



WHY NOT TAKE A STEP FURTHER?

Analysis of challenges in early stage adoption of HR-Analytics in Swedish organizations

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Abstract

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Keyword: HR-Analytics, challenges in the early stage of adoption, strategy as practice, data, technology.

Purpose: This study aims to explore how Swedish organizations precede or strategically act to gain trust in HR analytics, what challenges they identify in the process of implementation and how they strategically act to tackle them.

Theory: Strategy as practice theory is used in means of better understanding the phenomena in light of defining practitioners, practice and praxis while analysing the process of strategizing and how different actors and actions interacts. Furthermore, trust concept and definition is used to better understand the meaning and content of it.

Method: This study is a qualitative research conducted in 7 Swedish organizations. The empirical data is collected through semi-structured interviews with 13 participants. The target group of this study have been professionals working with HRA in different organizations. The interviews conducted were then coded in text-to-text format where we developed different thematic codes. The analysis of the data was done by viewing the results through a strategy as practice perspective.

Result: This study finds and describes different strategies that organizations use to gain trust in HRA. The study maps out the challenges that organizations face during the implementation phase as well as how they tackle these challenges.

Foreword

We would do it all over again! Even though the road of conducting this research was not easy, determination and hard work have made the journey exciting and filled with new experiences. During this journey we have come to acknowledge that studying new phenomena can be hard but that the opportunities it opens for you make it all worth it. Therefore, we would like to express our gratitude to all organizations who agreed to participate in our research.

A special thanks goes to our supervisor Bertil Rolandsson who continuously challenged us for different perspectives. His advice has increased the theoretical and practical relevance of this study. Finally, our families who continually supported us deserves a special commendation.

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1.Introduction

Globalization and technology advancement have raised demands on organisations to change. In this globalized economy, companies are becoming more and more competitive, pushing organizations in the developed world to realize the importance of human capital as competitive advantage (Barney & Clark, 2007). The limited pool of talents and the new jobs that have come to light have put companies in stress to find, recruit and retain talents. Moreover, these developments have given rise to evidence-based management and have made it spread on all fields of business including Human Resources (HR) (Pfeffer & Sutton, 2006). Human Resource Analytics (HRA) comes into the picture not only as a tool but as a process that helps organizations in this regard. Since HR analytics is new and in its infant stage, further research is needed to understand the challenges of HRA implementation and how they are strategically managed.

As a response to the limited research in the HRA field this study tries to analyze how organizations build trust in HRA as well as what challenges they face in the early stage of HRA's adoption. First, the study tries to examine the challenges that organizations participating in the study faced and faces in the early stage of adoption. Second, the study tries to gain insight on how these challenges were and are being dealt with, as well as the role of technology in early phases of adoption. In our study's context, HRA is understood as a new innovation based on big data trying to make a path into HR. HRA is a part of business analytics and in order for it to be successful it needs advanced technological systems in place. These new technological advancements are often related with the challenges to have the personnel on board with the new changes. The latest studies show that when new technology is introduced, employees tend to feel uncertainty and resistance, partly because of the lack of competences but also the lack of trust (Li. et al. 2008; Gefen et al., 2003; Pavlou & Gefen, 2004). Previous research on technology implementation lists trust in technology as one of the most important predictor of technology usage (Li. et al. 2008).

Research to date shows that trust in new technology, trust on the competences to leverage HRA as well as trust of management toward it can be some predictive factors of HRA adoption (Bassi et al, 2012; Angrave et al, 2016; Marler & Boudreau, 2017; Li. et al. 2008).

An issue continually brought up in previous research is the lack of competences from HR to conduct analytics (Bassi, 2011; Marler & Boudreau, 2017; Angrave et al, 2016). A report by Heuvel and Bondarouk (2017) points to the current use of HRA being limited to descriptive analytics, quite possibly explained by the lack of analytical skills perceived by HR professionals (Bassi, 2011; Marler & Boudreau, 2017). And as Marler & Boudreau (2017) suggest, analytics is not limited to descriptive analytics, it is to provide the necessary foundation for which organizations can make decisions and organizations need to have the trust in their HR professional's ability to conduct these analyses.

HR professionals have since long sought legitimacy in the boardroom and have looked for ways to prove HR's value to organizations and strategy (Bassi, 2011). This itself might dilute the analysis provided from HRA as it calls into question the motives of providing HRA and if it is merely to recognize the value of the HR department (ibid). According to Bassi (2011) HR should simply focus on adding value to the organization and its strategy. Ulrich (2015) claims that HR's role in strategic decision-making today is limited to having an opinion and having a reactive role to strategic decisions. HR sets the direction for change, but HRA offers an avenue for more influence using data-driven decision making (Angrave et al, 2016). Using hard facts and figures supports business decisions in regard to human strategies and enhances business performance according to Snell (2011). HRA offers an avenue for HR to speak in financial terms that appeal to both finance and management in terms they are familiar with, adding to HR's legitimacy and increasing HR's influence in boardroom strategic decision making in the process (Witte, 2016).

In general, HRA implementation has been lacking and there are different factors that contribute to this (Angrave et al., 2016; Rasmussen & Ulrich 2015; Bassi 2011; Heuvel & Bondarouk 2017; Marler and Boudreau, 2017; Vargas et al., 2018). Technology advancement and the competences of HR department to conduct analytics become relevant factors in this regard, as Angrave et. al. (2016) finds. According to Vargas et al. (2018) trust in own competences is also perceived as an important factor in determining the positive attitude toward analytics as people need to feel competent and capable in using new tools and techniques. The limited operational reporting software and the non-user friendly complexity of those developed to a higher degree makes HR professionals' trust on their own competences to use technology become a barrier to implementation (Vargas et al.,

2018). Magnusson and Hansen (2016), in their master thesis project, found that there is positive attitude from HR and managers in Scandinavian countries towards HRA but that the countries still lack in the implementation. Since research in Nordic countries, like in our case Sweden, is limited, there is little information on the challenges that Swedish companies face once they decide to implement HRA. Most organizations in Sweden today are working with some kind of metrics but mostly on operational and descriptive reporting (Magnusson & Hansen. 2016).

1.1 Research questions

The aforementioned difficulties imply that organizations introducing new technology have had to acquire more confidence in technology. This lead us to believe that the three main issues of HRA implementation boil down to technology trust, trust in competences to conduct HRA and management trust in HRA. These point to a problem with trust in the organization of whether they can handle HRA because of these three main issues, which lead us to our research questions (RQ):

RQ1: *How do companies precede or strategically act to gain trust in HR analytics?*

RQ2: *What challenges do they identify in the process of implementation of HRA?*

RQ3: *How do they strategically tackle these challenges?*

To answer these research questions, the study starts by presenting previous research and how different findings define and describe HRA as well as how HRA is perceived by the HR community. The section following previous research is the theoretical framework that provides the conceptual tools for analysing and understanding the problems. The method describes the way the research was conducted and how data was gathered. Then, the results section presents the findings that will be followed by a more theoretical discussion. The conclusion, which comprises a section with recommendations for future research, marks the end of this thesis.

2.Previous research

Even though the literature in the field of HRA is limited (Marler and Boudreau, 2017), in this section we present and discuss some of the most prominent researches. The dynamic and competitive business environment that we have created, have made change an ever-present fact. As the business ecosystem is changing fast it is at the same time pushing organizations to follow the same rhythm. HRA has emerged as part of Business Analytics (BA) (Bassi et al, 2012), which was developed as a means of gaining insight based on structured data collection and analysis (Chen et al, 2012). Therefore, this section begins by defining what HRA is and how it fits into the business intelligence and analytics world and then gradually proceeding to HRA maturity and reasons for adopting it, to carefully finish with technology in HR and how it all fits into the context.

2.1 HR Analytics

As mentioned above HRA has emerged as part of Business Analytics (BA) (Bassi et al., 2012) which as a branch of Business intelligence and analytics (BI&A), according to Marler & Boudreau (2017. p.15) is:

“A HR practice enabled by information technology that uses descriptive, visual, and statistical analyses of data related to HR processes, human capital, organizational performance, and external economic benchmarks to establish business impact and enable data-driven decision-making”.

Chen et al (2012) as well as Watson & Wixom (2007) point out that business intelligence and analytics (BI&A) was raised as result of development of new technologies that made it possible to gather huge amount of data and then analyse it. BI is a way of combining people's skills, technology, practices, applications that analyze critical business data and business processes in means of improving strategic and operational decision making (Chen et al 2012; Kapoor 2010). Since 2007, BI is among the first priorities of businesses as it serves as a reliable source for decision-making and innovation (Watson & Wixom, 2007). The BI process is divided into two main activities, the data gathering and data out process where the gathering of data is the most challenging process as it requires time, money and lots of effort (ibid). The research shows that once the data is in, it is still unusable until it comes to

the decision makers through applications, which demands skills and competences in understanding and manipulating the data to use it effectively (ibid).

On the other hand, the term of Business Analytics (BA) is much debated among researchers but to date, there is no unified definition of the term. According to Wong (2012), BA is a practice that integrates capabilities in technology, data management and applications to gain insight and improve decision-making. According to Liberatore and Luo (2010. p.314), BA is “*more than just analytical methodologies or techniques used in logical analysis*”, it is a process where data is accessed, aggregated, analysed and turned into action and insight. The research argues that BA improves fact-based decision and provides opportunity to predict future trends and threats which give businesses opportunity to act and prepare (ibid). BA is either considered as a component of BI (Kapoor, 2010), or a natural evolution of BI (Wong, 2012), which derives from the system advancement to support decision making (Holsapple et al., 2014).

Similar to BI&A, the aim of HRA is to improve processes, performance and make data-driven decisions in regard to business strategy. Furthermore, the quality of people-driven decisions should be improved by the use of data-driven decisions, and by extension so would individual and organizational performance (Bassi et al, 2012; Marler & Boudreau, 2017). In the website of one of the leading consulting companies within HR analytics (AIHR), they use a definition made by Heuvel & Bondarouk, (2017) that describes HR analytics as “*...the systematic identification and quantification of people drivers of business outcome*” (Vulpen V. E. What is HR analytics? /AIHR, 2016). In another definition, Bassi (2011. p.16), define HR analytics as:

“...the application of methodology and integrated process for improving the quality of people-related decisions for the purpose of improving individual and/or organizational performance”.

