitment. *Sloan Management Review*, 39(2), 15-26. Retrieved from <https://search-proquest-com.ezproxy.library.uvic.ca/docview/1302971887/fulltextPDF/EFD240B4FD8648F6PQ/1?accountid=14846>
- University of Lethbridge. (2014). *Destination 2020: Vision & Strategy*. Lethbridge: University of Lethbridge. Retrieved from https://www.uleth.ca/sites/default/files/2018/01/latest_strategic_plan_-_website_pdf.pdf
- Vandenabeele, W., & Hondeghem, A. (2008). No Easy Path to HRM Performance Measurement Systems: Exploring the Introduction of the U.S. Human Capital

- Assessment and Accountability Framework and the Flemish Management Code. *Public Personnel Management*, 37(2), 243-260. doi:doi-org.ezproxy.library.uvic.ca/10.1177/009102600803700207
- Verma, S., & Dewe, P. (2008). Valuing human resources: perceptions and practices in UK organisations. *Journal of Human Resource Costing & Accounting*, 12(2), 102-123. doi:10.1108/14013380810889547
- Vittadini, G. (2010). Human Capital Measurement: A Survey. *Journal of Economic Surveys*, 24(2), 248-279. doi:10.1111/j.1467-6419.2009.00614.x
- Vuontisjärvi, T. (2006). Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies. *Journal of Business Ethics*, 69(4), 331-354. doi:https://www-jstor-org.ezproxy.library.uvic.ca/stable/25123963
- Wake, N. J. (2015). The use of the balanced scorecard to measure knowledge work. *International Journal of Productivity and Performance Management*, 64(4), 590-602. doi:10.1108/IJPPM-08-2012-0091
- Walker, G., & MacDonald, J. R. (2001). Designing and Implementing an HR Scorecard. *Human Resource Management*, 40(4), 365-377. Retrieved from <https://onlinelibrary-wiley-com.ezproxy.library.uvic.ca/doi/epdf/10.1002/hrm.1025>
- Walsh, C. (2017, October 19). *On Building A Faster Horse: Design Thinking For Disruption*. Retrieved from Forbes: <https://www.forbes.com/sites/forbesfinancecouncil/2017/10/19/on-building-a-faster-horse-design-thinking-for-disruption/#76aa51749f9c>
- Wang, L., & Cotton, R. (2018, May/June). Beyond Moneyball to social capital inside and out: The value of differentiated workforce experience ties to performance. *Human Resource Management*, 57(3), 761-780. doi:10.1002/hrm.21856
- Xiao, Y., & Watson, M. (2017, August 28). Guidance on Conducting a Systematic Literature Review. *Journal of Planning Education and Research*, 1-20. doi:https://doi.org/10.1177/0739456X17723971
- Yeung, A. K., & Berman, B. (1997, Fall). Adding Value Through Human Resources: Reorienting Human Resource Measurement to Drive Business Performance. *Human Resource Management*, 36(3), 321-335. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.uvic.ca/ehost/pdfviewer/pdfviewer?vid=1&sid=cfa40e8f-1b6e-475c-b511-c1daf24f00f0%40pdc-v-sessmgr05>

Appendix A: Definitions for Human Capital

The following is a copy of a chronological list of “human capital” definitions compiled by Fida Afiouni in her article *Human capital management: a new name for HRM?* (Afiouni, 2013, pp. 21-22).

Author	Year	Definition
Snell and Dean	1992	Employees’ knowledge, skills and capabilities that are of economic value to organisations
Hudson	1993	The combination of these four factors: your genetic inheritance, your education, your experience, and your attitudes about life and business
Becker	1993	Knowledge and skills embodied in an individual
Edvinsson and Malone	1997	A primary component of the intellectual capital construct
Stewart	1997	A primary component of the intellectual capital construct
Sveiby	1997	A capacity to act in different situations to create both tangible and intangible assets
Davenport and Prusak	1998	The intangible resources of abilities, effort, and time that workers bring to invest in their work
Bontis	1999, 2001	The individual stock of knowledge embedded in the firm’s collective capability to extract the best solutions from its individual employees
Sullivan	1999	The firm’s individual employees who possess skills, abilities, knowledge, and know-how
Mayo	2000	A capability, knowledge, skill, experience, and networking, with the ability to achieve results and the potential for growth
Nerdrum and Erikson	2001	knowledge and skills complemented with productive capacity such as having the time and health
OECD	2001	the knowledge, skills, competencies, and other attributes embodied in individuals that facilitate the creation of personal, social, and economic well-being
Walker	2001	The set of skills, knowledge, and capabilities organisations need to succeed in the new knowledge and technology economy
McGregor et al.	2004	Embraces both the broader human resource considerations of the business workforce (traditionally known as the labour market) and the more specific requirements of individual competence in the form of knowledge, skills and attributes of managers and the people they manage
Youndt and Snell	2004	Refers to individual employee’s knowledge, skills, and expertise
Wiig	2004	Part of intellectual capital. The enterprise’s HC consists of the knowledge, understanding, skills, experience, and

Author	Year	Definition
		relationships of its employees. HC is the property of employees and is only leased or rented to the enterprise
Abeysekera and Guthrie	2005	A combination of factors possessed by individuals and the collective workforce of a firm. It can encompass knowledge, skills, and technical ability; personal traits such as intelligence, energy, attitude, reliability, commitment; ability to learn, including aptitude, imagination, and creativity; desire to share information, participate in a team and focus on the goals of the organisation
CIPD	2006	The skill, experience, and capacity to develop and innovate, that is owned by individuals
Isaac et al.	2009	HC is concerned with the skills, knowledge, innovativeness, capabilities, and overall competence of employees. It represents the goods and services employees produce that bring revenues when there is an investment of their knowledge, skills, and other abilities.
Gates and Langevin	2010	HC refers to the knowledge, competencies, experience, and creativity of the workforce as well as their attitudes and motivation. By structuring the management and sharing of this knowledge, the organisation can develop key competencies that are difficult to imitate, and thereby gain a sustainable competitive advantage.
Santos-Rodrigues et al.	2010	It is the value of the knowledge and talent embodied in the people who make up the organisation. It represents the knowledge, talent, competence, attitude, intellectual agility, and creativity.
Benevene and Cortini	2010	Human capital (HC) (attitudes, skills, and competences of people in the organisation). It is crucial for the organisation to create knowledge.
Choudhury and Mishra	2010	Human capital refers to individual's knowledge, skills, and expertise. It is the ability of the employees to do things that ultimately make the company work and succeed.
Unger et al.	2011	skills and knowledge that individuals acquire through investments in schooling, on-the-job training, and other types of experience

Appendix B: Glossary

Evidence can be created by program evaluations or performance measurement systems as well as by related approaches such as spending reviews or internal or external audits. Evidence can be qualitative or quantitative. Evidence can be collected formally or gathered informally. In performance measurement systems, performance results are often stated quantitatively - one common comparison is to look at actual performance results compared to stated targets. Public performance measurement and reporting tends to be more quantitative given the emphasis on accountability (ADMN 582 Content, n.d., para. 14).

Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties (American Accounting Association, 1973, as cited in (Verma & Dewe, 2008, p. 103)).

Human Resource Function is the corporate function that develops, implements, administers, leads, and provides advice and recommendation to organizational leaders on human capital (workforce) programs and policies (i.e., the human resources department).

Indicators are “based on metrics and a baseline against which a metric is measured” (Texel, 2013, p. 4). Indicators are comparative and directional. These baselines can be internal (targets) or external (benchmarks). In the human capital world, it could be comparing the overtime percent to a stated internal target (reduce by 2 percent) or and external benchmark (achieve top quartile compared to a stated market).

Intellectual capital combines all the intangibles based on the knowledge that an organization can use to acquire a competitive advantage and create value. Three components appear consistently: human capital, structural capital, and relational capital (Gates & Langevin, 2010, p. 113).

- **Human Capital** refers to the knowledge, competencies, experience, and creativity of the workforce as well as their attitudes and motivation (Gates & Langevin, 2010, p. 113).
- **Structural Capital** includes all the structures, procedures, routines, cultural aspects, and databases that permit an organization to codify, organize, and diffuse

internally the knowledge and experiences generated by the human capital (Gates & Langevin, 2010, p. 113).

- **Relational Capital** integrates the knowledge about relationships with the organization's external partners such as customers, suppliers, and local communities (Gates & Langevin, 2010, p. 113).

Measures are described as “a quantitative number that objectively represents a single characteristic of a real-world entity in a unit of measure, if applicable.” (Texel, 2013, p. 4). That is, it is something that is directly observable: the table is one metre long, there are 1,485 employees in the organization, or employees took a total of 256 sick days.

Metrics represent “a collection of measures that subjectively give context for a less tangible and more abstract attribute of a real-world entity” (Texel, 2013, p. 4). Metrics are often ratios or percentages. In the human capital world, it could be the number of employees per manager (span-of-control) or total overtime hours as a percentage of worked hours.

Performance measurement is the process of designing and implementing quantitative and qualitative measures of program results, including outputs and outcomes.

Performance measurement is an ongoing process that generates information that can be used for monitoring and reporting – ideally, performance information is used for performance improvement and building accountability (ADMN 582 Content, n.d., para. 9).

Performance measurement (and reporting) for improved accountability is focused on external expectations that an organization will measure results (usually intended outcomes) and will periodically report results in comparison to objectives, targets, or benchmarks. Performance measurement for improved accountability is more summative (ADMN 582 Content, n.d., para. 9).

Appendix C: Protocol Search Criteria

The following outlines the protocol search criteria for the study.

