

The ‘encyclopedia’ of decision frameworks in talent management: supporting the development of a talent management strategy

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In the last few years, strategic talent management has emerged as a new part of HRM. Talent management can be applied in a company by the development of a strategic talent management strategy. For this strategy, decisions need to be made. To help structure these decisions, decision frameworks are needed. The goal of this literature review is to give a structured overview of the state of research to decision frameworks in the specific area of talent management. This paper aims to be the encyclopedia of decision frameworks in strategic talent management. It also aims to point out the gaps in research to decision frameworks in talent management. To improve the practical relevance of this review, we connect the found frameworks to the theoretical framework of Collings on a talent management strategy and discuss how these frameworks could help to develop a talent management strategy. The review consists of 20 frameworks, found in 19 articles. These articles are all published in peer-reviewed journals, to ensure the quality of this literature review. At the end of this literature review, an overview is given. We will point out which areas of a talent management strategy have decision frameworks in place and which areas still lack decision frameworks. Also, directions for further research are given.

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1. INTRODUCTION

Boudreau and Ramstad (2005) have argued that the traditional service-oriented HR-focus needs to be extended to a “decision science”. A talent decision science should enhance decisions about talent, both within and outside the HR function (Boudreau and Ramstad, 2005). They call this talentship. Decisions about talentship are decisions “that improve the stewardship of the hidden and apparent talents of employees” (Boudreau & Ramstad, 2005). We can also call decisions about talentship talent management. According to Collings, Scullion and Vaiman (2011), a report by the Boston Consulting Group concluded that “talent management is one of the five key challenges facing the HR profession.

This implies that talentship or talent management is becoming increasingly important for a company. But Boudreau and Ramstad (2005) point out that “one element of any decision science is the logic that connects decisions about the resource to organization success.” (p.3). So, decision making is an important part of talentship or talent management. According to Gelatt (1989), decision making is the process of arranging and rearranging information into a choice or action. According to the Business Dictionary decision making is “the thought process of selecting a logical choice from the available options”. But “talent decision science requires frameworks that show what factors are relevant to decisions about talent, and how they combine” (Boudreau and Ramstad, 2005, p.3).

According to Power (2002), frameworks can be used to help to classify objects and to show how mutually exclusive types of things are related. The terms taxonomies, conceptual models and typologies are sort of synonyms for the term framework. Frameworks help managers make structured decisions. According to the MIS Quarterly (1980, Volume 4), a framework is “in the absence of theory helpful in organizing a complex subject, identifying the relationships between the parts, and revealing the areas in which further developments will be required.” (p.6) Logical decision-based frameworks show the implications for talent decisions really well (Boudreau & Ramstad, 2005).

However, the earlier mentioned sentence “traditional service-oriented HR-focus needs to be extended to a “decision science” that enhances decisions about talentship” (Boudreau and Ramstad, 2005, p.1) implies that at that time (in 2005) HRM wasn't already a decision science. Boudreau and Ramstad (2005) point out that “we still lack a well-developed decision science for human capital” (p.3). When HR wants to become a decision science, it is obvious that more research to frameworks is needed, as Boudreau and Ramstad (2005) pointed out earlier. But the research process to this topic should be structured.

As mentioned earlier, talent management is one of the five key challenges facing the HR profession. But as Collings et al. (2011) state about talent management being a key challenge for HRM: “Worryingly, it is one of the challenges which the function was least competent in.” (p.454). Collings and Mellahi (2009) stated that there has also been an alarming lack of theoretical development in the area (of talent management). So, more research is needed. But when certain areas of talent management are addressed in research and certain areas are not addressed at all the progress of research to talent management will be limited. And that's what this literature review is all about.

The main goal of this literature review is to show the current state of research to decision making frameworks in the area of talent management, which is a part of HRM. This study is highly relevant academically because this literature review, like any successful literature review, aims to show constructively

about what has been learned. It also shows the openings for further research in decision making in talent management based on decision frameworks. Our goal is not to assess whether there has been enough research to decision frameworks to form a strategic talent management strategy; we rather want to show if any frameworks have been developed and if so, how they are applicable. Another reason why it is academically relevant is that such a literature review, namely about decision frameworks for talent management, hasn't been done yet.

But it should be noted that this literature review is not just about finding decision frameworks. A HR department can possess all the available decision frameworks, but when they don't know how to use these frameworks in order to properly execute strategic talent management, the effectiveness of strategic talent management is limited. That's why the analysis of this literature review is based on an article written by Collings and Mellahi (2009). In that article, they give a definition of strategic talent management and present three processes that are crucial for strategic talent management.

These processes are the identification of pivotal talent positions in the firm, the development of a talent pool and the creation of a differentiated HR architecture. These concepts are all worked out in the theory section. Our aim for HR managers is, if they decide to form a strategic talent management strategy, to show in one article which decision frameworks are available and what they are about. This paper aims to be the ‘encyclopedia’ of decision frameworks in strategic talent management.

So practically it is also highly relevant because, as pointed out earlier, business leaders are increasingly frustrated with the traditional role HR plays. The call for HR to develop in a strategic partner has increased the last years. In this paper frameworks are linked to the proposed strategic talent management strategy (offered by Collings and Mellahi, 2009). If any frameworks are found that are applicable for strategic HRM decision regarding talentship, they can help HR play the role of strategic partner.