A study conducted by Heuvel & Bondarouk (2017) describes that HRA in 2015 is used more as a means for conducting reports and metrics rather than providing actual analysis. Angrave et al (2016) point out that HR does not have the analytical skills to provide HRA, which might explain the lack of HRA implementation. Ranjan & Basak (2013. p.2) claim “*Analytics is the discipline of gaining meaningful insights through interpretation of data that helps in better decision making*”. Heuvel & Bondarouks (2017) hope is that HRA in

2025 will include, among other HR themes; leadership, retention management, strategic workforce planning, employability and employee health (ibid). This does not differ from HR themes used today, but the focus would be more on organizational challenges and will be addressed in connection to business data from, for instance finance, since HRA uses the same ‘language’ as finance, marketing and management (ibid).

Ranjan & Basak (2013) explain that analytics is a tool to gain insights through the right kind of competence, appropriate and unified data, using the right tools and technology. Competence is mentioned as it is a crucial requirement in terms of having HRA ask the right questions and performing competent analyses. Appropriate and unified data speaks to external and internal data that is relevant to the question asked by HRA. Technology refers to having the necessary technology in order to have the adequate tools to execute analyses (ibid).

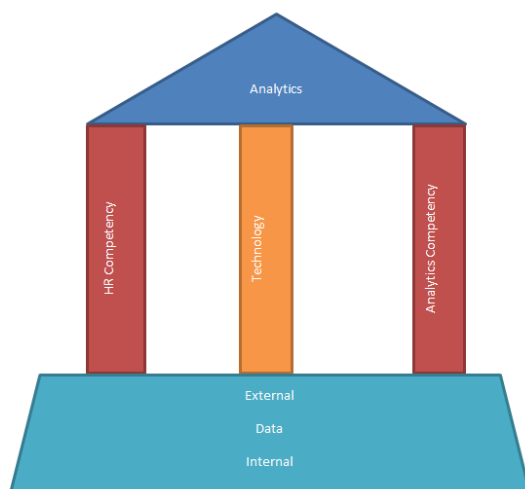


Figure 1. Model by Ranjan & Basak (2013)

Marler & Boudreau (2017) define HRA by also including what it is not; HR analytics is not HR Metrics as HRA involves sophisticated analysis of relevant HR data. HRA involves integrated internal data combined with external data. Technology plays a major part in HRA and this is recognized by Marler & Boudreau (2017), as it is used to collect, manipulate and report that data. HRA is used to make data-driven decisions that support people in the organization. HRA can link HR decisions to business outcomes, including improving organizational performance with predictive and prescriptive analytics (Marler & Boudreau, 2017; Gartner, 2013).

2.2 HRA maturity

The literature to date in HRA distinguishes between three and four types of analytics which describes the maturity level of HRA in organizations. Most of the articles identify three types of analytics starting from descriptive analytics moving to predictive analytics and prescriptive analytics (Naasz. & Nadel., 2015; Holsapple et al.,2014; Fitz-enz, 2009; Phillips-Wren and Hoskisson., 2015). These three levels of analytics are described and clarified by Gartner (2013), which adds as shown in figure 3 another level named diagnostic analytics, which is mainly conducted based on the outcomes of the analytics process (Banerjee et al., 2013). The four types of analytics differ from each other based on the type of data they focus on and their ability to create value for business, the type of question they answer as well as the level of sophistication (Ranjan & Basak. 2013).

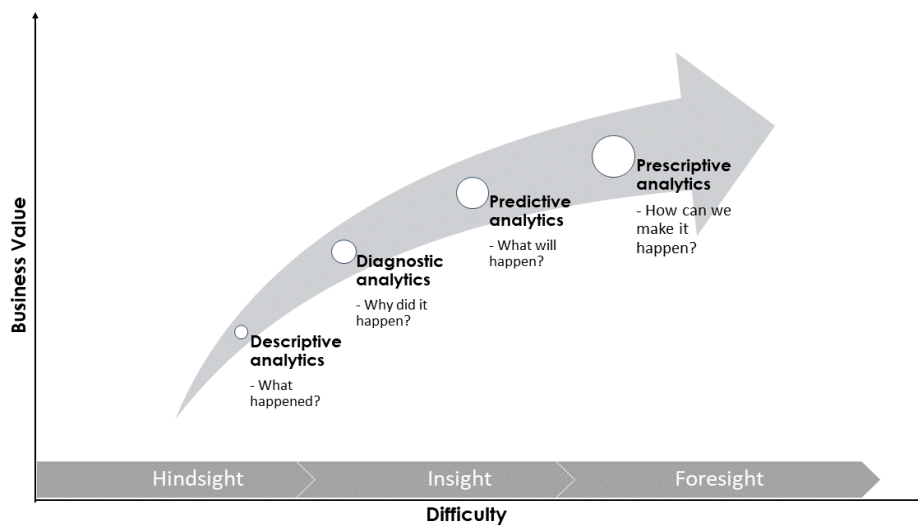


Figure 2. Ruohonen., S. 2015. Analytics maturity model. Modified from Gartner (2013)

As mentioned above, some of the differences between different levels of analytics are the type of data used, the ability to create value for business, level of sophistication and the questions they answer. Descriptive analytics are mainly concerned with relationships and differences between different groups (Fitz-enz, 2009), it is more concerned about the past in means of making a more informed decision (Naasz and Nadel, 2015). This type of analytics is the easiest type and according to Ranjan & Basak (2013. p.7), requires “*medium HR domain competency but minimal analytics competency*”, the technology used in the process is simple but the process itself craves advanced statistical tools also. This type of

analytics tries to answer the question “what happened?”. The main characteristics of this type of analytics, as described by Ruohonen (2015), are the cost reduction and process improvement focus, describing the current and historical data patterns and events as well as visualizing through dashboards.

According to Gartner (2013), the second type of analytics called diagnostic is concerned with the question of why things happened, what are the patterns that show the causes. The main characteristics of this type of analytics as described by Ruohonen (2015), are to explain the correlations and causes as well as effect -relations, to enable discovery of importable or unpredictable relations between current and historical patterns. Visualization of complex relationships becomes an important factor in this type of analytics as it constantly and simultaneously requires visualization of measures and dimensions (ibid).

Since descriptive and diagnostic analytics are built upon historical events and their consequences, predictive analytics comes as a complementary factor which grounds its prediction on current data patterns and giving meaning to them for the future, emphasizes Fitz-enz (2009). According to Ranjan & Basak (2013), this type of analytics utilizes a large number of variables based on the both internal and external (big data) data sources that require advanced statistical tools together with specialized analytical tools. The main characteristics of this type of analytics, as described by Ruohonen (2015. p.22), are: *“focus on probabilities and potential impact, the focus on describing the relationships and current and historical data patterns but includes future events and thus show predicted business impact.”* The dashboards in this type of analytics visualize scorecards on historical, current and future events (ibid).

After the results from predictive analytics comes the need for proper actions to be taken, here comes into picture the prescriptive analytics which is mainly concerned with prescription of actions that needs to be taken in order to deal with the predicted future events (Ranjan & Basak, 2013). At this stage it is meant to answer the question “How can we make it happen?”. Here too has Ruohonen (2015. p.22) wisely mapped the characteristics of this type of analytics where *“focus on decision options and optimization based on predicted future outcomes”* is listed as the first characteristic, through data it becomes possible to conclude different alternatives for the future and their business impact. Similar to the three mentioned analytics types, visualization through dashboards is very important, the

visualization of scorecards on the decision alternatives as well as future actions to be taken and their business impact are among the most important factors visualised.

2.3 Reasons for adopting HRA

Research shows that based on the resource-based view (Barney, 1991), companies want to have unique and inimitable capabilities that differs them from the others. In this context HR analytics would only confuse them and their business strategies. On the other hand, mimetic isomorphism (Scott, 2014) suggests that organizations would imitate each other's organizational structure if that proves to be successful. Still, with all doubts and reservations companies all over the world have started to strategically use HRA and many have seen good results and improvements on their business strategies (The Rise of Analytics in HR - LinkedIn Business Solutions, 2018).

HR analytics has gained much attention and importance in many businesses' strategic decision making according to Heuvel and Bondarouk (2017). Research shows that many companies use HR analytics as a way of gaining an insight on why things are happening and what investments are giving the results organizations are striving for (Bassi, et al., 2012). Bassi et al (2012) point to the purpose of HRA; improving organizational and individual performance. Ranjan & Basak (2013) speak of several factors pointing to the need for HRA: Demand for efficient use of resources (optimal utilization of the human resources in an organization), scarcity of talent (hire, retain and manage talent), demand for fact-based decision making (the demand for data-based decisions), limited use of existing systems (current systems consist of simple reports and dashboards). Ranjan & Basak (2013) call these the Pull-factors. The Push-factors include advancement in science behind analytics, technology, tools and the readily available digital information. The success of other industries, such as in the financial services industry, in using analytics is also a heavy Push-factor.

Implementing HRA can provide value by for instance establishing causal links between employee loyalty and high revenue or employee satisfaction and customer and employee loyalty, exemplified by Marler and Boudreau (2017). There are studies that show that HR professionals do not have the analytical skills to perform these analyses. By learning these skills, not only will they be able to perform HRA, but they will also raise the status of the HR profession and in addition will give HR the necessary tools to communicate with

finance, management and even IT divisions. There is a concern sprouted by Marler & Boudreau (2017) which is echoed by Angrave et al (2016); if HR does not adopt Analytics, it will be adopted by IT and finance who will then misinterpret or misspecify the analyses so that they do not benefit employees.

2.4 Digital Technology in HR

As we mentioned in the previous sections, HRA is highly related to technology and the so-called HR information systems (HRIS). Previous research classifies HRIS into five different subsystems; data warehousing, data analytics, data mining, data mashups and information delivery systems (Kapoor & Sherif, 2012). These subsystems are essential in forming a proper HRA model that will reach the appropriate users and eventually garner business insights that will help improve for instance performance. Data warehouse is a support database where data is stored. Data analytics is analysis of the data stored in the data warehouse. Data mining is a variety of statistical techniques such as classical and artificial intelligence that includes discovery driven techniques that does the exploration and analysis automatically to discover hidden patterns in data measurements. Data mashup is a term used to describe the application that combines databases or presentations to create new services, in other words simplifying processes. The information delivery system gives access to reports and projects so that users can follow up trends, metrics and key performance indicators (KPI's). Information delivery systems are preferably easy to use and have an easy to understand design (Kapoor & Sherif, 2012).