Table 7: Protocol Search Criteria	
Levels of Literature Searched (Appendix D: Types of Periodicals)	<p><i>Primary Sources</i> were Level 1 (scholarly and research journals) and Level 2 (professional, trade & industry journals) literature.</p> <p><i>Contextual Sources</i> were Level 3 (popular magazines) and Level 4 (newspapers/newsletters) literature.</p>
Keywords	<p>Research Question #1: Human Capital Performance Indicators:</p> <p><i>"human capital" AND indicator; "human resource*" AND indicator; ("human resources*" OR workforce OR talent) AND (indicator* OR measure* OR metric*); ("human resources*" OR workforce OR HR) AND (indicator* OR measure* OR metric*); and ("human resources*" OR workforce OR HR) AND (indicator* OR measure* OR metric*) AND performance</i></p> <p>Human Capital Based Performance Reporting Systems</p> <p><i>("human capital" OR "human resources*" OR workforce OR HR) AND (dashboard* OR "performance target*" OR "performance report*") AND ("performance improve*" OR "efficient* improve*" OR "effective* improve*" OR "impact* improve*" OR "performance change" OR "efficient* change" OR "effective* change" OR "impact* change" OR "public sector"); ("human capital" OR "human resources*" OR workforce OR HR) AND (dashboard* OR "performance target*" OR "performance report*" OR decision*) AND ("performance improve*" OR "efficient* improve*" OR "effective* improve*" OR "impact* improve*" OR "performance change" OR "efficient* change" OR "effective* change" OR "impact* change" OR "public sector"); and ("human capital" OR "human resources*" OR workforce OR HR) AND (dashboard* OR "performance target*" OR "performance report*" OR "balanced score*" OR deliverology)</i></p> <p>* The original keywords included combinations including the word "People*". However, these turned out to be too broad and were excluded from the search.</p>
	<p>Business Search Complete Web of Science JSTOR CEBMA</p>
Citation Tracking	Custom Excel Spreadsheet

Appendix D: Types of Periodicals

Periodicals can be described as following a hierarchy. The following provides examples of levels of literature based on “Types of Periodicals” described by MacEwan University (Learning Resources Centre, 2007)

	SCHOLARLY AND RESEARCH JOURNALS Level 1	PROFESSIONAL, TRADE & INDUSTRY JOURNALS Level 2	POPULAR MAGAZINES Level 3	NEWSPAPERS/NEWSLETTERS Level 4
Examples	Human Resource Management Review Journal of Human Resources International Journal of Public Sector Management Canadian Public Administration	Harvard Business Review Canadian Government Executive CPHR Alberta Magazine Canadian HR Reporter	Canadian Business Alberta Ventures Alberta Views MacLean's Report on Business	Edmonton Journal Globe and Mail National Post HR Week
Value & Uses	Reports on original research In-depth analysis of topics Lengthy articles Statistical information Academic level book reviews Refereed or peer-reviewed	Current trends, news & products in a field Practical industry information Company, organization & biographical news Book & product reviews	Current events and news Hot topics Brief, factual information Short articles Interviews	News stories Current information Local & regional focus Analysis & opinion of current events Editorials Book reviews
Language	Academic level writing & vocabulary Specialized language of the discipline Can be highly technical	Written for practitioners in the field Specialized jargon	Non-technical vocabulary Often simple language	Non-technical vocabulary Written for a general audience
Authors	Researchers, academics, professors, scholars	Experts in the field or journalists with subject expertise	Journalists, staff writers, freelance writers	Journalists, staff-writers

	SCHOLARLY AND RESEARCH JOURNALS Level 1	PROFESSIONAL, TRADE & INDUSTRY JOURNALS Level 2	POPULAR MAGAZINES Level 3	NEWSPAPERS/NEWSLETTERS Level 4
Sources	Foot notes & bibliographies Documentation often extensive	Occasional brief bibliographies Sources can be sited in text	Original sources can be obscure Sources, when used, are rarely cited in full	Sources are rarely cited in full
Publishers	Professional organizations, universities, research institutes and scholarly presses	Commercial/trade publisher Industry institutes and professional associations	Commercial/trade publisher	Commercial/trade publisher
Graphics	Graphs, charts, and tables Ads and photographs are rare	Graphics, charts, tables, photographs relevant to the industry glossy ads	Many graphics and photographs Many full-page, color, glossy ads	Photos, graphics, and charts Many ads

Appendix E: Literature Search Databases

Included: The following databases were included as data sources:

Proquest ABI/INFORM Global: ABI/INFORM Global™ is one of the most comprehensive business databases on the market. It includes in-depth coverage for over 3,535 publications, with more than 2,495 available in full text (Center for Evidence-Based Management, n.d., para. 3)

Business Source Elite: Business Source Elite provides full text coverage for more than 1,100 scholarly business, management, and economics journals, including nearly 500 peer-reviewed publications. In addition to the full text, this database offers indexing and abstracts for nearly 1,800 journals (Center for Evidence-Based Management, n.d., para. 4)

JSTOR: JSTOR is a digital library containing digitized back issues of academic journals, books, and primary sources. It provides full-text searches of almost 2,000 journals. <https://en.wikipedia.org/wiki/JSTOR>

Web of Science: Web of Science (previously known as Web of Knowledge) is an online subscription-based scientific citation indexing service that provides a comprehensive citation search. It gives access to multiple databases that reference cross-disciplinary research, which allows for in-depth exploration of specialized sub-fields within an academic or scientific discipline. https://en.wikipedia.org/wiki/Web_of_Science

Excluded: The following databases were not included as data sources:

Google Scholar: Google Scholar is a freely accessible web search engine that indexes the full text or metadata of scholarly literature across an array of publishing formats and disciplines. https://en.wikipedia.org/wiki/Google_Scholar

Appendix F: Summary of Primary Articles

The following provides a summary of the primary articles used for both research questions. It includes the title, citation, tier, and research theme(s) for each article. This is followed by the published key words and abstracts that provide some quick context for each.

a) Research Question #1 (Performance Indicators) Primary Articles

Reference ID:	RQ1-011
Title:	Perceptions of Human Capital Measures: From Corporate Executives and Investors
Citation:	(Lim & Chan, 2010, p. 686)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #3 Common v. Strategy-aligned Human Capital Performance Indicators #4 Disclosure of Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	human capital; executives' perspective; investors' perspectives
Abstract:	<p>This study compared the perceptions of executives and investors in terms of the importance to disclose human capital measures and their knowledge of those measures. Forty-nine senior-level executives (41% response rate) from service-oriented, public-listed companies in Australia and 33 investors (47% response rate) from various fund management companies responded to our survey. The investors indicated the importance to disclose certain human capital measures more than the executives did. The executives appeared to show a better understanding than the investors did on indicators such as staff satisfaction index, staff capacity, motivational index, workforce stability, and workforce competence profile. To date, researchers have explored human capital from a piecemeal perspective. A more integrated and multifaceted measure of human capital has the potential to benefit fund managers and executives. Disclosure of value added by employees, composition of staff (full-time, contract, or temporary), staff turnover, average years of experience, and average age of management and operational staff would shed some light on investment decisions for fund managers. Executives could utilize the measures to reflect on an assortment of human capital issues that are relevant to their organizations and stakeholders, especially the investment community. This study proposed a more inclusive measure of human capital by integrating traditional measures of human capital and non-accounting measures (e.g., educational level, experience, and motivation). A comparison of the perspectives of executives and investors revealed preferences for certain information, which can help to improve the perception of transparency and accountability.</p>

Reference ID:	RQ1-091
Title:	Prioritization of human capital measurement indicators using fuzzy AHP Prioritization of human capital measurement indicators using fuzzy AHP
Citation:	(Bozbura, Beskese, & Kahraman, 2007)
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #5 Developing Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Article Type:	
Keywords:	human capital, measurement indicators, fuzzy sets, AHP, prioritization
Abstract:	<p>People in an organization constitute an important and essential asset which tremendously contributes to development and growth of that company by the help of their collective attitudes, skills, and abilities. Therefore, the human capital (HC) can be considered the most important sub-dimension of the intellectual capital. Since you cannot manage what you cannot control, and you cannot control what you do not measure, the measurement of HC is a very important issue. This study aims at defining a methodology to improve the quality of prioritization of HC measurement indicators under fuzziness. To do so, a methodology based on the extent fuzzy analytic hierarchy process (AHP) is proposed. Within the model, five main attributes; talent, strategical integration, cultural relevance, knowledge management, and leadership; their sub-attributes, and 20 indicators are defined. The proposed model can be used for any country. However, the results obtained in the numerical example reflect the situation of HC in Turkey, since the experts are asked to make their evaluations considering the cultural characteristics of Turkey. The results of the study indicate that “creating results by using knowledge”, “employees’ skills index”, “sharing and reporting knowledge”, and “succession rate of training programs” are the four most important measurement indicators for the HC in Turkey.</p>

Reference ID:	RQ1-095
Title:	Measurement of Human Resource Activities in India
Citation:	(Srimannarayana, 2009)
Article Type:	Tier 1
Direct:	Direct
Theme:	#4 Disclosure of Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	employee recruitment, employee compensation, on the job training, employee relations, performance management, new employees, payroll
Abstract:	<p>The human resource (HR) function in organizations has evolved and matured to a substantial degree in India. HR budgets are increasing in most of the organisations. Subsequently, accountability in human resource management has emerged as an important trend. HR departments have started attempting to measure the contribution of HR. In this background, the present study has been undertaken to identify measures of HR activities in India. Based on</p>

Reference ID:	RQ1-095
the information collected from 109 HR professionals across India, the study found that the attempts in Indian industry to measure the HR activities improved from a limited extent to a significant extent. But the focus of measurement is largely on traditional HR measures and not on business impact measures.	

Reference ID:	RQ1-138
Title:	Indicators of Effective Human Resource Assessment in Management
Citation:	(Lala Popa & Demyen, 2012)
Article Type:	Tier 1
Direct:	Direct
Theme:	#6 Recommended Human Capital Performance Indicators

Keywords:

human resource; human resource management; indicators; organization; turnover

Abstract:

The purpose of this paper is to illustrate the main indicators regarding the assessment of human resource in enterprises, especially SME's. One of the chapters deals with the analysis of the efficiency of human resources, while another one exposes the concept of performance in the area of human resources. During the last years, facing new and more provocative problems, the specialists concluded that this type of resource becomes more and more essential for any organization which tries to adapt to the demands of market.

Reference ID:	RQ1-141
Title:	Human resource management and performance at the Indian Railways
Citation:	(Pereira, Fontinha, Budhwar, & Arora, 2018)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #2 Public Sector Human Capital Performance Indicators #3 Standardized v. Strategy-centric Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators

Keywords:

high-performance work practices, public sector, Indian railways, multiple performance indicators, multiple stakeholders

Abstract:

Purpose High-performance work practices (HPWPs) have been well documented within private organizations in developed country economies. Such practices, however, remain under-investigated in the public sector and in emerging economies. The purpose of this paper is to work towards filling this void, by empirically evaluating HPWP within an Indian public sector undertaking (PSU), also the world's largest commercial public sector employer: the Indian Railways (IR). Design/methodology/approach The authors investigate whether the practices implemented in this organization are consistent with the idea of HPWPs, and analyse how they are influenced by different stakeholders and ultimately associated with different indicators of organizational performance. The authors focused on six railway zones and interviewed a total of 62 HR practitioners. Findings The results show that most practices implemented are aligned with the idea of HPWPs, despite the existence of context-specific unique practices.