It also should be noted that this review is about strategic talent management, and not about human resource management as a whole. Strategic talent management is a part of human resource management. While strategic human resource management generally focuses on all the employees of the organization, strategic talent management focuses on talent that belongs to the talent pool of the organization and who occupy, or are developed to occupy, pivotal talent positions. (Collings & Mellahi, 2009) Only these talents can provide the firm a competitive advantage and that's why talent management is the way for HRM to be a strategic partner. The research question of this paper is as follows:

Which decision frameworks are applicable for strategic talent management?

This paper is divided in four sections. First, the concepts for which frameworks are searched are explained and worked out. Then the methodology is described, the actual search will be done and the results will be analyzed. Next is the discussion of the results for each concept. The paper will be concluded with a discussion, the answer to our research question and suggestions for other research.

2. THE TALENT MANAGEMENT STRATEGY

In this part, the concepts that belong to a strategic talent management strategy will be conceptualized. Collings and Mellahi (2009) wrote a literature review about it with the goal

of developing a clear and concise definition of strategic talent management. They also point out which activities belong to a strategic talent management strategy. That article will be used to link the found frameworks linked to this strategy.

Collings and Mellahi (2009) mention three different activities and processes for a talent management strategy: “the systematic identification of key positions which differentially contribute to the organization’s sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organization.” These processes, especially the first two processes, are dependent and can’t be considered separated from each other.

This definition of a strategic talent management strategy will serve as the framework for this systematic literature review with the idea that a strategy requires strategic decision making. For those decisions, decision frameworks are needed. At the end of this part it will be made clear for what type of decisions frameworks are needed.

2.1 Identification of pivotal talent positions

According to Collings and Mellahi (2009), this is the first stage in any strategic management system. Boudreau and Ramstad (2005; 2007) and Huselid, Beatty and Becker (2005) make recommendations for identifying key positions in a firm. While Boudreau and Ramstad talk about key positions, Huselid et al. (2005) talk about “*A Positions*” and a differentiated workforce strategy. Becker and Huselid (2006) “recognize that the locus of differentiation, in terms of fit, should be on the job not the individual employee” (p.7).

So, ultimately, the job itself makes the strategic difference, not the employee. Collings and Mellahi (2009) state that, “ultimately, the key is a differentiated focus on strategic rather than non-strategic positions” (p.10). But the process of identifying which jobs are strategically important for the firm is complex. Huselid et al. (2005) state that traditionally jobs were differentiated on the basis of input, such as skills or efforts.

Huselid et al. (2005) state: “We all know that effective business strategy requires differentiating a firm’s products and services in ways that create value for customers. Accomplishing this requires a differentiated workforce strategy, as well.” (p.8). *A positions* are defined by their “disproportionate importance to a company’s ability to execute some parts of its strategy and second the wide variability in the quality of the work displayed among the employees in these positions” (Huselid et al., 2005, p.2). With these types of jobs, “there is likely to be a wide range in people’s performance”. When someone performs an *A* position in an excellent way the job is, with the wide range in people’s performance, likely to provide the firm a sustainable competitive advantage.

Now we will summarize for which decisions frameworks are needed. First of all, to identify the pivotal positions (or “*A positions*”), we need frameworks. Decision frameworks that make clear which positions are of strategic importance for the firm and which positions are not. It could also mean a framework that guides step-by-step the identification of pivotal talent positions.

2.2 Development of a talent pool

This process or activity is related to the previous process. Talent from the talent pool is used to fill the key positions. Huselid et al. (2005) point out the necessity of the right combination of talent and position. They state: “They (*A* players, or the best

talent of the firm) are going to be effective only when they’re harnessed to the right cart—that is, engaged in work that’s essential to company strategy” (p.1). To develop a talent pool, talent segmentation is needed. Boudreau and Ramstad (2005) argue that “talent segmentation” is as vital as “customer segmentation”. They state: “Part of talent segmentation is identifying “pivotal talent pools”—where human capital makes the biggest difference to strategic success.” (p.129).

The development of a talent pool, as Collings and Mellahi state it, is the development of the pool of high potential and/or high performing incumbents (2009). The firm can use talent from this pool to “fill pivotal talent positions”. According to Sparrow (2007) this leads to a shift where firms no longer recruit when a vacancy occurs but when they expect a vacancy. Sparrow (2007) calls this ‘recruiting ahead of the curve’.

This is much like in professional sports. When for example a player of a soccer team plays really well, generates interest from other clubs and is almost certain to leave the club in the next transfer window, the management of the club likely has already identified other talents that can fill that position. The study of Stahl et al. (2007) confirmed that the high performing organizations that were studied were following a “talent pool strategy”.

But, as Collings and Mellahi (2009) point out, there are some risks with a talent pool strategy that require the focus of the HR-department. It can occur that there are too few employees in the talent pool to meet the business demands. It can also occur that the firm fails to retain its talent. When the firm has invested much in the development of these talents, that loss of a talent automatically means the loss of investments. But with the rise of boundaryless careers the risk of losing talent is higher than ever and is inevitable. But when it is impossible to retain all talent, the talent pool needs to be refilled. That means that talent from outside should be drawn to the organization.

Collings and Mellahi (2009) argue for a combination of internal development and external recruiting. They also make a recommendation for developing employees within the broader context of the organization and not with a particular succession role in mind. With this, firms prevent themselves from only developing employees to fit some specialized role. It may be clear that if talents are developed with broader competencies they can fit a wide range of roles.