Our previous research section outlines what HR analytics is according to different academic sources, the levels of maturity described in previous research, the reasons for adopting HRA and the role of technology in HR in order to better understand the prerequisites of successful HRA implementation. Previous research not only gives an understanding of what HRA is, but it also explains how HRA was born. This helps the reader understand the context of our study as well as to make sense of the results. Nevertheless, studies addressing digitalization in HR and trust issues that comes with it is to be seen. It is also worth mentioning that this study will be one of it kind when it comes to addressing issues as trust and digitalization in relation to HRA implementation.

Furthermore, as mentioned in the introduction, research on HRA is limited (Marler and Boudreau, 2017), and previous research that uses strategy as practice in a trust building

context to analyse HRA implementation, is non-existent to our knowledge. Choice of theory is explained in the coming section.

3.Theory

In this section we will present the theory chosen in means of better understanding the phenomena. Our discussion around the challenges of HRA implementation revolve around strategic actors, practice and praxis in terms of HRA professionals, HRA as well as actions and routines that emerge in the process. For this reason, we consider Strategy-as-practice in the context of trust-building as an adequate choice of theory for this thesis.

3.1 Strategy-as-practice

Strategy-as-practice (*s-as-p*) is an approach that studies strategy through the lenses of strategy praxis, practitioners and practices (Jarzabkowski & Whittington, 2008). According to the *s-as-p*, strategy is defined as activity while strategizing is defined as “*actions, interactions and negotiations of multiple actors*” to achieve that activity (Jarzabkowski & Spee, 2009. p.70). The approach has emerged in the recent decade as a way of studying strategic management, organizational decision-making and managerial work (Golsorkhi, Rouleau, Seidl, & Vaara, 2015; Vaara & Whittington, 2012).

According to the *s-as-p*, strategy is something that emerges from activities of all people in the organization (Jarzabkowski et al., 2007; Whittington, 2006). These strategic activities are perceived and undertaken in means of developing the business, staying in market or as Varyani & Khammar (2010) suggest, to maintain competitive advantage for the organization. In this context we see HR analytics as strategic activity which is done by practitioners in means of improving business strategy. *S-as-p* is a way of examining the process of doing strategy and the holistic picture of activities, people involved in the process which gives us a great opportunity to understand the role of practitioners in the whole process (Jarzabkowski & Whittington, 2008). In the latest studies in the field of *s-as-p*, researchers have explored the role of technology in strategizing process as well as what tools are used in this process (Golsorkhi et al, 2015). The theory is an attempt to explain the practice in means of improving it.

As shown in Figure 7; praxis, practices and practitioners are interconnected with one another and it is not possible to study one without touching upon the other (Jarzabkowski et al, 2007). To make a better understanding of categories A, B and C a further explanation of three concepts is needed.

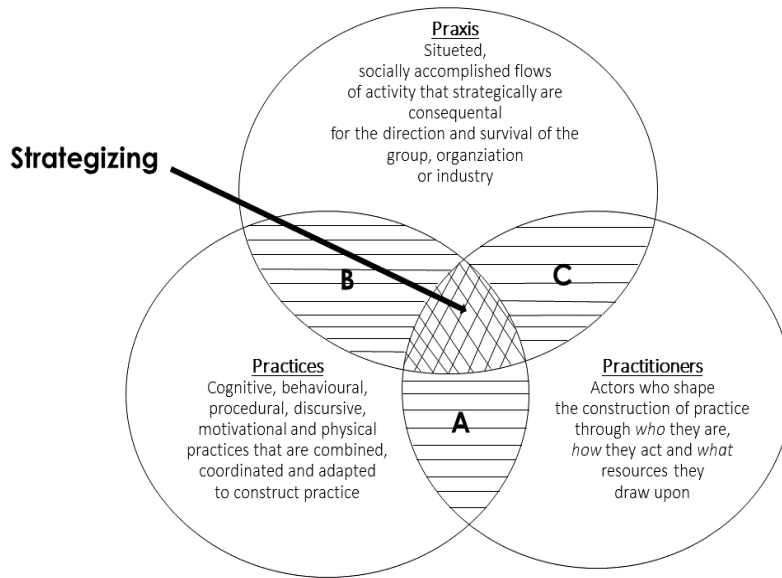


Figure 3.- Jarzabkowski et al., 2007 A Conceptual Framework for Strategy as Practice Analysis.

3.1.1 Practitioners

Practitioners are people who do the work of strategy, according *s-as-p* approach the practitioners are not only limited to the top management, but practitioners are considered all those who are included in the strategy making process (Jarzabkowski & Paul Spee, 2009). Practitioners are involved in doing the strategy and then implementing it, it is them who gather information, filter it and decide what is most convenient and fit for their strategy making, what they actually do is the strategy praxis (Whittington, 2006).

3.1.2 Practice

The material tools as well as symbolic and social are referred as practices, in our case HR analytics is the practice (Jarzabkowski & Spee, 2009). By studying the practice one can deepens on the issues that concerns those involved in strategy-making, it is a way of theoretically contributing in understanding and developing un understanding which can have practical relevance for practitioners (Jean-Louis et al, 2010). In our study we identify HRA as a practice, and by studying the challenges on the early stages of adoption we aim to create practical understanding and relevance for practitioners involved in the process. According to Varyani & Khammar (2010), practice and praxis are interrelated to one another and it is actually practice who emerges from praxis.

3.1.3 Praxis

The activities such as meetings, communication, form-filling are categorized as praxis (Jarzabkowski & Spee, 2009). As we mentioned above, praxis is what strategy makers do in the process. It is as explained by Jarzabkowski and Spee (2009, p.70):

“a stream of activity that interconnects the micro actions of individuals and groups with the wider institutions in which those actions are located and to which they contribute”.

3.2 Strategizing trust

As mentioned above, strategizing is seen as the actions, interactions and negotiations of different actors in means of accomplishing an activity (Jarzabkowski & Paul Spee, 2009). Strategizing based on this term is very broad and as research show, sometimes it can be hard to separate strategic activities from those that are not strategic (ibid). To make it more accurate for our study we follow the approach of only focusing on those activities that are concerned with the HRA and trust building in HRA. In the context of this study we use a definition of Mayer et al (1995) used in by Li et al (2008, p.41), where trust is defined as:

“the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (p. 712).”

According to Li et al (2008), trust is built based on different factors and in different stages where practitioners take actions, interact and negotiate with the trustor (those who grant trust) in means of gaining and showing the trustworthiness of the practice. Since HRA is relatively new in Swedish organizations, trust is not pre-existing in the initial phase of adoption, instead the practitioners need to strategize in order for them to gain trust. Li et al (2008, p.41), suggest that “*second-hand information, contextual factors, or personal intuition to make trust inferences*” are among the factors that determine trust building in the initial phase. Empirical findings show that enjoying a certain amount of trust will generate innovation, emotional stability as well as encourage risk taking together with creating a more open mindset, which HRA implementation can make use of (Rivière & Tuggle., 2005). On the other hand, lack of trust according to Rivière & Tuggle (2005), will increase

the control from external practitioners (trustors in our study), the implementation of projects will be delayed, and good ideas will be hard to recognize and accept.

3.3 HRA and trust in technology

The importance of technology in business today has grown significantly. The continuous development of the IT departments is both impressive and an nuisance, as employees will have to adopt to new technology continuously to stay up do date with the new systems (Kramer, 1999; Li et al, 2008). Historically, technological development has helped effectualize organizational processes, but it has also failed us on numerous occasions, as exemplified by Kramer (1999) further below in the text.

Li et al (2008) discuss trust in regard to information systems and claim that trust is a predictor of technology use. Li et al (2008) mention that pre-adoption expectations play a crucial role in the successful adoption of new technology. Trust therefore requires the employees to trust that the technology does what it is expected to do, which is not always the case, and especially not if the employee does not fully understand the technology (Li et al, 2008).

Kramer (1999) discusses to the difficulties in managing trust in relation to technology. Kramer (1999) uses the example of increasing surveillance on truck drivers to make sure that truck drivers do not drive longer than is allowed by law, but this resulted in the drivers trying to sleep when not tired and driving when they felt sleepy. The issue at hand was that the implementation of the surveillance technology was to increase safety and was well-motivated to improve working conditions, but resulted in worsening working conditions because technological systems do not always work as intended (ibid). Technological systems designed to improve or surveil employees can also inherently provide adverse effects, if employees feel that their every move is being surveilled, they will be more encouraged to try to circumvent the system (ibid).

In this context strategy as practice serves as platform for identifying the work of practitioners and way of strategizing in means of building trust in the technology. As we mentioned above and in the previous research technology is an important factor in the HRA implementation but since technology cannot always be trusted it is important to identify the praxis emerging as result of strategizing. Therefore, the use of strategy as practice and trust as theories to examine and answer our research questions are quite adequate.

One limitation with using *s-as-p* is that the approach suits best small intensive samples and fine-grained analysis, which makes it harder to generalize (Golsorkhi et al, 2010).

4.Method

This section goes into detail of our chosen research design, case selection and our methods of data collection and data analysis.

4.1. Research design

For the purpose of this study, a qualitative method was chosen because it is suitable for explorative studies (Wolcott, 1994). A qualitative method also allows for the researcher to delve into other issues that may arise from the interviews (Wolcott, 1994) but that was not the case for our study as we did not discover new areas relevant for this thesis. Although, we have received data that might be relevant for future studies. The small sample size of qualitative methods is often criticized for its lack of generalizability, but the purpose of the explorative qualitative method is to receive data in order to understand issues better rather than replicating that data in other studies and generalizing results (Wolcott, 1994). The chosen design gave us the opportunity to ask follow-up questions in interviews and deviate from our interview-guide.

4.2. Interview participants

Our main criteria for participating organizations is that they either be in the adoption stage of implementing HRA or have passed the adoption stage of HRA. This choice allows us to gain insight on the initial challenges of HRA adoption and how these challenges are dealt with, which is the main purpose of this thesis.

The interview participants that we have chosen were based on availability of the interview participants and the main criteria listed above. The conscious choice of allowing different industries in the study made it easier for us to find participants. Since HRA is still new in Sweden, it would be significantly more difficult to find participants if we were to focus on a single industry.