Reference ID:	RQ1-138
<p>Furthermore, the authors identify the influence of multiple stakeholders in decision making concerning different practices. The authors additionally found that the measurement of performance goes beyond financial indicators and several context-specific non-financial indicators are identified and their social importance is reiterated. Originality/value Theoretically, this paper utilizes and contributes to the resource-based view of firms by identifying a distinctive bundle of competencies in human resources through HPWS in the IR.</p>	

Reference ID:	RQ1-147
Title:	Development of an integrated performance measurement framework for lean organizations
Citation:	(Sangwa & Sangwan, 2018)
Article Type:	Tier 1
Direct:	Direct
Theme:	#3 Standardized v. Strategy-centric Human Capital Performance Indicators #5 Developing Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators

Keywords:	employee attitudes; general systems theory; HR metrics; HR strategy
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Abstract:	<p>Measuring and quantifying strategic human resource outcomes in relation to key performance criteria is essential to developing value-adding metrics. Objectives This paper posits (using a general systems lens) that strategic human resource metrics should interpret the relationship between attitudinal human resource outcomes and performance criteria such as profitability, quality, or customer service. Approach Using the general systems model as underpinning theory, the study assesses the variation in response to a Likert type questionnaire with twenty-four (24) items measuring the major attitudinal dispositions of HRM outcomes (employee commitment, satisfaction, engagement, and embeddedness). Results A Chi-square test (Chi-square test statistic = 54.898, p=0.173) showed that variation in responses to the attitudinal statements occurred due to chance. This was interpreted to mean that attitudinal human resource outcomes influence performance as a unit of system components. The neutral response was found to be associated with the 'reject' response than the 'acceptance' response. Value The study offers suggestion on the determination of strategic HR metrics and recommends the use of systems theory in HRM related studies. Implications This study provides another dimension to human resource metrics by arguing that strategic human resource metrics should measure the relationship between attitudinal human resource outcomes and performance using a systems perspective.</p>
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Reference ID:	RQ1-172
Title:	Human Resource Accounting Practices Adopted in Indian Industries
Citation:	(Seth, 2009)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators

Reference ID:	RQ1-172
Keywords:	studies; human resource accounting; models; organization development
Abstract:	Human Resource Accounting (HRA) means accounting for people as original resources. It is the measurement of cost and value of people for an organization. It is also a way of thinking about the management of people in formal organizations. Knowledge workers are important resources for the typical modern business firms. With the growing complexities of business organizations, the need and importance of competent people is increasing continuously. Yet financial reporting ignores such resources. This paper throws light on the concepts of human resource accounting. It includes an introduction to the concept of human resource accounting, various human resource accounting models, which have been adopted by a number of Indian enterprises to give information about human resource in their balance sheets, steps involved in calculation of human value using Lev and Schwartz model and its critical aspects, and lastly, concludes with suggestions for improvement in the field.

Reference ID:	RQ1-215
Title:	A representative organizational diversity metric: a dashboard measure for executive action
Citation:	(Buttner & Tullar, 2018)
Article Type:	Tier 1
Direct:	Direct
Theme:	#6 Recommended Human Capital Performance Indicators
Keywords:	diversity; diversity management; demographic representativeness; organizational demographic diversity; organizational diversity metric
Abstract:	<p>Purpose Workforce analytics is an evolving measurement approach in human resource (HR) planning and strategy implementation. Workforce analytics can help organizations manage one of their most important resources: their human capital. The purpose of this paper is to propose a diversity metric, called the D-Metric, as a new tool for HR planning. The D-Metric can be used to assess the demographic representativeness of employees across skill categories of an organization's workforce compared to its relevant labor markets.</p> <p>Design/methodology/approach the authors present a real example and discuss possible applications of the D-Metric in HRM strategic planning and diversity research.</p> <p>Findings The D-Metric is a statistic useful in assessing demographic representativeness in the occupational categories of an organization's workforce compared to the demographics of its relevant labor markets. The methodology could be implemented to assess an organization's work force representativeness on dimensions such as race, sex, age and pay levels. When the labor market is unitary, without measurable variance, a substitute metric, the U-Metric also presented in this paper, can be used.</p> <p>Research limitations/implications Use of the D-Metric requires publicly available labor market data with variance across labor market segments.</p> <p>Originality/value There currently is no published metric that evaluates the representativeness of an organization's work force relative to its relevant labor markets. Many organizations seek a demographically representative workforce to better understand their diverse customer segments. Monitoring the representativeness of an organization's work force, as captured in Equal Employment Opportunity (EEO-1) forms in the USA, for example, is an important</p>

Reference ID:	RQ1-215
component of HR management strategy. From a legal perspective, the D-Metric or the alternative U-Metric could be useful in showing progress toward a demographically representative work force.	

Reference ID:	RQ1-238
Title:	HR Metrics and the Financial Performance of a Firm
Citation:	(Sen & Haque, 2016)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #3 Standardized v. Strategy-centric Human Capital Performance Indicators #5 Developing Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	
HR metrics, Financial performance, Human capital	
Abstract:	
HR metrics can be a meaningful measures of HR performance in the context of total organization. This article attempts to take a case-based approach to specifically highlight the linkage of HR efficiency metrics with some financial measures. The purpose of the paper is to focus on key HR metrics, taking examples from selected companies, indicating that when performance of HR system is measured and evaluated it may act as a positive reinforcing dimension in strategic value addition.	

Reference ID:	RQ1-260
Title:	Human capital indicators, business performance and market-to-book ratio
Citation:	(Sáenz, 2005)
Article Type:	Tier 1
Direct:	Direct
Theme:	#4 Disclosure of Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	
intellectual capital, human capital, benchmarking, business performance, banking, Spain	
Abstract:	
<p>Purpose</p> <p>– For many authors, the difference between the market value of companies' shares and their book value is the consequence of intellectual capital (IC). To test this, this paper suggests a methodology to study the relationship between IC indicators and the market-to-book ratio (MBR). In addition, it presents an exploratory application of that methodology in the field of human capital (HC) and within the Spanish banking industry. In this research, the relationships between HC, MBR, and other business performance indicators are measured.</p> <p>Design/methodology/approach</p> <p>– The methodology mentioned above creates a score for each of the three main IC components: human, structural, and relational capital. These scores try to measure the relative position of companies in the same industry in each of the IC blocks. Then, a global score is set,</p>	

Reference ID:	RQ1-260
<p>combining the scores of the previous blocks. For these calculations to be done, a common set of indicators in the companies studied is needed. The lack of balance nowadays between showing strategy uniqueness and delivering comparable information across firms, when preparing external IC reports, has limited the empirical application of the proposed methodology to HC indicators.</p> <p>Findings</p> <ul style="list-style-type: none"> – Preliminary results show a clear positive relationship between HC indicators and MBR, and almost a non-existent one between HC indicators and banks' efficiency and financial return. In any case, the highest correlations found are between, on the one hand, banks' efficiency, and financial return and, on the other hand, MBR. <p>Originality/value</p> <ul style="list-style-type: none"> – The value of this paper lies mainly in the methodology it provides for external IC benchmarking. 	

Reference ID:	RQ1-261
Title:	Measuring organizational performance in strategic human resource management: Problems, prospects and performance information markets
Citation:	(Rogers & Wright, 1998)
Article Type:	Tier 1
Direct:	Indirect
Theme:	#1 Importance of Human Capital Performance Indicators #4 Disclosure of Human Capital Performance Indicators #5 Developing Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	
n/a	
Abstract:	
<p>A major challenge for Strategic Human Resource Management research in the next decade will be to establish a clear, coherent, and consistent construct for organizational performance. This article describes the variety of measures used in current empirical research linking human resource management and organizational performance. Implications for future research are discussed amidst the challenges of construct definition, divergent stake-holder criteria, and the temporal dynamics of performance. The concept of performance information markets that addresses these challenges is proposed as a framework for the application of multi-dimensional weighted performance measurement systems.</p>	

Reference ID:	RQ1-262
Title:	Strategy, human resource management and performance: Sharpening line of sight
Citation:	(Buller & McEvoy, 2012)
Article Type:	Tier 1
Direct:	Direct
Theme:	#6 Recommended Human Capital Performance Indicators
Keywords:	
strategic human resource management; line of sight; HRM and performance	

Reference ID:	RQ1-262
Abstract:	
<p>This paper builds on previous theory and research on strategy and human resource management to identify important linkages between the firm's strategy, its human resources, and performance outcomes. First, we review the relevant literature focusing in particular on the role of human resources in creating competitive advantage. We then present a multi-level model illustrating how human resource management practices can effectively align organizational, group and individual factors with the organization's strategy. We redefine line of sight as the alignment of organizational capabilities and culture, group competencies and norms, and individual KSAs, motivation and opportunity with one another and with the organization's strategy. Further, we propose that such alignment contributes to the creation of human capital and social capital, both of which are necessary to achieve and sustain superior performance. We conclude the paper with some implications for future research and practice.</p>	

Reference ID:	RQ1-263
Title:	HR metrics and analytics: use and impact
Citation:	(Lawler, Levenson, & Boudreau, 2004)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #5 Developing Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	n/a
Abstract:	
<p>HR functions often collect data on their efficiency, but not on the business impact of their programs and practices. This is a crucial point because HR organizations that collect effectiveness data are more likely to be strategic partners. If HR wants to play a strategic role in organizations, it needs to develop its ability to measure how human capital decisions affect the business and how business decisions affect human capital.</p>	

Reference ID:	RQ1-265
Title:	Accounting for People: A report of the Task Force on Human Capital Management
Citation:	(Department of Trade and Industry, 2003)
Article Type:	Tier 2
Direct:	Direct
Theme:	#3 Standardized v. Strategy-centric Human Capital Performance Indicators #4 Disclosure of Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	n/a
Abstract:	
<p>The Task Force on Human Capital Management was established by the Secretary of State for Trade and Industry in January 2003 to:</p>	

Reference ID:	RQ1-265
	<ul style="list-style-type: none"> • look at the performance measures currently used to assess investment in human capital; • consider best practice in human capital reporting, and the performance measures that are most valuable to stakeholders; • establish and champion the business case for producing such reports; and • produce a final advisory report by the autumn.