But as Huselid et al (2005) state: it isn’t easy to make these decisions. Decisions about HRM affect people, and it is clear that choosing people for a talent pool affects the emotions of all employees. Marescaux, De Winne and Sels (2013) found that when HR practices are differentiated for employees, some “may develop negative perceptions of favourability and subsequently lower affective organizational commitment” (p.342). When it comes to the classification of your employees, the psychological side of this decision should also be taken into account.

To conclude this section we will quickly summarize for which decisions frameworks are needed. First, there is the identification of talents in the firm. Which employees have the skills and knowledge to be of strategic value for the firm and which do not? This means employee classification models, but also a systematic step-by-step model for the identification of an employee as a talent. Also, the talent pool needs to consist of enough employees to fill the pivotal positions.

For that, frameworks about employee retention and the external sourcing of talents are needed. That also means frameworks about the attraction of talents to the firm. To conclude we have

the psychological side of the decisions about a talent pool. Frameworks that make clear which psychological effects talent management has on the employees included in the talent pool, and maybe more important, on the employees that are not included in the talent pool. So for that, frameworks that take the psychological aspect into account are also included in this research.

2.3 Development of a differentiated human resource architecture

The HR architecture is simply the way employees are managed (Lepak and Snell, 1999). Huselid and Becker (2011) define *HR architecture* as “the HR practices, systems, employee competencies, and employee behaviors that together help to implement the firm’s strategy.” (p.425). According to Huselid and Becker (2006), the architecture of the HR practices (such as employee participation, training, development and appraisal) is the most important asset of strategic human resource management (SHRM). They list three reasons: “First, it is the source of value creation in the subsequent outcomes in the HR architecture. Second, it has the potential for greater inimitability based on how it is aligned with the firm’s strategy. Finally, unlike human capital, it is immobile.” (p. 4).

When it comes to HR architecture, two key streams are identified in the literature and the practice of HRM. Those streams have both different opinions about how the set of HR practices should be designed. First, there is the best practice approach which assumes that there is a configuration of HR practices that can universally be applied to improve the profitability of any company. The organizational context doesn’t matter: this set of practices is applicable to any organization (Pfeffer, 1994).

The other stream is the ‘best fit’ approach, or contingency approach. Here the influence of the internal and external context in which the organization operates is taken into account. Boxall and Purcell (2008) argue that organizations should align the HR strategies with the strategy of the firm and with the environment.

But more recently, another stream developed. Where the previous two streams tend to manage all the employees with the same set of HR practices this stream emphasizes the importance of a differentiated HR architecture. Lepak and Snell (1999; 2002) have made well known contributions to this type of stream. This stream emphasizes the different contributions that specific employee groups can make to the performance of the organization. So for that, those groups all need to be managed with different HR configurations.

For example, when it comes to development of the employee, some employee groups that have low potential of contributing for the organization’s success may get less attention from the HR department for development than employee groups that have a lot of potential of contributing to the success of the organization.

Collings and Mellahi (2009) leave the question which HR practices support or don’t support the development of talent pools and the deployment of key talent to important strategic positions open; they rather advocate the contingency approach. This contingency approach, developed by Lepak and Snell (1999), is based on the assumption that specific HR systems and practices are not likely to be appropriate for every situation. According to the contingency approach, the applicability of the HR systems depends on the uniqueness of the employees, or human capital.

We however, want to search the literature for articles that may point out which practices and systems affect talent management. That could mean frameworks for development, participation and compensation, connected to talent management. This is decided to keep the focus on talent management. There are a lot of articles from a psychological standpoint, for example, that describe the concept talent and how it can develop. If we would include these frameworks it could lead to losing oversight in the research process. So for that, the articles need to describe talent development in relation to talent management. It could also mean, more generally, frameworks for how to manage talent, which can be about different perspectives at managing talent. Those perspectives could be about forces and drivers that influence talent management.

2.4 Decision frameworks

In this part we want to discuss the concept decision framework itself and point out its added value for talent management. As we stated earlier, frameworks can be used to help to classify objects and to show how mutually exclusive types of things are related (Power, 2002). According to the MIS Quarterly (1980, Volume 4), a framework is “in the absence of theory helpful in organizing a complex subject, identifying the relationships between the parts, and revealing the areas in which further developments will be required.” (p.6). According to Sprague and Watson (1996) frameworks play a crucial role in the understanding of a new or complex subject.

We can identify different sorts of decision frameworks. Frameworks such as the Resource Based View (RBV), developed by Barney (1991) and the Five-Forces model developed by Porter (1980) help managers to form a strategy for the firm. The aim of those models is to identify. Where the RBV identifies strengths within the firm, the Five-Forces model identifies outside forces that influence the performance of the firm.

Some models are not for identification but merely for classification. Usually, those models are displayed as a table based on two dimensions. For example, Dulebohn and Johnson (2013) provided a classification framework for HR decision making. The framework is a table based on two dimensions, namely degree of problem structure and management decision-making levels. Both dimensions are divided in 3 values or types. That results in a table of 9 cells. In every cell, a decision type is mentioned. Those decision types are then discussed in the article.

Other models aim to evaluate performances of, for example, the firm. A good example is the balanced score card (BSC). Based on the outcomes of an analysis using the BSC, managers can make decisions for the firm’s strategy. The balanced score card “provides a framework for managing the implementation of strategy while also allowing the strategy itself to evolve in responses to changes in the company’s competitive market, and technological environments.” (Kaplan and Norton, 1996, p.13).