4.2.1. Sampling

Participants in the study are chosen based on the Purposeful Sampling technique. The reason for using these techniques is based on HRA being very rare in Sweden. We started the search for our participants by writing keywords on Google (HR Analytics in Sweden, people analytics in Sweden), we then looked at the LinkedIn profile of people who came up, what

organization they work for and how long they have been working for the organization. In our effort to incite participation, we sent emails to these professionals but also organizations and asked for the mail to be forwarded to HR/HR-analytics. The mail inquired if they are interested in participating in a study of challenges in initial phase HRA adoption, to which 7 organizations responded that they were interested and offered us necessary interview subjects, including HRA managers and HR analytics professionals. We have a total of 13 interview participants from 7 different organizations, including public and private organizations.

	Industry	Sector	Nr. of participants	Interviewee background			Have been working with HRA since:
				Gender	Educational Background	Current position	
Organization A	Retail	Public	2	F/M	Finance/HR	HR Analyst/HR Analyst	2015
Organization B	Telecommunication	Public/Private	2	F/F	Finance/HR	People Analyst/ Head of people analyst team	2014
Organization C	Manufacturing industry	Private	1	M	HR	Junior workforce management and analytics	2016
Organization D	Services industry	Private	1	F	HR	Competence development manager	2019
Organization E	Manufacturing industry	Private	2	M/M	Engineer/Business administration	HR Leader within analytics and digitalization/People Analyst	2018
Organization F	Public services	Public	2	M/F	HR/HR	HR Analyst/HR Analyst	2014
Organization G	Manufacturing industry	Private	3	F/M/F	Engineer/HR/Engineer	People Analytics Manager/ People Analyst/People analyst and performance manager	2016

Figure 4. Table of participants

4.3. Data Collection

The interviewees were in some cases selected by the HRA manager of the respective organizations and in other cases we made contact through either email or LinkedIn profiles. We required HRA managers and analytics professionals and this is what we acquired. The chosen interviewees had the necessary knowledge of the HRA implementation process and its pertaining challenges. The interviews were semi-structured in order to provide some flexibility for us if we felt the need to ask follow-up questions during the interview. The semi-structured interviews also allowed interviewees to expand on their answers so as to not provide simple yes or no answers. The nature of the interview also allowed a discussion-like type of environment during the interviews that allowed the interviewees to feel more at ease regarding the questions. The interviews were recorded with the consent of the interviewees.

The interview guide had five topics of which the first was initial phase of adoption. This topic included questions like “when and why did you start with HRA?”, “what is the attitude of the HR department toward HRA?” and “Can you mention at least three challenges that your business faced during the adoption period?” in order to gain an understanding of why they are implementing HRA to begin with and to get a feel of their challenges in regard to HRA. The other four topics were technology, trust-related challenges, competence and maturity, where we inquire of their technological needs in regard to HRA and their HRA maturity level. We also discuss their competences and their main challenges in adopting HR analytics. The interview guide was designed in order to help us answer our research questions in the best way possible. The interview guide is attached as appendix A.

4.3.1. Setting

The setting of the interviews varied. Interviews with Organization A were done in a non-soundproof booth in the corridor of their offices, although this did not seem to bother the interviewees as they delved into matters without regard to their ambience. Interviews with Organizations B, E and G were done in sound-proof conference rooms in their offices, which was adequate. Interviews with Organizations C, D and F were phone-interviews because of the geographical locations of the organizations. The choice to conduct phone-interviews was endorsed by the interviewees and was not deemed an issue as the participants were in their personal offices at the time of the interview, presumably comfortable.

4.4. Data Analysis

The recorded interviews were transcribed after the interviews with the consent of the participants. We offered to send the transcripts back in order to ensure quality of data, this also gave the interviewees the chance to make amendments to their statements, the offer was rejected by all participants. Then we re-read the transcripts twice in order to get familiar with the dataset. We coded the first interview together in order to use the same codes for the similar texts in the transcripts. As an example, when interview participants were discussing technological shortcomings, we both coded, for instance, lack of technology as “technology challenge”. We then started coding the transcripts in text-to-text format where we developed different thematic codes. Examples of codes include “Technology issue”, “Technology challenge” and “Competence challenge”. We then refined the categories and grouped them together, comparing the different cases and lastly, we started describing the

findings in the upcoming chapter called Results. This method of coding is consistent with thematic coding described by Gibbs (2007). The analysis of the data was done by viewing the results through a trust and strategy as practice perspective.

4.5. Trustworthiness

Reliability is about being able to minimize errors and biases in a single study and to what extent a method consistently gives results. Yin (2003) uses the example of a second investigator doing the same case, with the exact same steps, and reaching the same results as a test of reliability, although this requires documentation and procedural information. We have transcribed all 13 interviews completely and we have all the interviews recorded, should anyone wish to re-do our study. As a method of increasing reliability and reducing bias, we have coded the first interview together where we defined the different codes and how the text should be coded in accordance with our research. After the first round of coding, we coded each other's transcripts in order to increase reliability. The semi-structured nature of our interviews also increases reliability as the information is already thematised to a certain degree (Wolcott, 1994).

Validity contends with to what degree our study explores what it claims to explore and how trustworthy the results are (Yin, 2003). Our effort is to investigate what challenges HRA implementation faces in Swedish organizations by inciting participation in interviews with seven organizations located in Sweden. We offered participation without bias and participation was voluntary. The settings for the interviews described in section 4.3.1 were deemed satisfactory by all participants. The issue of transferability often arises in qualitative studies, and since the organizations we interviewed had at an average two participants because of lack of knowledgeable HRA professionals, transferring becomes difficult. This in turn prevents transferability through broad-scale interviews in organizations because there is simply not enough knowledgeable HRA professionals in a single organization. The semi-structured nature of our interview guide increases the trustworthiness of the study, as it allows both interview participants and the interviewer to ask follow up questions. In addition, transferability is enhanced by the differing industries in which the participating organizations operate in due to the diversity in our sampling. In order to increase trustworthiness, we have also tested our results versus previous research.

4.6. Ethical considerations

In order to provide transparency and remain ethical in our study, we asked the interview participants if they wanted to read transcripts of our interviews so that they would have the opportunity to correct statements or make amendments. All interview participants declined this offer. We explained our standard of anonymity to them as following “If an employee in your organization were to read our thesis, they would not be able to recognize that your organization participated in our study”. As such, we explained the statement of anonymity to the participants and they agreed it was sufficient for their participation. We explained to the participants that their contribution was voluntary and that they had the opportunity to refuse to answer questions and interrupt the interview at any time they felt it was necessary, this did not happen with any interview participant. We asked for the interviewees consent to record the interviews and transcribe them, to which they consented. We ensured that the interview data, recordings and transcripts were intended for use only for the purpose of our thesis. There was also a promise made to all participants that they would be able to partake in the results of the finished thesis, which we intend to hold. All of this was done verbally before the start of the interviews.

We also recognized that there could possibly be some discomfort in participating in interviews and therefore asked if they wanted to do the interview in English or Swedish, where most decided to do it in English. The geographical location was chosen by the interview participants in order to reduce discomfort.

5.Result

In this section, we present the findings from our interviews. The empirical findings are divided into different topics that derive from the focus of our research as well as topics that came up during the interviews. We identify three types of strategies or ways of strategizing trust in HRA. These ways of strategizing were all connected to the challenges that companies face in the implementation phase of HRA. First practitioners start with making business case of HRA and at the same time defining the metrics. Second is building competent teams that can conduct HRA, and the last one is building trust in technology and automating data gathering processes. In this chapter we will look more into details to then discuss the findings in the context of theory and previous research in the following section.

5.1. Why HR- Analytics?

To create an understanding of why companies in Sweden are adopting HRA, a lot of focus has been put on questions when, why and who initiated the adoption. Most of the organizations started adopting HRA in the recent years between 2016 and 2018, with exceptions of two organizations where one of them claimed to have been working with HRA since 2014 and the other said that in 2014 they started with conceptualizing HRA as well as putting everything into place, to create a new function and a new team. When asked about the reasons for starting with HRA, different answers were given. Organization A said that they have been reporting statistics for a long time and every time the calculations were made, there were mistakes. In 2014, they decided that they needed this group within HR that would work with analytics. Most of the organizations answered that they started with HRA to support decision-making with facts and because they felt a need and a necessity to start with it. Some organizations mentioned culture change, future workforce planning and digitalization of the HR processes and systems as well as to streamline HR work as the main reasons. Organization E said that they implemented HRA because it is a trend and second because the HR manager believes that this function is needed to secure the future of HR.

When asked about who initiated the adoption of HRA, different practitioners came into the picture. Most of the organizations stated that it was the HR director and the top management. Organization A stated that it was both the HR director and the IT director who initiated the adoption together. While in Organizations F and G it was employees within HR department who were competent in HRA who initiated the adoption. When asked about

the expected benefits that organizations had from HRA implementation, the interviewees had only one thing in common and then they mentioned different expectations. What was common about all companies was the expectation to support decision-making in company with facts. Organization A stated that beside the need for accurate descriptive reporting on how the situation is in the organization, they expected to be able to find if there is any trend within employee groups, get a picture of how things are and be able to make more proactive investments in groups needing improvement. Organization E mentioned the improvement of business outcome and as they frame it:

“...analytics is here for no other reason than HR, and that is to drive engagement, productivity and wellbeing” (Transcript Int_OE).

Organization G mentioned expectations to conduct predictive analysis as it seems to be very important for them to stay ahead in the market, being able to plan the workforce for the future was another one and last to change the discussion that they have today regarding the business.

As we can see from the data, the decision for implementing HRA in most of the organizations comes from top management and HR directors. Employees within HR initiating the implementation is very rare and, among organizations in this study, it is employees who already have some experience in HRA from former employment or self-learning. Generally, helping the business make more fact-based decision-making, improve the organizational performance, to streamline the HR and make it value adding as well as showing the business impact seems to be reasons for starting with HRA. When it comes to expectations, all of the organizations expect to become more fact-based as well as produce accurate descriptive reporting. Some organizations expect to improve the business outcome as well as future workforce planning.

5.2. Management trust in HRA

When interviewees were asked about the trust of top management in HRA, they answered differently. For Organization A, trust and support from top management was extremely high. According to the interviewee they also “*measure how much the tool we provide analytics in is used and the HR director, I would say that he is inside the tool for maybe 200 days a year*” (Transcript Int_OA). The company sees HRA as a tool that is mostly directed toward top management, but they also affirmed that the type of organization where line

managers will be able to make use of HRA is on establishment. According to Organization B, HRA is not on the agenda of top management right now. Top management is not very involved in the analysis that they make, they only want to have reports on if the organization is hiring the right talent and that is where the interest ends. Similarly, Organization C answered that HRA is not on the agenda of top management and this due to the fact of the many reporting levels that are in organization. The organization feels that they have the support of top management but at the same time there are those who question the credibility of the data and the result that emerges. The organization also mentioned that in the beginning, top management was supportive with resources but now it is getting more restrictive.