Reference ID:	RQ1-266
Title:	H R Controlling 2013: Final Report
Citation:	(PricewaterhouseCoopers Česká republika, 2013)
Article Type:	Tier 2
Direct:	Direct
Theme:	#3 Standardized v. Strategy-centric Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	n/a
Abstract:	The HR Controlling 2013 study provides organizations with essential information to work with their people more effectively and apply the discipline of measurement in managing people as a business asset, through a portfolio of human capital performance measures. Our aim is to help organizations translate human capital into something tangible, measurable, and benchmarkable like any other asset.

Reference ID:	RQ1-250
Title:	A reflection and integration of workforce conceptualisations and measurements for competitive advantage
Citation:	(Nienaber & Sewdass, 2016)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of Human Capital Performance Indicators #5 Developing Human Capital Performance Indicators #6 Recommended Human Capital Performance Indicators
Keywords:	competitive advantage, organizational performance, predictive analytics, strategy, workforce, workforce analytics, workforce intelligence, workforce metrics
Abstract:	Workforce management is important in organizational performance. However, executives lament that their workforce management efforts remain ineffective. This comes as no surprise, as workforce measurement poses a challenge for several reasons: the many different conceptualizations of the workforce, which developed in parallel, and flawed workforce analytics, hence inadequate workforce intelligence, are among the most significant. To have the right people available requires timely and accurate information and intelligence to make evidence-based decisions. In order to achieve this proper measurement is required, which

Reference ID:	RQ1-250
<p>forms part of the information system that ensures the availability of the right people, at the right place, at the right time. People measurement/metrics is a neglected area of research, which is receiving increased attention. Though little, if any, attention is devoted to the link between people as dimension of competitive advantage and metrics to ensure the availability of the right people, at the right place at the right time. Our conceptual paper attends to this omission by reflecting on the different conceptualizations of 'workforce' by integrating the diverse and fragmented literature, which has not been done before, and linking it with workforce measurement. In so doing, we provide a more comprehensive understanding of 'workforce' and workforce measurement, ensuring alignment with organizational strategy to secure a competitive advantage and, thus, organizational performance. We also propose an integrated framework to measure and manage the workforce. It transpired that of the many tools available, predictive analytics emerged as the most effective means to measure and manage the workforce successfully. Our paper benefits both academics and practitioners as theoretical ambiguities and tensions are clarified while ensuring the availability of the requisite workforce.</p>	

Reference ID:	RQ1-267
Title:	Top Five Metrics for Workforce Analytics
Citation:	(Higgins, Cooperstein, Peterson, & Colletto, 2012)
Article Type:	Tier 1
Direct:	Direct
Theme:	#6 Recommended Human Capital Performance Indicators
Keywords:	
workforce cost, management cost & structure, workforce analytics, workforce analysis, workforce management system, workforce planning, workforce planning models, business issues and trends, global HR	
Abstract:	
The potential of these top five metrics is significant, and the greatest value can be achieved when they are linked to financial metrics, such as revenue or profit for FTE, for example workforce.	

b) Research Question #2 (Performance Reporting) Primary Articles

Reference ID:	RQ2-003
Title:	Disclosure in the annual reports of Australian government departments: A research note
Citation:	(Herawaty & Hoque, 2007)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #3 Public sector human capital performance reporting #5 Recommended human capital performance reporting systems

Reference ID:	RQ2-003
Keywords:	
annual reports; governmental accounting; disclosure; public administration; stakeholders; studies	
Abstract:	
<p>Annual reports are perceived to be important sources of information about government departments' performance, accountability, efficiency, and effectiveness. This paper aims to report on an empirical study that explores the current disclosure practices by Australian government departments. To achieve the research aim, the paper assesses the 2005-2006 annual reports of 56 Australia Government departments. It analyses 47 mandatory disclosures and 20 voluntary disclosures reported by the subject organizations. It employs a disclosure index to calculate the level of disclosures. The findings reveal that the voluntary disclosure level is higher than the mandatory disclosure in the subject departments. Further, it is found that the annual reports of government departments reveal a low level of disclosures in the areas of human resources, asset management, and external scrutiny, purchasing, and contracting. The study is based on published annual reports only. Therefore, it provides little in-depth insights into the current disclosure practice within the subject organizations. The findings reported in this paper will be of value to both theoretical and empirical studies of how organizational and institutional forces may affect the level of disclosure in the annual reports of public sector organizations. The study will provide basis for further research into this area in various international settings. Practically, this study will assist government departmental management to continue improving their quality of reporting.</p>	

Reference ID:	RQ2-006
Title:	Performance agreement in Thai public sectors: A call for reconsideration at the provincial level
Citation:	(Srimai, 2015)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #3 Public sector human capital performance reporting #5 Recommended human capital performance reporting systems
Keywords:	
performance evaluation; research; accountability; agreements; governors; provinces; public services	
Abstract:	
<p>Purpose - The purpose of this paper is to examine use of the performance agreement (PA) as well as the diagnostic control system that has been implemented at the provincial level of the Thai government.</p> <p>Design/methodology/approach - This is a qualitative study. Two qualitative methods - focus group and in-depth individual interviews - were employed. In addition, documents such as performance reports, forms, provincial strategic plans, and work manuals, were examined.</p> <p>Findings - Implementation of the PA at the provincial level has encountered some unexpected difficulties. Results of this study indicate that the PA and performance target-setting may</p>	

Reference ID:	RQ2-006
<p>contradict the "controllability" principle. In using the diagnostic control system, the two main challenges are: what to monitor and how to report it.</p> <p>Practical implications</p> <ul style="list-style-type: none"> - This study is intended to be used as a guide in the use of the existing PA and diagnostic control system. The study also points to areas in which improvements can be made to increase the effectiveness of the PA in future use. <p>Originality/value</p> <ul style="list-style-type: none"> - This study calls for reconsideration in the implementation of the PA at the provincial level of the Thai government. Results show that the notion that "what gets measured gets done" is only half true at best. 	

Reference ID:	RQ2-033
Title:	Balanced Scorecards Give Performance & Change Management a Very Timely Boost
Citation:	(Institute of Management & Administration, 2003)
Article Type:	Tier 2
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #4 Developing and implementing human capital performance reporting #5 Recommended human capital performance reporting systems
Keywords:	
compensation management; personnel management	
Abstract:	
Focuses on a compensation management strategy called 'Balanced Scorecard' (BSC). Articulation of the human resources strategy; Implementation activities for 10 weeks; Application of BSC at National City Bank of Cleveland.	

Reference ID:	RQ2-038
Title:	Design and Integration of the PMS
Citation:	(Tonchia & Quagini, 2010)
Article Type:	Tier 2
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #4 Developing and implementing human capital performance reporting #5 Recommended human capital performance reporting systems
Keywords:	
intellectual capital business unit intangible asset balance scorecard tangible asset	
Abstract:	
This chapter deals with the design and implementation of a PMS. This is a clearly identified and complex process which, starting with the specificities of a company, allows analysts to identify and introduce all the performance indicators required, at various organizational levels and for various company departments, until it reaches the management dashboard. In short, this can mean an update of the current IT system or the installation of a new one.	

Reference ID:	RQ2-038
<p>Consequently, particular attention must be given to the relationships between organization on the one hand, and corporate strategy on the other. Relationships between the PMS and organization is analysed, including Human Resources evaluation and the measurement of Intangible Assets. As far as strategy is concerned, relationships between the traditional strategic models (related to Industrial Organization – Porter’s approach) and the “new” strategic theories like Resource-Based View and the Competence Theory. It goes on to consider corporate’s Performance Improvement Projects and the fundamental importance that Project Management activities have in targeting high levels of performance.</p>	

Reference ID:	RQ2-065
Title:	Beyond the Administrivia: Incorporating Best Practices to Strengthen Your Human Resources Strategic Plan
Citation:	(Recardo, 2017)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #4 Developing and implementing human capital performance reporting #5 Recommended human capital performance reporting systems
Keywords:	
personnel department employees; new business enterprises; strategic planning; human resource planning; balanced scorecard (management); organizational effectiveness; stakeholders	
Abstract:	
<p>Human resources (HR) professionals increasingly are being called on to better align HR processes and practices to support the enterprise-wide business plan. Decades of experience in companies ranging in size from start-ups to the Fortune 10 has brought to light six best practices for optimizing the effectiveness of such efforts. HR managers must ensure that their firm's business strategy is the primary input for their own strategy, incorporate data from multiple sources and stakeholders, recognize that not all parts of an organization are equally important in terms of strategy, identify the people issues that underlie the strategy, enhance HR's services as part of the annual HR planning process, and develop a balanced scorecard of metrics. Only by understanding the implications of the enterprise-wide strategic plan on the HR function and assessing its current capability will HR managers be able to develop an effective strategic plan and the metrics to keep it on track. The framework for doing so can be customized to suit the HR needs of organizations of all sizes and be adapted to strategic planning for other staff functions as well.</p>	

Reference ID:	RQ2-066
Title:	Adding Value Through Human Resources: Reorienting Human Resource Measurement to Drive Business Performance
Citation:	(Yeung & Berman, 1997)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #4 Developing and implementing human capital performance reporting #5 Recommended human capital performance reporting systems

Reference ID:	RQ2-066
Keywords:	performance management; management; personnel management research; stockholders; success in business; balanced scorecard (management); job satisfaction; corporations; investor relations
Abstract:	Building upon the balanced scorecard framework, this article addresses three central issues of human resource (HR) measurement: (1) Do HR practices impact business results? (2) How can HR practices add value to business performance? (3) What HR measures can drive business performance? Using Eastman Kodak as a case study, this article identifies three paths through which HR practices contribute to business performance: (1)by building organizational capabilities; (2) by improving employee satisfaction; and (3) by shaping customer and shareholder satisfaction. Three clusters of measures are proposed: internal operational HR measures, internal strategic HR measures, and external strategic HR measures.