So, concluding, we can say that we can distinguish mainly three types of framework, namely frameworks for identification, classification and evaluation. When we apply this to talent management, identification frameworks could help with a step-by-step guide of the identification of talents. It could also mean frameworks for the identification of forces that affect the effectiveness of a talent management strategy. Classification frames could help with the classification of all the employees. Dependent on the dimensions we could then identify the talents. For example, if a classification model is based on uniqueness and strategic value, employees that score high on both

dimensions could be identified as talents. Evaluation frameworks could be used to measure the effectiveness of development on the talents, or on the effectiveness of the talented employee in a certain pivotal talent position.

3. METHODOLOGY

To answer our research question we will conduct a literature research. Since we want to give an overview of the state of research to frameworks, it will be done in the form of a narrative review. We will do the article search as discussed by Wolfswinkel, Furtmueller and Wilderom (2013). It needs to be noted, though, that for the analysis of the articles we will follow a different approach than the article of Wolfswinkel et al. (2013). This choice was made because we thought that the way they analyze the articles wouldn't fit our research. While they follow the process of open and axial coding, we will use an operationalization table to structurally give an overview of the state of research to decision frameworks in talent management.

The first step in the search phase is the definition of the scope. This means the determination of which questions will be addressed in the review. Here, criteria for exclusion or inclusion will also be addressed. These criteria will be addressed later, in section 3.2. After that the fields of research, the databases that which will be searched and the search terms are determined. In this review the fields of structured decision making, information management and of course human resource management were chosen. The chosen databases that were searched are Web of Science and Scopus.

3.1 Search terms

Several search terms were chosen to find articles. Since we only are looking for articles that contain frameworks, search terms will always contain the word "framework" or "decision model". To make sure that all the synonyms for the terms were found and used, the site Thesaurus was used. On this site, synonyms for specific words can be found. The rest of the search words are presented here, grouped to which activity it belongs.

- Theoretical model
- Framework

Identification of pivotal talent positions

- Key positions
- Strategic talent management
- Pivotal positions

Development of talent pools

- Talent
- Talentship
- Talent pool
- Talent retention
- Succession
- External
- Psychological
- Recruitment
- Attraction

Development of a differentiated HR architecture

- HR Architecture
- HR practices
- HR systems
- Development
- Compensation
- Participation

Since the area of strategic talent management is still in its infancy (Collings & Mellahi, 2009), it could very well be possible that the search will produce only a few articles. And that's why the search terms are kept simple. The search terms aren't too specific and search terms always contains at most two or three words. The terms "psychological", "key positions", "pivotal positions", "succession", "recruitment", "attraction", "HR practices", "HR systems", "development", "compensation", "participation" and "external" are only searched in combination with "talent" (together with of course "framework" or "theoretical model").

This was decided because without "talent", searches probably will mostly find articles about other professions than human resource management. To include multiple words in the search terms, the word AND is used. Also, asterisks are used to find more articles. For example, the search term "talent*" is used to find articles about that write about talent in general, but also about talents, as in employees that are of strategic worth for the organization.

3.2 Search phase and analysis

After this the actual search is done. Doubles are filtered out and the sample is cut down based on the title and the abstract. Then, all full texts are read and once more the pool of articles is decreased. This all happens on the basis of the inclusion criteria. First of all, the articles need to be written in English. The next criterion is about the quality of article. First, an article is used if it is published in a peer-reviewed journal. This journal doesn't have specifically to be a HR journal; it also can be that it is a journal about management or organizations in general. Second, an article is usable if it is quoted by articles out of the earlier mentioned journals. Logically, the article needs to be quoted in a positive way. When it comes to content-related criteria, only two aspects are required. The article needs to provide a theoretical or conceptual framework that is helpful for the development of a talent management strategy. The framework also has to have its implications for talent management in every context. That means that country-related frameworks or profession-related frameworks are not included.

To make sure that all the relevant articles are found, citations of the found articles are checked and added to the sample. Then, the usability of these cited articles are checked and excluded or included on the basis of the earlier mentioned steps (cutting down on the basis of title, abstract and full text). This is done repeatedly until no new articles appear. After all this, the final dataset is verified and the next phase of the review is reached.

In the second phase the article are analyzed. As we said earlier, we will now follow a different approach than proposed by Wolfswinkel et al. (2013). We have, based on the conceptualization identified for which decisions frameworks are needed. Table I serves as operationalization table. The concepts discussed in the previous chapter are represented in that table. Those concepts are divided in subcategories, each representing a type of decision that has to be made. With this table, we can get a clear overview of the state of research in strategic talent management.

Table I

First order construct	Second order construct
The identification of pivotal talent positions	Identification of strategic important positions
The development of a talent pool	Identification/classification of talents
	Decisions about psychological and ethical side of talent management
	Decisions about employee retention/ external sourcing of talent
Development of a differentiated HR architecture	Decisions about HR practices/systems
	Decisions about HR architecture

3.3 Search results

With methodology being set, the actual search for articles is carried out. The search results can be found in the tables in Appendix I. Table I shows the results of searching the database of Scopus while Table II shows the results of searching the database of Web of Science.

The search produced a lot of articles, although there was a lot of overlap between the databases. The search on Scopus resulted in 626 articles while the search on Web of Science produced 749 articles. A lot of articles that could prove to be useful though, were not accessible. The articles that could be useful and were accessible were chosen based on the title and the abstract. Logically, articles that didn't address strategic talent management were excluded. Then the articles were searched for frameworks and if the article didn't contain a framework, the article was also excluded.