Company E answered that they do have the trust of the top management but at the same time *“it is a journey to help people understand what analytic function are capable of”* (Transcript Int_OE). The same goes for the HR director who comes from a more traditional HR field. She is very interested, but at the same time she needs to see the results before fully buying into it. To strengthen the answer, the interviewee points out that it is the HR director who gives them three employees for the team. Organization G reported that they constantly try to make business cases that show the importance of HRA, they feel that the top management is interested but they are still lacking investments much needed for HRA. On the other hand, the line managers are those who are most positive towards HRA and they are consistently asking for HRA.

Organization D does not seem to have any support or trust for HRA from top management. The reason for this is that it is not yet formed as a process within the organization and that they are right now dealing with different problems which leaves HRA development out of the agenda. Organization F reported high trust from the top management and that they are positive of them working with data-driven management. The HR director is especially positive and excited about the analytics the group produces. In general, we can conclude that HRA enjoys a certain amount of trust from the top management. The data suggests that HR leaders, as well as line managers, seem to be most appreciative of HRA implementation. Furthermore, the investments on new employees for the team seems to be an indicator for trust. The case of the two companies where investments are not enough or where the investments are getting more strict can not be explained as a mistrust in this case.

5.3. The challenges of HRA implementation

A challenge that is applicable to all of the participants in this study is their challenge to make sense of the different HRA metrics. The lack of general KPI and metrics due to HRA's infancy stage caused a lot of confusion for all of the participating organizations in the adoption stage. Organization A, for instance, struggled for a year to understand what data they needed to provide the correct measurements, to decide on the right KPI:s, understanding the various benefits that come with HRA and simply understanding data, which is an ongoing process. Organization A describes the complexity of data:

“...especially the salary system, it's extremely complex, with so much data in different places. And the data is born in this system and it's transported here and stuff happens to it and actually this number, 34, where does it come from? Is it correct? What does correct mean when we put it in connection to what we want to measure?” (Transcript Int_OA)

Organization B struggles to make sense of technology and new systems, as they faced resistance from their workforce during their latest technology implementation. They describe it as a moment of irritation in their daily work, but still feel they are competent enough to deal with this challenge: *“I have these genius days where I just solve everything and then some days everything is messed up”* (Transcript Int_OB).

Organization C's main challenges are regarding resource allocation, as they feel they lack the resources to strengthen and multiply reporting lines. Organization C also struggles with data completeness and managerial support, and feedback from management.

“...sometimes [it] is kind of a black box, you give them this recommendation and you hear nothing from them, and you don't know if they are using it, working with it” (Transcript Int_OC).

This is also something Organization F struggles with, but they also have some fears over how they can store that data in a secure manner, pointing to a data security challenge.

Organization D struggles with digitalization as a process which influences the HRA development process. Organization D's staff are negative toward change because they feel digitalization threatens their job and they suffer with time-management because of the time-

consuming digitalization process. Employees are reminded of the colleagues that were let go during the last six months because technology replaced their work-tasks and are now understandably resistant to technological development.

Organization E mentions one main challenge that they struggle with; helping the organization understand the benefits of advanced HR Analytics.

“...I have been working as [an] HR generalist for more than 15 years so I know my audience. I kind of know their needs and still I am failing in helping them understand what could be achieved with the help of analytics” (Transcript Int_OE).

This is also something that Organization G struggles with.

Another challenge some of the organizations mentioned is that analytical skills are hard to find within HR and that HR still has a lot of work to do in order for them to gain this skill. Organization G mentioned that HR is not used to working with data and technology and when HRA comes into picture and requires the use of Excel, data and analysis it can face resistance from HR, which it has in Organizations B, D and to some extent G. Similarly, Organization E reported that it was difficult for them to find someone with HR analytical skills and that they instead have employed someone who has a ‘passion’ for analytics.

5.3.1. The importance of technology

The interviews show the importance of technology to each organization that was interviewed, with various degree of importance to the organizations and varied main purposes. Organizations A and E for instance, use and aim to use technology as an automation tool in order to make the data-gathering process more efficient so it does not require manpower. Organization B on the other hand talks more of technology as an enabler to reach the data that is readily available in the systems, as do organizations C, D, E, F and G.

Therefore, when asked about how important they consider technology to be in order to implement HR Analytics, all organizations told us they considered it very important. But they scale the importance of technology differently. Organization A for instance views technology as both vital for success and a determinant in developing HRA, as they see several issues with technology that hinder development such as employees making mistakes

in the systems or new IT systems being delayed. Organization A also speak of the often-delayed development of their current systems as they can only update them three or four times a year. They ask for a change in the system and it comes online after one to four months, depending on what time they ask, and that can delay development of projects within HRA. Organization A claims that technology can not be trusted to work as intended, the data it provides can not be trusted and employees sometimes have difficulties adapting to technology, be it new or old. For Organization A, this is where the extensive collaboration with IT was very useful, as the HRA team needed help coding in order to automate the processes:

“Then we had to actually build the measurements, and then we needed IT people, developers, to be able to write code. You take this number and divide by this number to get this measurement. And it can be quite complex, take a number like turnover rate; It’s not easy, I can write it pretty easily here to explain it, but to write code which can use the data we collect in a correct way to produce the measurement is quite complex.” (Transcript Int_OA)

Organization B talks of technology as tools to simplify data-gathering and visualize data and using the same HRM tool so users become accustomed to it. Organization B talks more of technology as something for the entire organization rather than for HRA or the HR department. Similar to Organization B, Organization C speaks of need for technology as an enabler but not a problem solver, they need a system that is flexible enough and a data visualization tool to enable presentations of data.

Organization D considers technology very important in terms of simplifying usage of systems. They want to have a single system to remove the perceived overload of systems currently in use, an abundance of systems currently causes moments of irritation with technology. It is important to note that Organization D speaks of technology not necessarily in terms of HRA analytics, but more in terms of the HR department in general.

Organization E makes a clear distinction in the importance of technology. Organization E considers technology very important in terms of data visualization and data warehousing in order to reduce the need for manpower to generate and clean data, but they are clear that technology for applying analytics is not important, that is the job of the analyst.

Organization E also discusses that technology can not be completely trusted, but also deliberate whether 100% data accuracy is necessary, as 80-90% accuracy would suffice in certain cases to make decisions.

Organization F speaks of technology in a matter of simplifying data-gathering by creating a digital flow of HR processes with digital footprints and the data-gathering process would be effortless. There would be more data to analyze, for which new data-mining and machine learning tools will be necessary. Organization G has similar challenges in regard to technology.

5.4 The Strategic Direction

The organizations discussed the different strategic avenues for their challenges at length in the interviews. A common strategy for the challenge of making the organization understand the benefits of HRA is repetitive communication of how HRA is beneficial for that manager who questions it. Organization A explains that you need to link organizational goals with managerial goals to make managers understand the benefits of HRA. So, if managers see that HRA can drive absentee rate down, it gives managers more time to plan because people are sick less. If managers see that HRA can help reduce employee turnover, less time will be spent recruiting and onboarding which gives more time for the managers to plan. Organization F even uses communication as a strategic tool to decrease the lack of IT resources, because they know that if they are better friends with the IT department they are less likely to say no when they request help. Organization G uses a strategy of making business cases in order to explain the value of HRA to managers.

As technology plays an important part in HRA, it also plays an important part in strategy. Storing the collected data has been a concern for the interview participants and the strategic thinking behind storing that data is complex. Organization A, as we merely touch briefly on this subject, aims to create a cloud solution where the data is de-personified so that it is not tied to a person, which means they can avoid the GDPR two-year purge of data, ensuring that they can keep the data and use it further in the future.

Another technological strategic challenge is ensuring data quality. Making sure the data is correct and of high quality has shown itself to be difficult at times for most organizations. Usually, it is about formulating the survey-questions in the correct manner as was exemplified by Organization D, or even having a lengthy discussion with the surveyor about

why formulating the survey questions in the right manner is important at all as exemplified by Organization E. The recurring question of ‘how good is our data’ is best answered by continuous work and automation. Organization A calls it data janitorial when you check up on the data to make sure it is correct, and it is something that should be reduced by automation as much as possible according to Organization A.

5.4.1 Shouldering self-learning as a path to HRA competence development

When asked about their capability and competences to perform HRA, most of the organizations answered that they feel comfortable with their skills to conduct HRA. Most of the organizations in the study have a team called people analytics or workforce analytics that operate under the HR department. What all organizations had in common is the composition of the group that is mainly consisted of people with different educational backgrounds. The groups are often made up of HR people with high interest in data, engineers, finance and IT people. All of the organizations had the same method when it comes to developing the HRA skills, the path toward it seems to be a self-learning process. Organization A answered that HRA requires lots of self-learning:

“We spend a lot of time on our own learning, that is, it is something that one has to do today when one works, so we need to devote time for our own competence development, as a company we are trying to move away from that classroom learned tutor leadership training to a more learning in everyday life. Learning from colleagues, learn on our own. I personally watch a lot on YouTube, different tutorials in the area that I am interested in, so you have to do that in principle every week to keep up”. (Transcript Int_OA)

Similarly, Organization G answered that they have put together a group of people interested and skilled in technology, analytics and HR and in order to form the necessary HRA skills they are training themselves. Organization C gives the same response, according to them:

“...educational background and professional is very important. Sure, you can learn statistics at job, but you need to have the concepts, strong shoulders to start with, ‘a study background’. But there is a lot of learning by doing”. (Transcript Int_OC)

Generally, all of the organizations responded that HRBP, on the other hand, were not that interested in technology or HRA but that is changing gradually. Most of the organizations defined the HR competences in data driven management as a challenge when it comes to implementation of HRA. To deal with this organizations are using different strategies, some are making portals where HRBP can read and get informed about HRA, the others are choosing simplicity as a strategy in order to make it interesting for people who are not interested in data.

5.5. From descriptive to ad hoc predictive analytics, the existing usage of HRA

As mentioned previously, most of the organizations have started with HRA in the last three to four years with the exceptions of Organization B and F who started working with analytics in 2014, but mostly on simple reporting of metrics. Organization C started to contextualise HRA in the late 2014 and the beginning of 2015. When asked about the type of metrics used so far, most of the organizations seem to use simple HR metrics as absenteeism, employee turnover, job satisfaction, length of service, demography etc. Most of the organizations reported doing descriptive analytics with some ad hoc predictive analytics reports, mainly when that was requested by top management.