Reference ID:	RQ2-064
Title:	Designing and Implementing an HR Scorecard
Citation:	(Walker & MacDonald, 2001)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #4 Developing and implementing human capital performance reporting #5 Recommended human capital performance reporting systems
Keywords:	balanced scorecard (management); financial statements; strategic planning; marketing strategy; human capital; decision making; workforce planning; management; personnel management -- study & teaching; human capital; workplace management
Abstract:	Verizon HR has effectively designed and implemented a strategic management system, which is based upon the balanced scorecard model of Dr. David Norton and Dr. Robert Kaplan of Harvard Business School. The HR Balanced Scorecard was conceived with New Economy organizational dynamics in mind. The scorecard uses a broad range of "leading and lagging" indicators--overall strategy, operational processes, customer perceptions, and financials to evaluate the effectiveness of HR initiatives to the bottom line. The HR Balanced Scorecard provides the means to monitor workforce indicators, analyze workforce statistics, diagnose workforce issues, calculate the negative financial impact, prescribe solutions, and track improvements.

Reference ID:	RQ2-069
Title:	Measuring Human Resources: An Overview of Practice and a Prescription for Results
Citation:	(Ulrich, 1997)
Article Type:	Tier 1
Direct:	Direct
Theme:	#5 Recommended human capital performance reporting systems

Reference ID:	RQ2-069
Keywords:	personnel management research; management; employee morale; labor turnover; industrial management; organizational behavior; employee attitudes; organizational commitment; performance management; strategic planning; balanced scorecard (management); decision making; human capital
Abstract:	Many talk about measuring human resources (HR) but get lost because the issues are confusing. What to measure? How to measure it? When to measure? Where to measure? These questions make measurement of HR difficult. This article reviews the history of HR measurement; summarizes how HR measures may be done for professionals, practices, and functions; and offers specific guidelines for improving HR measures.

Reference ID:	RQ2-077
Title:	Creating a Business-Focused HR Function with Analytics and Integrated Talent Management
Citation:	(Douthitt & Mondore, 2014)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #4 Developing and implementing human capital performance reporting #5 Recommended human capital performance reporting systems
Keywords:	talent management; personnel departments; organizational performance; personnel management; investments;
Abstract:	The article discusses the use of analytics and integrated talent management systems to develop human resources (HR) functions that would enhance business performance. It addresses concerns of HR leaders with regard to the use of HR metrics such as a balanced scorecard with elements including deliverables, processes, and alignment. It also explores the measurement of the value of HR investments, the calculation of return-on-investment, and the identification of business outcomes.

Reference ID:	RQ2-078
Title:	Using dashboards to drive HR: HR is finding that information on key performance indicators is just a click away
Citation:	(Onley, 2006)
Article Type:	Tier 1
Direct:	Direct
Theme:	#5 Recommended human capital performance reporting systems
Keywords:	personnel management; employee reviews; performance standards; web portals
Abstract:	

Reference ID:	RQ2-078
<p>The article focuses on the use of digital dashboard technologies that allow companies in the U.S. to track key performance indicators. The dashboards can measure everything from workers' compensation claims and diversity statistics to employee skill sets, training, and workforce morale. Companies began deploying dashboards to handle proliferating amounts of data. Human resources executives are using the web management tools to get a view of their company from a single portal.</p>	

Reference ID:	RQ2-102
Title:	Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies
Citation:	(Vuontisjärvi, 2006)
Article Type:	Tier 1
Direct:	Direct
Theme:	#5 Recommended human capital performance reporting systems
Keywords:	
subsidiary companies, corporate social responsibility, annual reports, job training, opportunity equality, job performance indicators, staffing, employees	
Abstract:	
<p>This paper explores by means of content analysis the extent to which the Finnish biggest companies have adapted socially responsible reporting practices. The research focuses on Human Resource (HR) reporting and covers corporate annual reports. The criteria have been set on the basis of the analysis of the documents published at the European level in the context of corporate social responsibility (CSR), paying special attention to the European Council appeal on CSR in March 2000. As CSR is a relatively new concept in Finland, the paper also contributes to the discussion on interface between HR reporting (especially as based on measurements such as Human Resource Accounting and Intellectual Capital schools) and corporate social reporting practices. The results of the content analysis indicate that social reporting practices are still at an early stage of development in Finland. The most reported theme was 'training and staff development'. A positive sign was that the majority also disclosed themes 'participation and staff involvement' and 'employee health and well-being'. Furthermore, nearly one-third made references to their work atmosphere or job satisfaction survey. However, disclosures lacked overall consistency and comparability with each other, and especially quantitative indicators were disclosed by few. Further concern was lack of information related to the theme equal opportunities and going beyond a sheer disclosure of age or gender structure. The other issues rarely disclosed were those related to employee work-life balance and integration of disadvantaged groups in the labour markets.</p>	

Reference ID:	RQ2-126
Title:	The use of the balanced scorecard to measure knowledge work
Citation:	(Wake, 2015)
Article Type:	Tier 1
Direct:	Direct
Theme:	#1 Importance of human capital performance reporting #2 Importance of leadership and learning culture #5 Recommended human capital performance reporting systems

Reference ID:	RQ2-126
Keywords:	
control, research and development, balanced scorecard, control systems	
Abstract:	
<p>Purpose - The purpose of this paper is to question whether the balanced scorecard provides an appropriate control mechanism for management control of knowledge workers.</p> <p>Design/methodology/approach - A case study approach is taken to explore the way in which management control of employees engaged in research and development is undertaken.</p> <p>Findings - The key finding of this work is that the balanced scorecard is not in itself a useful approach to management control of knowledge workers but provides an important mechanism for ensuring that there is alignment between the strategic objectives of an organization and the work being undertaken.</p> <p>Research limitations/implications - The inductive approach taken in a single-company case study has provided a rich data set for exploratory research, however, this research design limits the generalisability of the findings.</p> <p>Practical implications - The work provides insights into how the balanced scorecard can be used in knowledge-worker environments.</p> <p>Originality/value - The balanced scorecard is often reported as a tool that allows organizations to cascade strategic priorities down to the level of the individual through the use of measures. This research provides an alternative explanation of how the balanced scorecard can support knowledge worker control.</p>	

Appendix G: Recommended Human Capital Performance Indicators

The following provides a list of articles that were categorized by theme.

Table 8: Summary of Research Question #1 Primary Articles

<p><i>RQ1-011 Perceptions of Human Capital Measures: From Corporate Executives and Investors</i> (Lim & Chan, 2010, pp. 680-682) (A)</p> <ol style="list-style-type: none"> 1. Staff Satisfaction Index 2. Maximization and Utilization of Staff Capacity 3. Ratio of Value Added per Employee 4. Number or Percentage of Full-Time, Part-Time, Contract, or Temporary Staff 5. Quarterly, Half-Yearly, and Yearly Staff Turnover 6. Average Year of Experience 7. Average Age of Management and Operational Staff 8. Average Years of Service with the Company 9. Average Educational Level of Workforce at Each Functional Level 10. Quarterly, Half-Yearly, and Yearly Turnover of Experts 11. Ratio of Men and Women in Monument 12. Motivational Index 13. Workforce Sustainability 14. Workforce Competency Profile 15. Ratio of Wages or Salary to Total Cost
<p><i>RQ1-091 Prioritization of human capital measurement indicators using fuzzy AHP</i> (Bozbura, Beskese, & Kahraman, 2007, pp. 1105-1106) (B)</p> <ol style="list-style-type: none"> 1. IND1: total HR investments/revenue; 2. IND2: absenteeism rate; 3. IND3: measures of cycle time for key HR processes; 4. IND4: percentage of employee development plans completed; 5. IND5: percentage of payroll spent on training; 6. IND6: employees' satisfaction index; 7. IND7: employees' cooperation rate in teams; 8. IND8: succession rate of training programs; 9. IND9: percentage of employees with access to appropriate training and development opportunities; 10. IND10: eagerness to source sharing; 11. IND11: creating results by using knowledge; 12. IND12: freely expressing the opinions; 13. IND13: employees' performance rating; 14. IND14: internal relationship index; 15. IND15: employees' skills index; 16. IND16: mean efficient experience year of managers; 17. IND17: sharing and reporting knowledge; 18. IND18: time needed to orient new employees; 19. IND19: time to fill an open position; 20. IND20: percentage of correct entries on HR information systems.

RQ1-095 *Measurement of Human Resource Activities in India* (Srimannarayana, 2009, pp. 268-272) (C)

Recruitment Measures:

1. Applicants per recruitment source
2. Applicants selected per recruitment source
3. New employee performance rating by recruitment source
4. New employee quits (first six months) by source
5. Cost per applicant per recruitment source
6. The response time by recruitment source
7. Satisfaction of the manager who requested the recruit

Selection Measures:

8. Number of candidates moved to selection process
9. The new employee performance on the job
10. The length of time the selected candidate remained with the organization
11. The cost of selection tools, process etc.
12. The time taken to complete the selection process
13. Acceptance and offer ratio
14. Actual staffing requirement and actual selection of the candidates
15. Satisfaction of the manager who requested for new hires

Training & Development Measures:

16. Number of employees trained in training programmes
17. Number of training days
18. Training costs
19. Percent of amount spent on training in payroll
20. Feedback of participants
21. Learning of the participants during training
22. Transfer of learning on the job
23. Performance improvements made because of training received
24. Cost and benefit analysis of training Satisfaction of line managers on training

Performance Management Measures:

25. Performance appraisals completed on time
26. Accuracy of appraisal process to judge individual performance
27. Average number of employees whose compensation is performance contingent
28. Average number of appeals on the results of appraisal
29. Average number of quits because of appraisal results
30. Speed of action plans on appraisal results
31. Average number of employees with developmental plans
32. Effectiveness of appraisal process dealing with poor performers
33. Actual changes in productivity of employees because of appraisal process
34. Satisfaction of employees with the appraisal process
35. Ratio of promotions to number of employees
36. Average time frame between promotions

Compensation Measures:

37. Average salary increase
38. Average of current salary against industry average
39. Speed of salary action processing
40. Percent of employees covered in pay-for-performance plan
41. Percent of employees covered for benefits and services
42. Percent of employees who use benefits and services
43. Speed in extending the benefits and services to employees

44. Compensation as a percent of operating expenses
45. Compensation as a percent of revenue
46. Total compensation expenses per employee
47. Employee satisfaction on compensation
- Employee Relations Measures:*
48. Percentage of grievances settled
49. Average length of time to settle grievances
50. Cost of settling employee grievance
51. The extent of employee participation
52. Percentage of employees making suggestions
53. Consistency and clarity of messages from top management and from HR
54. Absenteeism rate
55. Employee quit rate

RQ1-138 *Indicators of Effective Human Resource Assessment in Management* (Lala Popa & Demyen, 2012, pp. 411-412) (D)

Recruitment KPIs:

1. costs of recruitment
2. selection indicators
3. process efficiency indicators consisting of number of employees who retain the same job for at least six months.