If the article did contain a framework about talent management but it couldn't be used for the development of talent management strategy the article was also excluded. This addresses for example the articles that give frameworks about talent management but only for further research. Country-related frameworks or profession-related frameworks were not included either. For example, the article of Sidani and Al Ariss (2014) contained a framework but that was developed exclusively for the Gulf Coast context. Then, the citations of the found articles were checked, which didn't produce a lot of extra articles.

After these steps, the pool consisted of 19 articles. That is a small size but it was expected because the area of talent management is still "in its infancy with some progresses towards adolescence" (Thunnissen et al., 2011, p. 1757). Table II shows in which journals the found articles were published. In the middle column the SJR rank (SCImago Journal & Country Rank) of the journal is found. SJR ranks the journals in four different groups, from Q1 to Q4. Q1 indicates that the journal is amongst the most prestigious journals in its profession, while journals in Q4 are amongst the least prestigious journals in its profession. As we can see, the articles were published in moderate to very prestigious journals. Only 2 journals weren't ranked. The reason for that is unknown to us, but the articles are still included. In the found articles we found 20 frameworks that

area applicable for the development of a talent management strategy.

Table II

Name of journal	SJR Rank	Number of selected articles
Human Resource Management Review	Q1	6
Journal of World Business	Q1	6
Journal of Management	Q1	2
Business Ethics: A European Review	Not ranked	1
Human Resource Management	Q1	1
International Journal of Business Research and Management	Not ranked	1
Organizational dynamics	Q2	1
Academy of Management Perspectives	Q1	1

In Appendix II the table gives an oversight of all the selected frameworks, together with title, name of the authors, year of publishing, the journal in which the article was published and the number of citations according to Scopus and Web of Science. Some articles are mentioned more than once in the table, but that is because the article contained more than one framework that was usable for our review. Appendix III shows the table with the checklist, based on table I.

If a framework is about a part of the talent management strategy, the number 1 is filled in that part of the table. For example, the framework in the article of Festing and Schäfer (2013) is about the topic of the psychological and ethical side of talent management, so the cell of article number 3 (the article number of Festing and Schäfer, 2013 in Appendix II) in the column of the psychological side is filled with the number 1. It could also happen to be that a framework discussed different points. For example, the model developed by Festing and Schäfer (2013) is about the psychological side of talent management (for example about the effects on the psychological contract) but they also discuss how this affects employee retention. In that case, both cells were filled with the number 1.

Of the results, 1 article contained a framework that could help the identification of pivotal positions. The development of a talent pool was addressed by 14 frameworks in articles. The development of a differentiated HR architecture is addressed by 8 frameworks. All of the articles are written in this millennium. Most of the articles are written in the past five years, namely 15. The remaining 4 articles were written more than 5 years ago. This is compatible with the view that talent management is a relative new part of HRM.

4. RESULTS

In this part we discuss the frameworks that we found in our search. We will discuss what the found frameworks are about and which questions they address. Our aim in this part is to give the reader an impression of the available frameworks in the area of talent management. An oversight of the state of research can be found in Appendix III. The recommendations for further research, based on that overview, will be given in the next part.

4.1 Identification of pivotal talent positions

This is probably the part of a strategic talent management strategy that has got the least attention in research when it comes to decision frameworks. We found only 1 article that developed or discussed a framework that applies to the identification of pivotal talent positions. And more specific, that framework only applies to the identification of strategic important positions. No found frameworks discuss or classify which jobs display a wide variability in performance.

4.1.1 Identification of strategic important positions

Heckman and Lewis (2006) discuss the talent classification framework of Zuboff (1988) and the implications for that framework by recommending specific actions for the different groups. This framework can be used both for the identification of pivotal talent positions as well for the development of talent pools. For example, as Heckman and Lewis (2006) state: "Jobs in the lower right quadrant (easy-to-replace, high value added) should either be redesigned to be unique and differentiated from the competition (thus made more difficult to replace) or outsourced." (p.144). But also: "For instance, low-value, difficult-to-replace talent can yield higher value if the jobs are made more consultative and information-rich." (p. 144).

Still, this doesn't specify the classification of pivotal talent positions. It needs to be said though, that we found articles that discussed this point. But these articles didn't contain any frameworks. One of the reasons that we haven't found any frameworks for this activity could be that it is hard to quantify why certain jobs are of strategic importance for the firms and which jobs are not, as Becker and Huselid (2006) recognize. But it is still very important to identify the pivotal talent positions in a company. As Boudreau and Ramstad (2007) point out, a lack of identification could lead to firms investing too much in talents for positions that are not pivotal while failing to invest sufficiently in talents for pivotal positions.

4.2 Development of a talent pool

Of the 3 mentioned activities, the development of a talent pool is the area that has got the most attention in research. In this area, all 3 subconcepts have gotten attention in research in the form of a decision framework. For the development of a talent pool, we have found a total of 14 frameworks.

4.2.1 The identification/ classification of talents

Heckman and Lewis (2006) discuss an employee classification framework (developed by Zuboff, 1988), where they distinguish talent based on two dimensions: the difficulty of replacing the employee and value that the employee adds. This provides another way of looking at employees. While the "difficulty of replacing" focusses on the labor market, the "added value" focusses is related to the customer. Lepak and Snell (2002) also offer a classification model, and although it's primary objective is to describe different HR architectures, it can be perfectly used for employee classification.