Organization A, for instance, mentioned the usage of impact metrics in cases when they want to see how different types of training affect the productivity or performance in the organization. Organization G mentioned only effectiveness metrics and that right now they are starting to measure efficiency as well. The organization mentioned the measurement of flexibility, diversity and job competency as very important metrics in order to plan and strategically develop the future workforce. Organization E mentioned metrics as a challenge for the company as “...*there are very few global definitions, on metrics, very few definitions on global KPI (key performance indicators) ...*” (Transcript Int_OE). Since the company is a multinational company, it is important for them to have the same standards in metrics in order for them to be able to have accurate and trustworthy metrics as well as ‘well’ grounded analytics. Similarly to other companies, Organization E measures the classic HR metrics, but they aim to take in other metrics as prerequisite to conduct HRA.

The majority of the organizations in the study responded that they are doing mostly descriptive analytics, to some degree diagnostic analytics. When asked about why they are not doing predictive analytics, the common answer was the lack of data and not a clear and

defined strategy on how to get there. Organization F answered that they are trying to make predictive analytics in order to assist the budget planning, when asked how they do it, the company gave an example:

“...we are trying to look at sick leave for the same time in previous years and then we try to make predictions that it will probably look like this in this year too” (Transcript Int_OF).

Organization A sees automation as an opportunity to do more predictive analytics:

“...we do that too (predictive analytics), but then we have to do a random sample and then look at individual areas, but we could make it more general if it was a little more automated” (Transcript Int_OA).

The lack of data and, more importantly, a general definition of metric for organizations seems to be a hindrance for conducting predictive analytics.

Organization G was the only one who claimed that in the scale of analytics maturity they are between two and three, described in previous research section. The organizations claim to have established a good descriptive reporting system and that the focus right now is only to conduct diagnostic and predictive analytics.

6. Discussion

In this section we discuss the findings in the context of strategy as practice as well as the research focus. The theory serves as an understanding and defining of practitioners and their work on strategizing in means of HRA implementation. We identify HRA as a practice emerging from the flow of praxis in the process of strategy-making by practitioners. As explained by many organizations, they strive to produce accurate statistical reports that would contribute to the improvement of the strategy, becoming more fact-based as well as future adequate workforce planning has signalled the need for starting with HRA. HRA is the practice emerged from the stream of activities (praxis) that practitioners do in the process of making strategy. The section is divided in three parts of discussion, where we will answer the research questions as well as analyse them in light of theory and previous research presented in chapter two.

6.1 Strategizing trust in HR analytics

The first question in this study tries to answer how organizations precede or strategically act to gain trust in HR analytics. We tried to get answers to this question by formulating an interview guide drawn on the theory where questions about practitioners, practice and praxis were asked in means of mapping the important factors in the process of strategy making. We started by gaining an insight on why organizations have started with HRA in means of understanding the existing praxis in the process of strategy making as well as identifying the practitioners.

HRA is relatively new to all organizations in the study and in order to make it more feasible and understandable, all the organizations reported that a good amount of time and work is being dedicated to making a business case of HRA. Since trust is built based on different factors and in different stages (Li et al, 2008), the first stage that the organizations mentioned is to show what HRA is, what it is capable of and how HRA can add value to businesses by implementing it. To do that, practitioners tasked with the work of implementing HRA find those critical areas where HRA can contribute and show to the business leaders how business outcome can be improved by implementing HRA. The first factor in showing the value adding position of HRA was the inventory of data as a necessity for the results of HRA analysis to be perceived as correct. The interviewees seem to spend a considerable amount of time defining what certain types of data mean and what types of

KPI should be measured to achieve the results. A unification of the definitions on metrics and KPI is defined as the first activity in the strategizing of gaining trust in HRA.

HRA is a new practice that includes different components as technology, data and analytical skills which, as mentioned by most of the interviewees, are hard to find in HR which goes in line with Angrave's et al (2016) findings. It is here where the second stage based on competences as a factor of trust building starts. Most of the HRA groups that operate under HR seem to be consisting of different practitioners. This study finds that HRA groups in Sweden are consisting of engineers, HR professionals, IT professionals as well as professionals from finance. We found out that this combination increases the trustworthiness of HRA, as more competences are involved in the process and that the HR with its limited competences within other areas do not act alone. This combination of practitioners with competences in HR, IT, data science and engineering seems to be a success factor for HRA to be implemented in organizations, but also show that the results are carefully scrutinised by practitioners with high proficiency in the field. In those organizations where HRA groups were not composed of these different professionals, a good relationship with IT and finance department was reported.

The third stage in the process of trust building is showing the results. All of the organizations mentioned that showing the results from the HRA practice was a necessary indicator in the process of legitimizing HRA. In this stage, visualization of results becomes prominent and the targeted group are profiled. Visualization of the results that gives a clear picture of what is happening, how it is happening and what will happen was a factor that is highly valued by top and line management. Creating a smart and interactive dashboard is reported as an important factor by all organizations, a claim that is in line with Ruohonen's (2015) findings. In general, a short answer to the question would be: In order for organizations to gain trust in HRA, they act differently in three stages, in the first stage the organizations make a business case of HRA (showing the value-adding qualities of practice), in this stage the most important factor becomes the inventory of data as well as ensuring the data quality. The second stage is creating a competent HRA team within HR with a wide variety of competences in HR, IT, engineering and finance. The third stage is concerned with visualizing and simplifying the results for the trustor (receivers).

6.2 The challenges of HRA implementation

The second research question of this study tries to map out the challenges that organizations face in the process of building trust in HRA implementation. During the interviews, participants talked about different challenges but there were some that were consistent among all of them. The ambiguity surrounding the metrics due to lack of standardized metrics in the industry makes trusting the reports more difficult. Organizations develop their own metrics and use said metrics to define their current performance, but they lack benchmarking. Working long-term with the same metrics and advertising for your own metrics and KPI: s at conferences is used as a strategy to lay the foundation for a broader use of similar metrics in similar industries, this works to a certain degree. Not having standardized metrics is problematic because it causes uncertainty among both HR and management on whether what HRA is doing is correct because they have nothing or no one to compare to which decreases trust in HRA.

Digitalization has proven to be a competence challenge not only for the HRA team, but HR in general according to the interviews. Employees struggle with new technology and new technology is not considered user-friendly. Adding to that, IT resources are perceived scarce and not available for help when needed. This is problematic because it recurrently stops HRA professionals from performing their duties, having to stop and ask for help and wait for it for long periods of time stunts progress and causes frustration. This also reduces trust as described by Kramer (1999).

A challenge that was a recurring topic in the interviews was the difficulty in explaining the benefits of HRA to other parts of the organization, sometimes including managers. This issue goes back to showing the results discussed in the previous section, but it is a larger issue than that. Visualizing the results can illustrate reports to quite a good effect, but that visualization is directed at the immediate recipient of the analytic report, not at the greater good that HRA can do. In order to better help the organization understand analytics, the reports and the visualizations are used as a step-by-step show of improvement in what can be done, these reports are often met with admiration and further questions of what more can be done with the help of analytics. Practitioners are using practices as a strategic tool to enhance understanding of HRA. The strategy of using results to garner interest and understanding of HRA drives ad hoc questions of more advanced analytics, helping the

development of the HRA department and driving it into predictive modelling of HRA. A lack of understanding of what HRA can provide to the business leads to doubt among management which in turn leads to management being less willing to make investments in HRA.

Another challenge that was discussed in the interviews was the lack of competence from HR professionals in conducting HR analytics, which is in line with previous research from Angrave et al (2016) and Marler & Boudreau (2017). The interviewees disagree that they lack the necessary competences to conduct analytics but confirm that there are competence challenges with regard to technology. Nevertheless, digitalization of HR information systems has made HR more technology driven, and it means that HR needs to develop the necessary technological skills as technology is a tool that is gaining ground in our daily lives. Technology is also streamlining the operational HR work, giving HR people more time to focus on strategy and development.

The recurring discussion of trust in technology is a difficult topic. Not because it is in dispute whether we can trust technology or not (the participating organizations agree technology cannot be trusted) but because the solution to technology trust is not clear-cut, and its evident importance is underlined in the interviews and supported by Marler & Boudreau (2017). Trust in technology can be divided into three parts; trust that technology will work as intended, trust in the data it provides and trust in employees adapting to and understanding technology. Organization E also deliberates whether 100% data accuracy is necessary in all instances, to some degree removing the challenge of data-trust. The continuous effort to increase trust in data is strategically important because it also increases trust in the results.

It should also be mentioned that organizations often speak of technology as a means of simplifying the data-gathering process, in which the strategizing part only goes as far as recurring reviews of the data in order to make sure the data is trustworthy and that managers have used the right codes to code the data correctly. The practitioners' role in this situation is what Organization A calls the data janitoring role, where you make sure the data is correct and amend potential mistakes. This is described as practices by Jarzabkowski & Spee (2009).

In short, the answer to research question two can be summarized into four overarching topics. Challenge number one regards problems with metrics, how they are defined, used and benchmarked in order to create consistent and trustworthy results. Challenge number two regards how organizations can explain the benefits of HRA to their management in order to garner trust in the HRA practice and incite more investments in HRA. The third challenge is the competences, or lack thereof, of HR professionals to use technology effectively and having the necessary analytical skills to conduct analytics. The last challenge is regarding trust in technology which is divided into three parts; trusting the technology will work as intended, trust in the data technology provides and trust in employees being able to understand technology and its functions.

6.3 The Strategic direction

The third research question of this study is concerned with how organizations deal with the challenges that arise when they try to implement and build trust in HRA. Since we have had similar responses, we have analysed the findings based on four challenges that are identified in the section below.

The challenge of metrics is divided into two main challenges. First, organizations had the problem of deciding what kind of metrics and KPI they wanted to measure that would bring value to the organization and analytics. The findings suggest that most of the organizations spend a considerable amount of time in the process of defining those strategic metrics that would be more feasible to measure as well as bring value to the organization. Second, having a general definition of what those metrics mean for the organization was then seen as a challenge in process. The findings suggest that all of the organizations are putting a considerable amount of work into it. The strategy used by organizations is that they promote their definitions of metrics and their KPI at conferences so that they become the standard or the benchmark after developing those metrics and KPI's themselves, this is described as practices by Jarzabkowski & Spee (2009).