Training Program KPIs:

4. the total cost of training programs
5. cost per employee of the same programs
6. the average improvement.

Staff Stability Indicators:

7. the average period to fill a post.

Performance management KPIs:

8. percentage of employees with low performance
9. the percentage of employees whose performance improved following training programs
10. dynamic costs of benefits
11. rewards
12. average monthly revenue per employee
13. average monthly costs per employee.

The analysis of human resources situation in an enterprise can be made according to the following:

14. Share of staff in a particular category / area of activity in the total staff = the number of staff in a particular category / range / Total employee * 100
15. Share a particular profession staff = total number of employees corresponding to a profession / total number of employees * 100
16. Budget execution against approved expenditure budget = budget expenditures made / total budget expenditures approved * 100
17. Structure of expenditures by type of service and by sources of income = total spending provisions related services / sources of income amount financed these expenses * 100
18. Percentage of staff costs in total expenditure = personnel expenses / total expenses * 100

<p>RQ1-141 <i>Human resource management and performance at the Indian Railways</i> (Pereira, Fontinha, Budhwar, & Arora, 2018, p. 56) (E)</p> <p><i>Financial</i></p> <ol style="list-style-type: none"> 1. total gross expenditure 2. cost of staff directly hired 3. cost of staff hired through contractors 4. total cost of staff 5. percentage of total expenditures spent on staff 6. gross earnings <p><i>Non-financial</i></p> <ol style="list-style-type: none"> 7. Absenteeism due to sickness and labour trouble 8. Absenteeism due to disease 9. Number of train accidents 10. Casualties 11. Injuries
<p>RQ1-147 <i>Development of an Integrated Performance Measurement Framework for Lean Organizations</i> (Sangwa & Sangwan, 2018, p. 68) (F)</p> <p><i>Health and safety</i></p> <ol style="list-style-type: none"> 1. Absenteeism rate, 2. health and safety of employees 3. number of accidents/incidents occurred per year <p><i>Empowerment</i></p> <ol style="list-style-type: none"> 4. number of suggestions implemented/worker/month, 5. employment security, 6. number of remuneration policies or incentive schemes, 7. employee satisfaction, 8. respect for people, 9. work-related flexibility <p><i>Skill</i></p> <ol style="list-style-type: none"> 10. Training hours/employee/year 11. percentage of skilled or multi-functional workforce 12. use of multifunction task forces/teams <p><i>Cost:</i></p> <ol style="list-style-type: none"> 13. Labor turnovers 14. average cost of training/year 15. average labor wage rate
<p>RQ1-172 <i>Human Resource Accounting Practices Adopted in Indian Industries</i> (Seth, 2009, p. 107) (G)</p> <ol style="list-style-type: none"> 1. Cost per employee 2. Human capital investment ratio 3. Amount of wealth created by each employee 4. Profit created by each employee 5. Ratio of salary paid to the total revenue generated 6. Average salary of each employee 7. Employee absenteeism rate 8. Employee turnover rate and retention rate
<p>RQ1-215 <i>A Representative Organizational Diversity Metric: A Dashboard Measure for Executive Action</i> (Buttner & Tullar, 2018, p. 221) (H)</p> <ol style="list-style-type: none"> 1. D-Metric

<p>RQ1-238 <i>HR Metrics and the Financial Performance of a Firm</i> (Sen & Haque, 2016, p. 179) (I)</p> <ol style="list-style-type: none"> 1. Operating Income/Revenue per FTE 2. Profit per FTE 3. Human Capital Return on Investment 4. Human Capital Value Added 5. Labor Cost Operating Income/Revenue Ratio 6. Personnel Cost to Operating Income Cover
<p>RQ1-250 <i>A Reflection and Integration of Workforce Conceptualisations and Measurements for Competitive Advantage</i> (Nienaber & Sewdass, 2016, p. 14) (J)</p> <ol style="list-style-type: none"> 1. Total Cost of Workforce 2. Management span of control 3. High-performance turnover rate 4. Career path ratio 5. Talent management index
<p>RQ1-260 <i>Human Capital Indicators, Business Performance and Market-To-Book Ratio</i> (Sáenz, 2005, pp. 379, 381) (K)</p> <ol style="list-style-type: none"> 1. Average age of staff. 2. Men/women diversity. 3. Percentage of persons with university degree. 4. Percentage of persons promoted out of the total number of staff. 5. Percentage of new recruitments out of the total number of staff. 6. Percentage of persons who are subject to a system of earned income according to objectives. 7. Percentage of persons receiving variable earned income. 8. Percentage of variable earned income in terms of total earned income 9. No. of hours of training per employee
<p>RQ1-261 <i>Measuring Organizational Performance in Strategic Human Resource Management: Problems, Prospects and Performance Information Markets</i> (Rogers & Wright, 1998, p. 315) (L)</p> <p><i>HR outcomes</i></p> <ol style="list-style-type: none"> 1. Turnover 2. Absenteeism 3. job satisfaction <p><i>Organizational outcomes</i></p> <ol style="list-style-type: none"> 4. productivity 5. quality 6. service <p><i>Financial accounting outcomes</i></p> <ol style="list-style-type: none"> 7. ROA 8. profitability <p><i>Capital market outcomes</i></p> <ol style="list-style-type: none"> 9. stock price 10. growth 11. returns
<p>RQ1-262 <i>Strategy, Human Resource Management and Performance: Sharpening Line of Sight</i> (Buller & McEvoy, 2012, p. 52)</p> <p><i>Recruitment</i></p> <p><i>Selection</i></p> <p><i>Training Practices</i></p>

RQ1-263 *HR Metrics and Analytics: Use and Impact* (Lawler, Levenson, & Boudreau, 2004, pp. 28-29) (M)

Efficiency

1. Time to fill open positions
2. HR headcount ratios
3. Administrative cost per employee

Effectiveness

4. measures of the strategic skills and core competences embodied in the work force, as well as metrics that classify how well pivotal jobs are filled and the type of development activities that are taking place for critical talent

Impact

5. Changes in the performance of business processes (e.g., reduced defects, increased speed, more frequent innovations) that occur when the quality of talent is improved or when new HR practices are introduced.

RQ1-265 *Accounting for People: A Report of the Task Force on Human Capital Management* (Department of Trade and Industry, 2003, pp. 22, 27, 32) (N)

1. We recommend that reports on HCM should:
 - have a strategic focus:
 - communicating clearly, fairly, and unambiguously the Board's current understanding of the links between the HCM policies and practices, its business strategy, and its performance; and
 - including information on:
 - the size and composition of the workforce; retention and motivation of employees;
 - the skills and competencies necessary for business success, and training to achieve these;
 - remuneration and fair employment practices;
 - leadership and succession planning
 - Be balanced and objective, following a process that is susceptible to review by auditors.
 - provide information in a form that enables comparison over time and uses commonly accepted definitions where available and appropriate
- #3. We recommend that the Standards Board invite leading employers, co-operating as appropriate with investors, professional organizations, and other relevant stakeholders, to develop guidelines on key indicators and definitions. This might best be done through the creation of a standing subgroup on HCM reporting whose membership would be appropriate to discharge the responsibilities outlined above.
 -
 - Within the UK, it seems that the most common measures used by larger companies relate to: • workforce profile • turnover • retention rates • absenteeism • employee performance and productivity • employee engagement.
 - Additional measures which have fairly general currency both in the UK and in other countries include: • training (amount, cost, effectiveness) • leadership/career development • revenue/profit per employee • remuneration policies.

RQ1-266 *HR Controlling 2013: Final Report* (PricewaterhouseCoopers Česká republika, 2013, p. 8) (O)

Financial Impact

1. Revenue per FTE
2. Cost per FTE
3. Profit per FTE
4. Wealth Created per FTE

Productivity and ROI

5. Remuneration/Revenue
6. Remuneration/Total Costs
7. Human Capital ROI

Human Capital Engagement

8. Acceptance Rate
9. Average Remuneration
10. Performance Related Pay
11. Attendance Related Pay
12. L&D Hours per FTE
13. Learning Penetration
14. Absence Rate
15. Resignation Rate

Organization and Workforce Structure

16. FTEs per Functional FTE
17. Functional Costs per FTE
18. Function Costs/Total Costs
19. Percentage of Managers
20. Rookie Ratio
21. Gender Diversity
22. Workforce Structure by Age/Education

RQ1-267 *Top Five Metrics for Workforce Analytics* (Higgins, Cooperstein, Peterson, & Colletto, 2012, pp. 2-5) (P)

1. Total Cost of Workforce
2. Management Span of Control
3. High-Performer Turnover Rate
4. Career Path Ratio
5. New Hire High Performer Rate

Appendix H: Accounting for People Recommendation 1 & 2

Recommendation 1

We [the taskforce] recommend that reports on HCM should:

- have a strategic focus:
 - communicating clearly, fairly, and unambiguously the Board's current understanding of the links between the HCM policies and practices, its business strategy, and its performance; and
 - including information on:
 - the size and composition of the workforce; retention and motivation of employees;
 - the skills and competencies necessary for business success, and training to achieve these;
 - remuneration and fair employment practices;
 - leadership and succession planning
 - Be balanced and objective, following a process that is susceptible to review by auditors.
 - provide information in a form that enables comparison over time and uses commonly accepted definitions where available and appropriate.

(Department of Trade and Industry, 2003, p. 22)

Recommendation 2

We [the taskforce] recommend that directors of companies producing operating and financial reviews, and all public and other bodies that produce operating and financial reviews or reports with similar aims, should include within them information on HCM within the organization, or explain why it is not material (Department of Trade and Industry, 2003, p. 24).