They distinguish two dimensions, much like the framework of Zuboff (1988), namely strategic value and uniqueness. Talents in the firm are likely to score on both dimensions. The

employees in this quadrant of the framework are categorized as knowledge-based employment.. These employees are "able to contribute to a firm's strategic objectives" (Lepak and Snell, 2002, p.520). Lepak and Snell (2002) connect it to HR configurations, but how that applies to talent management will be discussed in 4.3.2.

The other found frameworks are more focused on talent only, not on all the employees of the firms. Before we can identify a talent, we need to have the definition of talent. Gallardo-Gallardo, Dries and Sels (2013) try to define what the concept talent actually means in the world of work with their framework. This framework approaches the concept talent from two sides, namely the object and subject approach. The object approach sees talent in the characteristics of people. For example, when it comes to commitment, talent is found in employees that score high on this dimension. The subject approach sees talent as people, for example, as employees with high-potential. It can help the development of a talent management strategy since it makes clear for managers how to approach talent. They can then choose the approach to talent that fits the firm.

Nijs, Gallardo-Gallardo, Dries and Sels (2014) offer a model that conceptualizes, operationalizes and measure talent. It also attempts to clarify its relation to excellent performance. This model can be used for the evaluation of talent in the firm. The framework consists of two parts: a definition part and a measurement part. The definition part discusses the concept of talent and divides it into different dimensions of talent. The measurement part discusses how these dimensions can be measured. They introduce 11 propositions in the framework that help in the understanding and the application of the framework.

Then, to identify talent, Mäkelä, Bjorkman and Ernrooth (2010) offer a detailed guide of how employees of MNCs are included in the talent pool. They provide and discuss different steps and also discuss additional effects that affect employees being labeled as a talent. The framework suggests that inclusion is a "two-stage decision process in which mostly experience-based (on-line) performance appraisal evaluations are used as an input in largely cognition-based (off-line) managerial decision making." (p. 134). They are aware however, that the framework is only an initial attempt. As Mäkelä et al. (2010) state, "more empirical and theoretical work is clearly needed" (p.140).

4.2.2 Decisions about the psychological and ethical side of talent management

When it comes to the psychological and ethical side of talent management, 5 frameworks were found that are applicable. Collings and Mellahi (2009), in the article that serves as framework for this literature review, focused on employee motivation, organizational commitment and extra role behavior as mediating variables on the effect of a talent management strategy on firm performance. Employee motivation has a positive effect on task performance. Collings and Mellahi argue that "organizational commitment strengthens the positive association between effective talent management and organizational performance" (p. 24). Extra role behavior is defined by Collings and Mellahi (2009) as "positive behavior that plays a reinforcing effect on the association between talent management and organizational performance" (p.24).

Festing and Schäfer (2013) adopt a social-exchange perspective and present some propositions on the effects of talent management on the psychological contract. They give special attention to generational effects. Due to the size limitations of this paper, it will be discussed more broadly in the section of employee retention (4.2.3), since it also discusses that part of

talent management. The article of Gelens, Dries, Hofmans and Pepermans (2013) attempts to help managers in the understanding the different reactions of employees to talent management practices by using perceived organizational justice. The framework consists of concepts that are connected by arrows. Each arrow stands for a proposition that is discussed in the article.

But talent management has effect on all the employees in the firm, not just the ones that are included in the talent pool. Raza Malik and Singh focus on 'B players', the employees that are not included in the talent pool. Raza Malik and Singh discuss how high potential programs affect these 'B' players. Swailens (2010) came up with a part of talent management that we didn't discuss in our conceptualization but is still very useful for talent management, namely the ethical side of talent management. Swailens (2010) identifies four steps in the talent management process, namely imagining talent, identifying talent, developing talent and evaluating program impact. At every step, questions that arise are pointed out and discussed.

4.2.3 Decisions about employee retention/ external sourcing of talent

The last type of decisions that we discuss in part 4.2 are about ensuring the size of the talent pool. That means that we discuss talent retention or, if talents have left the firm and the talent pool needs to be refilled, the external sourcing of talent. For that topic, we found frameworks. Chee Hong et al. (2012) discussed the factors that influence employee retention. The factors are employee training, employee empowerment, the appraisal system and employee compensation. These factors were empirically confirmed with a study.

Festing and Schäfer (2013) do not only discuss the effects of talent management on the psychological contract in general but also discuss the effects of talent management on talent retention. They point out that "only a highly engaged TM may contribute importantly contribute to talent retention." (p. 267). Highly engaged talent management is found in organizations that "intensively pursued TM measures that focused on extensive investment in training and other measures." (Festing and Schäfer, 2013, p. 266). They also show that generational effects employee retention, namely that the strong interest of Generations X and Y in development and the potential of career advancement makes this highly engaged talent management even more important than for the Baby-Boom generation.

Allen, Bryant and Varadaman (2010) provide 2 frameworks. Their aim, as the title shows, is to get rid of the misconceptions in the area of talent retention and replace those misconceptions with evidence-based strategies. The first framework points out evidence-based guidelines for talent retention. This framework consists of three principles. The second framework is an extensive model for the development of a retention strategy. This framework can be divided in two parts. The first part can be used to interpret the analysis of turnover through the lens of the organizational context. The second part is the diagnosis of why employees stay or leave.