Explaining the benefits of HRA to management in a way that incites trust in HRA has proven to be difficult for organizations. Organizations now use their results to garner trust in HRA and use that trust to embark on more advanced analytics. Management is usually impressed by the results of HRA which lead to ad hoc requests from them, increasing trust and understanding of what the benefits of HRA are. The decision to use the results as a

strategy to increase trust and understanding is a conscious decision from HRA practitioners because they feel that if management sees the benefits, investments in HRA will increase.

What we also found in the study is that HR does not necessarily lack the analytical skills to conduct analytics as described by Marley & Boudreau (2017) and Bassi et al (2012), but rather the data-savviness to feel comfortable with technology. This can be explained by the complexity of technology used in the process. The way of dealing with competence issues, we have learned, is through self-learning. HRA professionals take time of their workday to learn something new about a program through 'YouTube'-tutorials or other deductive means. Another method of self-learning that Organization F was especially good at was creating strategic friendships with people in IT, finance and statistics so that they could get reliable help in times of need. Organization F argues that friends are harder to turn down. Strategizing this way, in accordance with Jarzabkowski & Spee (2009), to create friendships is beneficial for HRA development in general but also for increasing the competence of HRA professionals specifically. Strategizing like this does have its downside, however. If the trustor, for instance the IT technician, figures out that he or she is merely a part of a strategy and not a real friend, the strategy can backfire spectacularly and the loss of trust is not easily regained according to Kramer (1999). What organizations should do instead is build organizational trust so that these instances can be avoided to the fullest extent. Organizational trust also has the benefit of being non-personal (Kramer, 1999). Personal trust can remain as a back-up, should organizational trust be lost.

Organization's participating in the study battle technology trust difficulties through continuous supervision of technology to make sure it is working as intended, supervision of the data flow and correction of data if necessary. They use self-learning or help from IT when it comes to battling the issue of understanding and adapting to technology. Most of the organizations continuously work with IT architecture, this is a means of correctly coding the data as well as building efficient and functional systems of gathering, processing and visualizing the data, as a part of developing their praxis as described by Jarzabkowski & Spee (2009). Another challenge that was mentioned above concerning technology was the competences of employees to use it. Findings suggest that self-learning becomes an important factor in the ability of employees to extract right data, which is conspicuous as it puts pressure on employees. We also saw a tendency among some of the organizations in

the study to automate the data-extraction function and one of the organizations even mentioned employing a robot to do that.

7. Conclusion

The focus of this study was to analyse the challenges that organizations face during the implementation phase of HRA. The study was therefore built to first explore how organizations proceed or strategically act to gain trust in HRA, what challenges they identify in the process and how they deal with them.

The conclusion to the first question is that in order to gain trust in HRA organizations starts by making business cases of HRA, where the possibilities and strengths of the practice are presented for top and line management. By showing the capabilities and the value-adding qualities of HRA, not only is trust built on the practice, but it generates positive attitude towards it as well. In this stage the most important factor becomes the inventory of data as well as ensuring the data quality. To increase the trust in the capabilities of HR to perform HRA organizations proceed by creating a highly competent HRA team within HR where a wide variety of competences in HR, IT, engineering and finance are present. Visualization and simplification of the results is the third step in building trust as trustors (receivers) need to have something that they understand and easily relate to.

The conclusion to the second question is that we found four main challenges organizations identify in the process of HRA implementation, those are:

- Metrics, how they are defined, used and benchmarked
- Explaining the benefits of HRA to management
- Competence in technology
- Trust in technology

The conclusion to the third research question is that they strategically tackle the challenge of metrics by spending significant time in defining their metrics and then promoting them so that they are the benchmark. Organizations use their results in HRA to better explain the benefits of HRA to management; this sparks the interest of management and leads to more ad hoc requests, increasing trust in HRA in the process. The challenge of competence is best battled by self-learning through internet means such as 'YouTube' tutorials during work time and extensive collaboration and strategic friendships with other departments to increase competence. Trust in technology is gained by continuous supervision of the data flow, the data quality, and their own self-learning process. These conclusions, and especially for the last research question, should be applicable to other organizations implementing HRA.

These organizations are likely to face the same or similar challenges due to the nature of the challenges as overarching and not organization-specific.

As it is mentioned in the introduction and based on the findings, trust is a crucial factor in HRA implementation. It is also worth mentioning that trust can not be taken for granted, it is something that is earned as result of strategizing which requires constant development of new processes and strategies. The findings from this study support the claim from previous research which suggest that a prerequisite for successful implementation of HRA is for the trustor to have trust on the competences of practitioners involved with the HRA to leverage HR analytics. The findings highlight trust as important factor but it also points out that trust can be challenging to build.

This study finds that trust as a component of successful HRA implementation is a heavy barrier to overcome. Trust is inherently difficult to gain and very easy to lose. The strategic friendships are certainly at risk of this. If a trustor notices that he or she is simply part of a strategy for the furtherance of HRA implementation and not a real friend, personal trust will be gone and probably not possible to regain. Organizations need to build organizational trust to avoid these types of incidents. Strategizing around how to build trust and maintain it will be essential for implementing HRA.

7.1 Limitations of the study

One limitation of the study is that participants are mainly professionals working with HRA which limits our research mostly to their perspective in the challenges. Even though this category of participants are those who are most competent in answering the questions, an inclusion of trustors (top and line managers) would of have given us a more holistic view on the challenges of HRA implementation. Another limitation of our study is our sample size, we aimed for an industry-non-specific sample size which we achieved, but the number of organizational participants was not that high. However, the fact that HR Analytics is very new makes organizations that use HRA limited and at the same time hinders our possibility to include more participants.

7.2 Implications for practice

Organizations that have participated in this study have all asked to take part in the results. We assume organizations will learn from the successful ways of our participants described in this study and take into consideration the principal conclusions of what is necessary for

successful HRA implementation. This study can serve as valuable insight on challenges in the implementation phase and therefore help organizations to plan and prepare. Challenges that we have identified are measurable and organizations can make cost calculation for a more adequate budget planning. This study also gives suggestions for best practice for HRA teams composition.

7.3 Recommendations for future research

During the course of this study, we noticed a pattern that organizations with more successful HRA have people analytics teams with a more varied background than simple HR backgrounds. An interesting study for the future would be how various educational background affects the success of HRA, as we noticed engineers, finance and IT can play a huge part in HRA development. Another pattern that we discovered is that organizations in the public sector were more willing to invest in HRA and one of the organizations even reported that other public organization are constantly coming to them for study visits and taking advice on how to start with HRA. It would be interesting to study this pattern and find out what this dedication is depended on and why. It would also be important for future research to look if the organizations are reaching the expected benefits from HRA.

Reference list

- Angrave, D., Charlwood, A., Kirkpatrick, I., Lawrence, M. & Stuart, M. (2016). *HR and analytics: why HR is set to fail the big data challenge*. Human Resource Management Journal, 26(1), pp. 1-11
- Banerjee, A., Bandyopadhyay, T., & Acharya, P. (2013). *Data Analytics: Hyped Up Aspirations or True Potential?* Vikalpa, 38(4).
- Barney, J. (1991). *Firm resources and sustained competitive advantage*. Journal of management, 17(1), pp. 99–120.
- Barney, J.B. and Clark, D.N. (2007) *Resource-Based Theory Creating and Sustaining Competitive Advantages*. Oxford University Press, Oxford, 327
- Bassi, L. (2011). *Raging debates in HR analytics*. People and Strategy, 34(2), 14.
- Boudreau, John & E. Lawler III, Edward. (2014). *Stubborn traditionalism in HRM: Causes and consequences*. Human Resource Management Review.
- C. Mayer, Roger & H. Davis, James & David Schoorman, F. (1995). *An Integrative Model of Organization Trust*. Academy of Management Review. 20. 709-734.
- Denis, Jean-Louis & Langley, Ann & Rouleau, Linda. (2010). *The Practice of Leadership in the Messy World of Organizations*. Leadership. 6. 67-88.
- Dwayne Melançon (2007). *Managing Change from the Top: Using Fact-Based Enforcement to Support Change Management Policies*. EDPAC: The EDP Audit, Control, and Security Newsletter, 35:6, 19-24.
- Fitz-Enz, J. (2009). *Predicting people: From metrics to analytics*. Employment Relations Today. 36(3), 1-11.
- Gefen, D., Karahanna, E., Straub, D.W., (2003). *Trust and TAM in online shopping: an integrated model*. MIS Quarterly 27 (1), 51–90.
- Gefen, D., Straub, D.W., 2004. *Consumer trust in B2C e-commerce and the importance of social presence: experiments in e-products and e-services*. Omega 32 (6), 406–424.

- Gibbs, G. R., (2007). *4 Thematic coding and categorizing. Analyzing Qualitative Data.* London: SAGE Publications, Ltd
- Gloria Phillips-Wren & Angela Hoskisson (2015) *An analytical journey towards big data.* Journal of Decision Systems, 24:1, 87-102.
- Holsapple, C., Lee-Post, A., & Pakath, R. (2014). *A unified foundation for business analytics.* Decision Support Systems, 64, 130–141.
- Hsinchun Chen, Roger H. L. Chiang and Veda C. Storey (2012). *Business Intelligence and Analytics: From Big Data to Big Impact.* Management Information Systems Research Center, University of Minnesota. Vol. 36, No. 4.
- Janet H. Marler & John W. Boudreau (2017) *An evidence-based review of HR Analytics.* The International Journal of Human Resource Management, 28:1, 3-26
- Jarzabkowski, P., & Spee, A. P. (2009). *Strategy-as-practice: A review and future directions for the field.* International Journal of Management Reviews, 11 (1), 69-95.
- Jarzabkowski, P., & Whittington, R. (2008). *Hard to disagree, mostly.* Strategic Organization, 6 (1), 101-106.
- Jarzabkowski, P., Balogun, J., & Seidl, D. (2007). *Strategizing: The Challenges of a Practice Perspective.* Human Relations, 60 (1), 5-27.
- Kapoor, B., Sherif, J. (2012). Global human resources (HR) information systems. Kybernetes, Vol. 41 Issue: 1/2, pp.229-238
- Kapoor, B. (2010). *Business intelligence and its use for human resource management.* The Journal of Human Resource and Adult Learning, 6(2), 21.
- L. Witte. (2016). *We have HR analytics! So what? – An exploratory study into the impact of HR analytics on strategic HRM* (Unpublished master's thesis). University of Twente, Enschede, Netherlands.
- Li, Xin & Hess, Traci & Valacich, Joseph. (2008). *Why do we trust new technology? A study of initial trust formation with organizational information systems.* J. Strategic Inf. Sys... 17. 39–71.