Appendix I: Key Points or Lessons in Developing Human Capital Performance Indicators

Researcher	Key points or lessons
Boudreau & Ramstad (Boudreau & Ramstad, 1997, pp. 345-347, 351, 354-355)	<p>Lesson # 1: Measures Should Reveal Value Linkages - We argue that one key to the emergence of new HR measurement systems is the concept of linkages.</p> <p>Lesson #2: Focus on the Constraints: Constraints are critical to measurement effectiveness.</p> <p>Lesson # 3: Intangibility Does Not Prevent Measurement</p>
Sangwa & Sangwan (Sangwa & Sangwan, 2018)	<p>The following eight criteria or guidelines have been identified from the literature and discussion with industry professionals for the selection of KPIs:</p> <ul style="list-style-type: none"> ○ Dedicated to organizational goals: The improvement of every KPI should reflect the improvement of organizational goals (Sangwa & Sangwan, 2018, p. 49) ○ Data reliability and complexity: The main purpose behind the creation of KPIs is a collection of a suitable and reliable data. The collection of unreliable data means wrong diagnosis and solving wrong problems (Sangwa & Sangwan, 2018, p. 49). ○ Consistent to the hierarchy: The performance measure should be consistent throughout the hierarchical structure of the organizations (Bititci et al., 1997) (Sangwa & Sangwan, 2018, p. 49). ○ Dynamic: The KPIs should be static as well as dynamic depending on the timeline of measurement. The regular operational performance is measured by static measures. The real time performance, which changes from time to time due to external factors, is measured by dynamic measures (Ferreira et al., 2012) (Sangwa & Sangwan, 2018, p. 49) ○ Time horizon: The performance indicators must be suitable for short-term and long-term performance strategies (Sangwa & Sangwan, 2018, p. 49) ○ Easy to understand: KPIs should be defined in such a way that these are simple to understand, measure, monitor, and analyze (Sangwa & Sangwan, 2018, p. 49). ○ Socio-technical: A PMS should consider technical and social aspects as the socio-technical theory suggests that a superior performance may be accomplished by insisting on both the technical and social subsystems (Hadid and Mansouri, 2014) (Sangwa & Sangwan, 2018, p. 49). ○ Duplication: Duplication means measuring the same indicator in different forms (Sangwa & Sangwan, 2018, p. 50).

Researcher	Key points or lessons
Akthar (Akthar, 2013)	<p>BUILDING THE RIGHT MEASURES: This is the fact that if measurement, assessment, and evaluation are to play a part in achieving sustainable organization performance, they should be impact-oriented, forward-looking, and focused on the entire HR system, not just on individual HR practices. Figure 1 illustrates the cycle of developing and using HR metrics for maximum impact. The main components are:</p> <ul style="list-style-type: none"> ○ Identifying where HR can make a strategic impact in the organization. ○ Developing proper metrics suitable to these areas. ○ Get data relating to relevant metrics? ○ Drag out insight from the data. ○ Act to communicate metrics and related insights information to provide a robust basis for strategic change and improvement. (Akthar, 2013, p. 79)

Four steps together will help to identify practical ways forward to develop metrics for maximum impact. The order of these steps reflects the cycle in Figure 1.

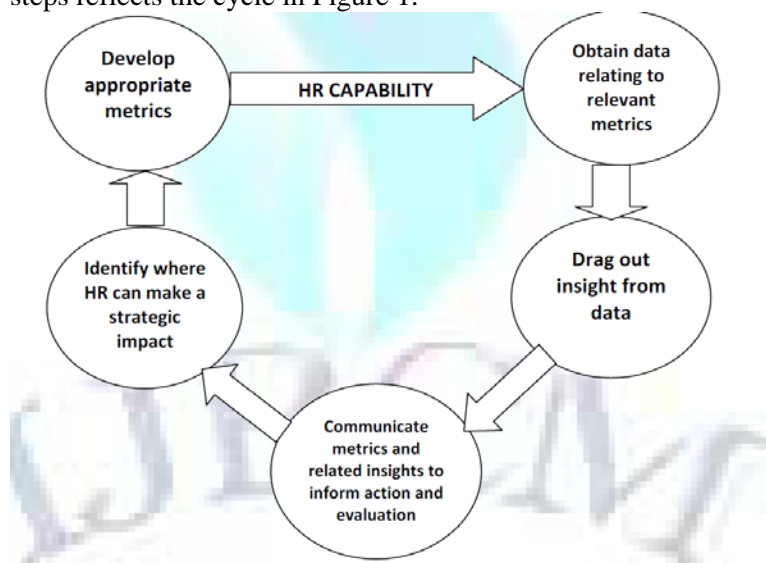


Figure 1: Use of HR Metrics for Maximum Impact

(Akthar, 2013, p. 79)

- **STEP 1: IDENTIFYING WHERE HR CAN MAKE A STRATEGIC IMPACT** This step focuses on determining the areas where HR can make a strategic impact in the organizational context. It enables to identify priority areas for measurement, which are aligned with organizational goals and strategies and identify capability opportunities or problem areas from a business partner perspective. (Akthar, 2013, p. 79)
- **STEP 2: SELECTING APPROPRIATE METRICS FROM WHICH ORGANIZATIONAL INSIGHTS CAN BE DRAWN** This step is the ‘heart’ of this cycle. Building on step 1, it gives a framework to help in developing appropriate metrics to assess the efficiency, effectiveness, and strategic impact of the people

Researcher	Key points or lessons
	<p>management processes. It also provides the building blocks for step 3. (Akthar, 2013, p. 79)</p> <ul style="list-style-type: none"> • STEP 3: EFFECTIVELY COMMUNICATING INSIGHTS FROM METRICS FOR MAXIMUM IMPACT This step focuses on how you can most effectively communicate the insights drawn from metrics to inform action and hence enable HR to deliver maximum strategic impact. (Akthar, 2013, p. 80) • STEP 4: THE HR FUNCTION AND MEASUREMENT CAPABILITY This step focuses on capability development for the HR function, which spans all stages of the cycle, as illustrated in Figure 1. This step enables to identify a range of analytical and influencing skills that helps in further development of HR function to ensure they have the capability required for all aspects of measurement, assessment and evaluation highlighted in this tool. It encourages identifying current areas of strength as well as development priorities. These steps provide an action plan facility to identify the key actions and take forward these key actions to make a sustainable improvement to the development and use of metrics in the organization. (Akthar, 2013, p. 80) <p>AN INTUITIVE APPROACH TO MEASURE SELECTION</p> <p>before discussing the process of measuring the Selection function, it would be appropriate to discuss the term ‘intuitive approach’. By intuitive approach, what is meant in this paper is that measuring HR functions is not something that is very difficult and requiring special skills. On the contrary, HR measurement issues can easily be understood and identified, if one understands the objective of the HR function. This is further outlined and detailed with the example of Selection function. (Akthar, 2013, p. 80)</p>
<p>Lim & Chan (Lim & Chan, 2010)</p>	<p>Despite the availability of several human capital indicators, this research decided to determine a new and more inclusive set of indicators that are relevant to the service industry in Australia. The indicators aim to be measurable, meaningful, inexpensive to collect and process, quantifiable in terms of ratios, percentages, and metrics, and more importantly be able to be changed as needed (Lim & Chan, 2010, p. 680).</p>
<p>Mubarik, Chandran, & Devadason (Mubarik, Chandran, & Devadason, 2018)</p>	<p>1. Various approaches to measuring human capital in organizations include:</p> <ul style="list-style-type: none"> ○ <i>Accounting-Oriented Approach</i>: generally, integrates the HC measurement into the conventional accounting framework. ○ <i>Market Value Approach</i>: uses techniques based on market value, which measures HC based on the number of employees, their market and book value. One prominent research in this category is that of Bontis and Fitz-Enz (2002). They created various metrics like human capital revenue factor, human economic value added, human capital cost factor and human capital value added. These metrics quantify the market value of HC. ○ <i>Market Return Approach</i>: focuses solely on “returns” generated by intangible assets. Examples for this include the Human

Researcher	Key points or lessons
	<p>Capital Pricing Model and the Role of Human Capital. The most prominent measure is that developed by the Saratoga Institute (Bontis et al. 1999), comprising the human capital financial index combined with the human capital revenue index (revenue per employee), human capital cost index (total labor cost per employee) and human capital profit index (revenue minus purchased services per employee)</p> <ul style="list-style-type: none">○ <i>Value Added Approach</i>: is based on the difference between input and output. In this regard, the difference between the return on HC and the cost of HC is measured.○ <i>Human Resource Indicators</i> approach: focuses on indicators like employees' competence, motivation, skills, professional knowledge, and creativity, is the most popular approach for measuring HC. This approach collects indicators related to corporate performance and quantifies them with the help of various techniques. <p>(Mubarik, Chandran, & Devadason, 2018, p. 608)</p>

Appendix J: Grouped Human Capital Performance Indicators

ORGANIZATIONAL STRATEGY IMPACT HCPIs

(A) Maximization and Utilization of Staff Capacity	(E) cost of staff directly hired	(O) Revenue per FTE
(A) Ratio of Value Added per Employee	(E) cost of staff hired through contractors	(O) Cost per FTE
(A) Ratio of Wages or Salary to Total Cost	(E) total cost of staff	(O) Profit per FTE
(D) Share of staff in a particular category / area of activity in the total staff = the number of staff in a particular category / range / Total employee * 100	(E) percentage of total expenditures spent on staff	(O) Wealth Created per FTE
(D) Share a particular profession staff = total number of employees corresponding to a profession / total number of employees * 100	(F) Labor turnovers	(J) Total Cost of Workforce
(D) Budget execution against approved expenditure budget = budget expenditures made / total budget expenditures approved * 100	(G) Cost per employee	(L) productivity
(D) Structure of expenditures by type of service and by sources of income = total spending provisions related services / sources of income amount financed these expenses * 100	(G) Human capital investment ratio	(L) quality
(D) Percentage of staff costs in total expenditure = personnel expenses / total expenses * 100	(G) Amount of wealth created by each employee	(L) service
	(G) Profit created by each employee	(M) Administrative cost per employee
	(G) Ratio of salary paid to the total revenue generated	(N) employee performance and productivity
	(I) Operating Income/Revenue per FTE	(N) revenue/profit per employee
	(I) Profit per FTE	(P) Total Cost of Workforce
	(I) Human Capital Return on Investment	(O) Remuneration/Revenue
	(I) Human Capital Value Added	(O) Remuneration/Total Costs
	(I) Labor Cost Operating Income/Revenue Ratio	(O) Human Capital ROI
	(I) Personnel Cost to Operating Income Cover	(D) average monthly revenue per employee
		(D) average monthly costs per employee.