4.3 Development of a differentiated human resource architecture

The part about HR practices or systems has received some attention in research. It needs to be said, however, that it mostly has focused on the specific HR practice of talent development. Remarkable was also the interest in global talent management. How the HR architecture relates to a strategic talent management strategy has received little to no attention in academic research. We found many articles about HR

architecture, but almost no articles connected it to talent management or were about a differentiated HR architecture, which was a requirement for inclusion in this research. We found 6 frameworks on HR practices, mainly on talent development. No frameworks related talent management to employee participation or employee compensation. We found 2 articles with frameworks that discussed HR architecture in relation to talent management.

4.3.1 Decisions about HR practices or HR systems

When it comes to HR practices or systems, two topics can be identified. The first topic is about talent management in a global context. The other topic is about the practice of talent development. Tarique and Schuler (2010) wrote a literature review and developed a framework that illustrates "the influences and interrelations of the factors in a MNEs environment such as a global economic recession that may help shape its GTM actions" (p.131). The framework identifies two drivers of GTM challenges, namely exogenous drivers and endogenous drivers. Exogenous drivers refer to forces and drivers that "forces or drivers external to the firm that are largely beyond management's control but can create challenges that can affect an organization's IHRM system" (p.126). Endogenous drivers refer to forces and drivers that are "internal to the firm including competitive or strategic position, headquarters international orientation, organizational structure, and workforce capability" (p.126). These drivers influence the GTM system and ultimately the effectiveness of this GTM system, which is depicted in the framework.

Schuler, Jackson and Tarique (2011) also focused on talent management in a global context. The framework they developed shows "the major contextual forces and shapers of GTCs (global talent challenges) and several HR policies and practices used in crafting global management talent initiatives to manage global talent challenges" (p.507). The framework consists of four dimensions in global talent management, namely forcers and shapers, GTCs, HR practices and policies for GTM initiatives and results. Each dimension is worked out more broadly in the article. Together with the framework, 9 propositions on global talent management are offered.

But according to Khilji, Tarique and Schuler (2015), the global talent management view is limited, because it focuses on individuals and organizations. They present a conceptual framework that extends the view to macro global talent management (MGTM). The framework integrates ideas from different disciplines (such as international business, sociology and geography) and fields (such as finance and innovation). It "captures the essence of complexities associated with managing talent globally" (p.236). The framework consists of three parts how are connected with each other. The first part is about the macro environment, the second part is about the MGTM process and the third part is about MGTM outcomes.

Schuler (2015) provides a framework for the broader topic of managing talents. The framework "identifies, organizes, suggests, and documents many choices (Cs) in managing talent that have been introduced into our most globally competitive companies, regardless of country of origin." (p.47). According to Schuler (2015), talent management can be facilitated by analysis using the framework. The framework consists of 5 areas of talent management in which choices need to be made. Those areas are choices in considerations, challenges, context, contingencies and consequences. These choices are worked out more extensively in the article.

Schiemann (2014) discusses the ACE framework to address the question of talent optimization. With that framework, we can

ask ourselves the question of how we can know if talent investments have been optimized. It can help to “where talent investments should be made (e.g., targeted managerial skills or training) and processes, structure or policies changed.” (p. 287). According to Schiemann (2014), the framework is helpful for “coordinating the entire talent lifecycle” (p.285). The talent lifecycle consists of all the “stages of interaction between an organization and its human capital” (p.282).

It can also happen that firms invest in talents while they are already high-performing. The framework of Boudreau and Johnson (2005) provide the HC BRidge model, which can be used for the identification of talent groups that need development. They illustrate this with an example: “One organization initially believed the most important talent pool was sales representatives, because revenue was important. Working through the impact elements of HC BRidge® revealed there was relatively little to be gained in improving the quality of sales representatives” (p. 133).

4.3.2 Decisions about HR architecture

Becker and Huselid (2006) make a case for the differentiated HR architecture, but they connect it to strategic HRM, of which talent management is part of. They show how a differentiated HR architecture ultimately affects firm performance. Lepak and Snell (2002), as discussed in 4.2.1, connect employee classification to HR configurations. As we stated earlier, talents are likely to score high on strategic value and uniqueness. The HR configuration that is connected to this quadrant is the commitment-based HR configuration. This approach focuses on internal development and the long-time commitment of the employees in this quadrant.

5. DISCUSSION

In this review was researched which decision frameworks are available for the development of a strategic talent management strategy. This would make clear which areas of the talent management strategy already have decision frameworks available and which areas lack decision frameworks. As Appendix III shows, for all the activities there are decision frameworks available.

Appendix III shows that the areas that have gotten attention in research are the identification of talents/classification of employees, the psychological and ethical side of talent management, the decision about talent retention, the recruitment of talent and the HR practices connected to talent management. The areas that have gotten little attention in research are the identification of pivotal talent positions and the decisions on HR architecture.

All of this means that the development of a talent pool has gotten reasonable attention in research, but the other two activities (namely the identification of pivotal talent positions and the development of a differentiated human resource architecture) have gotten little to no attention (with the exception of talent development). This means that firms can use frameworks to identify their firm, to retain or attract talent, to develop the talent and to deal with the psychological side of talent management. But firms get almost no help from decisions frameworks to support their talents with the right HR practices, HR systems, HR architecture or even to put the right talents in the right positions. This makes the effectiveness of a strategic talent management strategy limited. It is clear that more research about these two topics is crucial.

5.1 Limitations

The major limitation that was faced was that not all of the articles that could be useful for the article were accessible. It would also be good for a next literature review in this topic to include books. Due to the fact that those books were not accessible via the library of the University of Twente, and due to time reasons, books were not included in this review. Only 1 framework out of a book is featured in this review, namely the talent classification framework of Zuboff (1988), since that framework was discussed in the article of Lewis and Heckman (2006).