- Liberatore, M. J., & Luo, W. (2010). *The analytics movement: Implications for operations research*. *Interfaces*, 40(4), 313-324.
- Kramer M., Roderick. (1999). *Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions*. *Annual review of psychology*. 50. 569-98.
- Magnusson M. & Hansen J. N. (2016). *Ready or Not? A quantitative study regarding HR professionals' readiness towards predictive HR Analytics from a Nordic perspective (Unpublished master's thesis)*. Gothenburg University, Gothenburg, Sweden.
- Marler, J. H., & Boudreau, J. W. (2017). *An evidence-based review of HR Analytics*. *The International Journal of Human Resource Management*, 28(1), 3–26.
- Mayer, R.C., Davis, J.H., Schoorman, F.D., (1995). An integrative model of organizational trust. *The Academy of Management Review* 20 (3), 709–734.
- Mika Vanhala, Riikka Ahteela, (2011) "*The effect of HRM practices on impersonal organizational trust*", *Management Research Review*, Vol. 34 Issue: 8, pp.869-888.
- Naasz, K. & Nadel, S. (2015) "*Advances in 'Big Data' and Analytics Can Unlock Insights and Drive HR Actions*", *HR Focus*, Vol. 92, No. 5, pp. 1-4.
- Pfeffer, Jeffrey & I. Sutton, Robert. (2006). *Hard Facts, Dangerous Half-Truths, and Total Nonsense Profiting from Evidence-Based Management*. *Strategy & Leadership*. 34. 35-42.
- Rajesh Ranjan & Arkadev Basak (2013). *Creating Value through Analytics in HR. Role of Third-party services*. Everest Global.
- Rasmussen, T., & Ulrich, D. (2015). *Learning from practice: how HR analytics avoids being a management fad*. *Organizational Dynamics*, 44(3), 236-242.
- Roslyn Vargas, Yuliya V. Yurova, Cynthia P. Ruppel, Leslie C. Tworoger & Regina Greenwood (2018): *Individual adoption of HR analytics: a fine-grained*

view of the early stages leading to adoption. The International Journal of Human Resource Management

- Ruohonen S. (2015). *Business benefits of leveraging predictive analytics in HR* (Unpublished master's thesis). Aalto University, Helsinki, Finland.
- Rivière, V.M., & Tuggle, F.D. (2005). *The Role of Organizational Trust in Knowledge Management: Tool & Technology Use & Success.* *IJKM*, 1, 67-85.
- Scott, R.W. (2014), *Institutions and Organizations. Ideas, Interests, Identities.* Sage Publications, London.
- Snell, A. (2011). *Developing talent intelligence to boost business performance.* *Strategic HR Review*, 10(2), pp. 12-17.
- Van den Heuvel, S., & Bondarouk, T. (2017). *The rise (and fall?) of HR analytics: a study into the future application, value, structure, and system support.* *Journal of Organizational Effectiveness: People and Performance*, 4(2), 157-178.
- Varyani E. M. & Khammar M. (2010). *A Review of Strategy-as-Practice and the Role of Consultants and Middle Managers.* (Unpublished master's thesis). Gothenburg University, Gothenburg, Sweden.
- Watson, H. J., & Wixom, B. H. (2007). *The current state of business intelligence.* *Computer*,40(9).
- Whittington, R. (2006). *Completing the Practice Turn in Strategy Research.* *Organization Studies*, 27 (5), 613–634.
- Wong, David. (2012). *Data is the Next Frontier, Analytics the New Tool: Five trends in big data and analytics, and their implications for innovation and organisations.*
- Yin, R. (2013). *Case study research: Design and methods* (5th ed.). London: SAGE.

Books

Bassi, L., Carpenter, R., & McMurrer, D. (Eds.). (2012). *HR Analytics Handbook*. Amsterdam: Reed Business.

Golsorkhi, D., Rouleau, L., Seidl, D., & Vaara, E. (2015). Introduction: *What is strategy as practice?* In D. Golsorkhi, L. Rouleau, D. Seidl, & E. Vaara (Eds.), *Cambridge Handbook of Strategy as Practice* (pp. 1-30). Cambridge: Cambridge University Press. doi:10.1017/CBO9781139681032.001

Lawler, E. E., & Mohrman, S. A. (2004). *Creating a strategic human resources organization: An assessment of trends and new directions*. Stanford, California: Stanford University Press.

Wolcott, H. F., (1994) *Transforming Qualitative Data: Description, Analysis, and Interpretation*. SAGE Publications Ltd. London

Online

Gartner (2013). Online. Available at: <http://www.gartner.com/it-glossary/big-data/> and <http://blogs.gartner.com/matthew-davis/top-10-moments-from-gartners-supply-chain-executive-conference/> [08.02.2019]

The Rise of Analytics in HR - LinkedIn Business Solutions (2018). <https://business.linkedin.com/talent-solutions/talent-intelligence/rise-of-analytics-in-hr-leaders#> [08.02.2019]

Vulpen V. E (2016). What is Hr Analytics? Online. Available at: <https://www.analyticsinhr.com/blog/what-is-hr-analytics/> [01.03.2019]

Appendix 1

Interviewee Background

Name:

Gender:

Function:

Current employer:

How long have you been ...

- at this organization? _____

- in your present position? _____

Topic list:

1. Initial phase of adoption:

- o When and why did you start with HR analytics?
- o Who initiated the adoption of HR analytics? / who proposed to start with HR analytics?
- o What were and are the expected benefits of HRA?
- o What are the steps for adopting HRA?
- o How would you describe the initial phase of adoption?
- o How satisfied are you in general with your progress so far?

2. Existing usage of HRA

- o Which types of metrics are used so far? (efficiency, effectiveness, impact)
- o What is the focus of HR analytics at the moment (descriptive, predictive, prescriptive) and who requests it?
- o Which actors are involved in the process of HR analytics? Do you have a special HR analytics team?
- o How does the overall usage of analytics look like in your organization? / Is almost every department making use of analytics as a decision-making paradigm?

3. Trust related challenges:

- o Can you mention challenges that your business faced during the adoption?
- o How did/do you respond to these challenges?
- o Do you feel you have the trust of your management to tackle the challenges?
- o How much oversight do you have from your supervisor?
- o What are you met with when you talk about HRA?
- o Do HR advisors provide advice to line managers based on analytics insights?
- o How do others in organization perceive reports from HR analytics?

4. Competence in HRA:

- o How do employees feel about the new HRA technology? (HR people)
- o How do they explain their competences to handle the new technology? (HR people)
- o How do you feel about your ability to conduct HR analyses?
- o How does management perceive your ability to conduct HR analyses?
- o How do you acquire the necessary analytical skills to conduct HRA?

5. Management trust in HRA:

- o What is the attitude of HR department towards HRA?
- o Was the board/management supportive with regard to investments in HR analytics?
- o Do you have the feeling that line management values the introduction of HR analytics?
- o Does HRA affects the relationships between employees and managers? How do employees feel? How do managers feel?
- o What is the process of decision-making based on HRA reports?

6. Technology

- o How important is technology for implementing HRA?
- o What kind of technology is needed in order for HRA to be successful?
- o Are there any specific technology challenges in the process (From the employee side and the management side)?
- o What is the attitude of managers towards the new technology in HR and HRA in specific?
- o What is the attitude of employees toward new technology, related to HR and HRA?
- o How do employees understand the new technology?

Appendix 2

Intervjudeltagare bakgrund

Namn:

Kön:

Funktion:

Nuvarande arbetsgivare:

Hur länge har du varit i:

- Den här organisationen? _____

- Din nuvarande befattning? _____

Temalista:

1. Initiala fasen av HRA införande:

- När och varför påbörjade ni arbetet med HRA?
- Vem påbörjade införandet av HRA? Vems idé var det (dvs ledningens eller HR avdelningen)
- Vad var och är den förväntade fördelarna med HRA?
- Vilka är stegen för att införa HRA?
- Hur skulle du beskriva den påbörjande fasen av HRA införande?
- Hur nöjd är du med era framsteg än så länge?

2. Nuvarande användning av HRA

- Vilka sorters mätningseenheter används nu? (effektivitet, påverkan)
- Vad är fokus för HRA för tillfället (Deskriptiv, förutsägande, normativ) och vem efterfrågar den?
- Vilka aktörer är inblandade i HRA processen? Har ni ett speciellt HRA team?
- Hur ser den allmänna användningen av HRA ut i er organisation? Använder sig alla avdelningar av analytics som ett beslutsunderlag?

3. Tillits-utmaningar

- Kan du nämna några utmaningar er organisation har mött gällande införingen av HRA?
- Hur reagerade ni på dessa utmaningar/hur mötte ni dessa utmaningar?
- Känner du att du har ledningens tillit att lösa era utmaningar?
- Hur mycket översyn har ni från er ledning?
- Vad möts du av när du pratar om HRA?

- Ger HR-Business Partners råd och tips baserat på HRA rapporter till mellanchefer och andra?
- Hur uppfattar andra i organisationen dessa rapporter från HRA?

4.Kompetensfrågor

- Hur tänker anställda kring ny HRA teknologi? (HR)
- Hur förklarar de sina kompetenser gällande ny teknologi? (HR)
- Hur ser du på din förmåga att utföra HRA?
- Hur uppfattar ledningen er förmåga att utföra HR analys?
- Hur erhåller ni de nödvändiga analytiska kunskaperna för att genomföra HRA?

5.Ledningens tillit till HRA

- Vad är HR avdelningens inställning till HRA?
- Var ledningen positiv till att investera i HRA?
- Har du känslan av att mellanchefer uppskattar HRA?
- Hur påverkar HRA relationen mellan anställda och chefer?Vad tycker anställda och vad tycker ledningen?
- Hur ser processen ut för beslutstagande baserat på HRA rapporter?

6.Teknologi

- Hur viktigt är teknologi för införandet av HRA?
- Vilken teknologi behövs för att införa framgångsrik HRA?
- Finns det specifika teknologiska utmaningar i införing processen? Från anställdas och ledningen perspektiv.
- Vad är ledningens syn på ny teknologi i HR och HRA?
- Vad är anställdas inställning till ny teknologi, relaterat till HR och HRA?
- Hur förstår anställda den nya teknologin?