TALENT MANAGEMENT - Talent Acquisition HCPIs

(C) Applicants per recruitment source	(C) Number of candidates moved to selection process	(C) Satisfaction of the manager who requested for new hires
(C) Applicants selected per recruitment source	(C) The new employee performance on the job	(D) costs of recruitment
(C) New employee performance rating by recruitment source	(C) The length of time the selected candidate remained with the organization	(D) selection indicators
(C) New employee quits (first six months) by source	(C) The cost of selection tools, process etc.	(D) process efficiency indicators consisting of number of employees who retain the same job for at least six months
(C) Cost per applicant per recruitment source	(C) The time taken to complete the selection process	(K) Percentage of new recruitments out of the total number of staff.
(C) The response time by recruitment source	(C) Acceptance and offer ratio	(O) Acceptance Rate
(C) Satisfaction of the manager who requested the recruit	(C) Actual staffing requirement and actual selection of the candidates	

TALENT MANAGEMENT - Knowledge Acquisition HCPIs

(A) Average Educational Level of Workforce at Each Functional Level	(C) Feedback of participants during training	(K) Percentage of persons with university degree.
(A) Workforce Competency Profile	(C) Learning of the participants during training	(K) No. of hours of training per employee
(B) succession rate of training programs;	(C) Transfer of learning on the job	(N) training (amount, cost, effectiveness)
(B) percentage of employees with access to appropriate training and development opportunities;	(C) Performance improvements made because of training received	(N) leadership/career development
(B) eagerness to source sharing;	(C) Cost and benefit analysis of training Satisfaction of line managers on training	(P) Career Path Ratio
(B) creating results by using knowledge	(D) the total cost of training programs	(P) New Hire High Performer Rate
(B) employees' skills index	(D) cost per employee of the same programs	(O) L&D Hours per FTE
(B) sharing and reporting knowledge	(D) the average improvement.	(O) Learning Penetration
(C) Number of employees trained in training programmes	(F) Training hours/employee/year	(B) percentage of payroll spent on training
(C) Number of training days	(F) percentage of skilled or multi-functional workforce	(K) Percentage of persons promoted out of the total number of staff.
(C) Training costs	(F) use of multifunction task forces/teams	(F) average cost of training/year
(C) Percent of amount spent on training in payroll	(J) Career path ratio	
	(J) Talent management index	

TALENT MANAGEMENT - Performance Development HCPIs

(B) percentage of employee development plans completed	(C) Average number of quits because of appraisal results	(C) Ratio of promotions to number of employees
(B) employees' performance rating	(C) Speed of action plans on appraisal results	(C) Average time frame between promotions
(B) mean efficient experience year of managers	(C) Average number of employees with developmental plans	(D) percentage of employees with low performance
(C) Performance appraisals completed on time	(C) Effectiveness of appraisal process dealing with poor performers	(D) the percentage of employees whose performance improved following training programs
(C) Accuracy of appraisal process to judge individual performance	(C) Actual changes in productivity of employees because of appraisal process	
(C) Average number of appeals on the results of appraisal	(C) Satisfaction of employees with the appraisal process	

ENGAGEMENT & WELLNESS - Empowerment & Engagement HCPIs

(A) Staff Satisfaction Index	(C) Cost of settling employee grievance	(J) Management span of control
(A) Quarterly, Half-Yearly, and Yearly Staff Turnover	(C) The extent of employee participation	(J) High-performance turnover rate
(A) Average Years of Service with the Company	(C) Percentage of employees making suggestions	(L) Turnover
(A) Quarterly, Half-Yearly, and Yearly Turnover of Experts	(C) Consistency and clarity of messages from top management and from HR	(L) job satisfaction
(A) Motivational Index	(C) Employee quit rate	(N) turnover
(A) Workforce Sustainability	(C) Employee quit rate	(N) retention rates
(B) employees' satisfaction index;	(F) number of suggestions implemented/worker/month,	(N) employee engagement
(B) employees' cooperation rate in teams	(F) employment security,	(P) Management Span of Control
(B) freely expressing the opinions	(F) number of remuneration policies or incentive schemes,	(P) High-Performer Turnover Rate
(B) internal relationship index	(F) employee satisfaction,	(O) Resignation Rate
(C) Percentage of grievances settled	(F) respect for people,	
(C) Average length of time to settle grievances	(F) work-related flexibility	
	(G) Employee turnover rate and retention rate	

ENGAGEMENT & WELLNESS - Health, Wellness & Safety HCPIs

(B) absenteeism rate	(E) Casualties	(G) Employee absenteeism rate
(C) Absenteeism rate	(E) Injuries	(L) Absenteeism
(E) Absenteeism due to sickness and labour trouble	(F) Absenteeism rate, health and safety of employees	(N) absenteeism
(E) Absenteeism due to disease	(F) number of accidents/incidents occurred per year	(O) Absence Rate
(E) Number of train accidents		

ENGAGEMENT & WELLNESS - Total Rewards HCPIs

(C) Average salary increase	(C) Compensation as a percent of revenue	(N) remuneration policies.
(C) Average of current salary against industry average	(C) Total compensation expenses per employee	(O) Average Remuneration
(C) Speed of salary action processing	(C) Employee satisfaction on compensation	(O) Performance Related Pay
(C) Percent of employees covered in pay-for-performance plan	(G) Average salary of each employee	(O) Attendance Related Pay
(C) Percent of employees covered for benefits and services	(K) Percentage of persons who are subject to a system of earned income according to objectives.	(C) Average number of employees whose compensation is performance contingent
(C) Percent of employees who use benefits and services	(K) Percentage of persons receiving variable earned income.	(D) dynamic costs of benefits
(C) Speed in extending the benefits and services to employees	(K) Percentage of variable earned income in terms of total earned income	(D) Rewards
(C) Compensation as a percent of operating expenses		(F) average labor wage rate

(A) Number or Percentage of Full-Time, Part-Time, Contract, or Temporary Staff	(H) D-Metric	(O) Function Costs/Total Costs
(A) Average Year of Experience	(K) Average age of staff.	(O) Percentage of Managers
(A) Average Age of Management and Operational Staff	(K) Men/women diversity.	(O) Rookie Ratio
(A) Ratio of Men and Women	(N) workforce profile	(O) Gender Diversity
	(O) FTEs per Functional FTE	(O) Workforce Structure by Age/Education
	(O) Functional Costs per FTE	

HR PROGRAM PIs

(B) total HR investments/revenue	(B) time to fill an open position;	(M) Time to fill open positions
(B) measures of cycle time for key HR processes	(B) percentage of correct entries on HR information systems	(M) HR headcount ratios
(B) time needed to orient new employees;	(D) the average period to fill a post.	

Legend

(A) RQ1-01 Perceptions of Human Capital Measures: From Corporate Executives and Investors	(J) RQ1-250 A Reflection and Integration of Workforce Conceptualisations and Measurements for Competitive Advantage
(B) RQ1-091 Prioritization of human capital measurement indicators using fuzzy AHP	(K) RQ1-260 Human Capital Indicators, Business Performance and Market-To-Book Ratio
(C) RQ1-095 Measurement of Human Resource Activities in India	(L) RQ1-261 Measuring Organizational Performance in Strategic Human Resource Management: Problems, Prospects and Performance Information Markets
(D) RQ1-138 Indicators of Effective Human Resource Assessment in Management	(M) RQ1-263 HR Metrics and Analytics: Use and Impact
(E) RQ1-141 Human resource management and performance at the Indian Railways	(N) RQ1-265 Accounting for People: A Report of the Task Force on Human Capital Management
(F) RQ1-147 Development of an Integrated Performance Measurement Framework for Lean Organizations	(O) RQ1-266 HR Controlling 2013: Final Report
(G) RQ1-172 Human Resource Accounting Practices Adopted in Indian	(P) Q1-267 Top Five Metrics for Workforce Analytics
(H) RQ1-215 A Representative Organizational Diversity Metric: A Dashboard Measure for Executive Action	
(I) RQ1-238 HR Metrics and the Financial Performance of a Firm	

Endnotes

- ⁱ Human capital has been described as the skills, knowledge, competencies, capabilities, abilities, experience and motivations people bring to work (Bernstein & Beeferman, 2017, p. 5; Hesketh, 2014, p. 7). A more fulsome list of ‘human capital’ definitions can be found in Appendix A: Definitions for Human Capital.
- ⁱⁱ *Efficiency* is attaining the most program outputs possible for each program input (McDavid, Huse, & Hawthorn, 2012, p. 483).
- ⁱⁱⁱ *Effectiveness* is the extent observed outcomes could be attributed to the program (McDavid, Huse, & Hawthorn, 2012, p. 483).
- ^{iv} *Impactfulness* is the relationship between improvements in performance and sustainable strategic success (Boudreau & Ramstad, 2007, p. 50).
- ^v New Public Management is a movement that started in the 1970s that view that public sector organizations should adopt private sector business practices to improve its efficiency and cost-effectiveness (Diefenbach, 2009, pp. 892-893).
- ^{vi} Definitions provided by Gates & Langevin can be found in (Human capital measures, strategy, and performance: HR managers' perceptions, 2010).
- ^{vii} Preferred Reporting Items for Systematic reviews and Meta-Analysis (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, p. 1)
- ^{viii} The levels of literature are based on “Types of Periodicals” described by MacEwan University (Learning Resources Centre, 2007) provided in Appendix D: Types of Periodicals.
- ^{ix} Secondary articles.
- ^x Primary articles.
- ^{xi} Total Quality Management (TQM) is a set of management practices throughout the organization, geared to ensure the organization consistently meets or exceeds customer requirements. TQM places strong focus on process measurement and controls as means of continuous improvement (Free Management Library, n.d.).
- ^{xii} New Public Management is a movement that started in the 1970s that view that public sector organizations should adopt private sector business practices to improve its efficiency and cost-effectiveness (Diefenbach, 2009, pp. 892-893).
- ^{xiii} While attributed to Peter Drucker, there are discussions that include its origins back to Georg Joachim Rheticus in the 1500s and others (Henderson, 2015, para. 1). Whatever the source, its meaning is not diminished.