5.2 Future research

As we concluded in the section of Discussion, the areas that still lack decision frameworks is the area of the identification of talent positions. We found 1 decision framework that could help the identification process but is still very vague. An idea of what this framework could look like is like the framework of talent identification of Nijs et al. (2014). That framework splits the concept of talent in sub concepts and links it then to ways of measuring talent. A pivotal talent position framework could very well be much like this.

The other area that lacked decision frameworks was the area of the creation of a differentiated HR architecture. As Appendix III shows, we found frameworks about HR practices. But those were about development of about global perspectives at managing talent. We found no decision frameworks for talent compensation or employee compensation. Also, we haven't found any articles that clearly show how HR architecture relates to talent management. Those areas are also in need of more decision frameworks.

But the point that may be even more important is the lack of empirical validation. As Gallardo-Gallardo et al. (2013) state: “Another conclusion is that the literature on talent management, although diverse in terms of underlying concepts, is rather normative. In fact, the assumptions underlying the different approaches to talent discussed in this paper are often ‘sold’ as objective facts, even though little empirical evidence of their accuracy has been provided by academics and/or HR practitioners to date.” (p.297). By far, most articles were theoretical of nature. That has his implications for the practical relevance of the decision frameworks, because decisions based on literature-based-frameworks work out very differently than expected.

The last direction of future research that we propose comes from other professions. According to Nijs et al. (2014), a lot of frameworks from other professions are applicable for talent management. So a future research article could discuss the question of how frameworks from different professions are applicable for talent management. The framework that would really help forming a strategic talent management strategy would be a framework that integrates all the found frameworks. That framework should also be extended in a global context.

6. CONCLUSION

We started this review with stating the reality of talent management being a science in its infancy. Lewis and Heckman (2006) stated it and Thunnissen et al. (2011) repeated that conclusion some years later, although it slightly had progressed to adolescence. We also stated the need for decision frameworks that outlines the logical connections in talent management.

Some years later we can conclude that the area of talent management is starting to evolve, but there are still major

issues. Firms can use certain decision frameworks to identify their talent, but as we stated earlier, frameworks for putting the right talent in the right position are scarce and so are frameworks for supporting talent management with the HR architecture. Talent management needs more research in these areas if it wants to become a successful part of the HR profession.

Even more alarming is the lack of empirical validation of the frameworks. Without the ability to connect decisions to logical outcomes by using decision frameworks, talent management is nothing more than a term without value. But as we said earlier, the literature review revealed a tendency that frameworks are more and more a topic of research in talent management. We can conclude that on the basis of the fact that most of the frameworks were developed in that last 5 years. Talent management is still a young part of HRM, but it could very well be that in 5 years talent management has progressed from adolescence to maturity.

To answer our research question, we found some decision frameworks that help the development of a strategic talent management strategy. We discussed them shortly and showed for which type of decisions they could be used for. But we also are aware of the fact that how they exactly are applicable for a strategic talent management strategy is a firm-specific question. We found that if a firm decides to form a strategic talent management strategy, the strategy needs to consist of three parts, namely the identification of pivotal talent positions, the development of a talent pool and the creation of a differentiated HR architecture. To support the development of this strategy we presented and discussed several decision frameworks and found that the development of a talent pool is by far the most researched area of the 3 parts. The other two still lack theoretical frameworks and are in need of more research.

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Appendix I

Table 1: search on Scopus

1 st search term	2 nd search term	3 rd search term	Number of results
Frameworks	Talent		210
Frameworks	Talent	External	32
Frameworks	Talent	Psychological	34
Frameworks	Talent	Key positions	3
Frameworks	Talent	Pivotal Positions	1
Frameworks	Talent	Succession	14
Frameworks	Talent	Recruitment	35
Frameworks	Talent	Attraction	19
Frameworks	Talent	HR practices	4
Frameworks	Talent	HR systems	1
Frameworks	Talent	Development	99
Frameworks	Talent	Participation	22
Frameworks	Talent	Compensation	9
Frameworks	Strategic talent managment		4
Frameworks	Talentship		1
Frameworks	Talent pool		24
Frameworks	HR Architecture		7
Frameworks	Talent Retention		5
Theoretical model	Talent		56
Theoretical model	Talent	External	-
Theoretical model	Talent	Psychological	8
Theoretical model	Talent	Key positions	-
Theoretical model	Talent	Pivotal Positions	-
Theoretical model	Talent	Succession	1
Theoretical model	Talent	Recruitment	1
Theoretical model	Talent	Attraction	1
Theoretical model	Talent	HR practices	-
Theoretical model	Talent	HR systems	-
Theoretical model	Talent	Development	28

Theoretical model	Talent	Participation	2
Theoretical model	Talent	Compensation	1
Theoretical model	Strategic talent managment		1
Theoretical model	Talentship		-
Theoretical model	Talent pool		3
Theoretical model	HR Architecture		-
Theoretical model	Talent Retention		-
		Total number of results	626

Table II: search on Web of Science

1 st search term	2 nd search term	3 rd search term	Number of results
Frameworks	Talent		166
Frameworks	Talent	External	22
Frameworks	Talent	Psychological	21
Frameworks	Talent	Key positions	4
Frameworks	Talent	Pivotal Positions	1
Frameworks	Talent	Succession	5
Frameworks	Talent	Recruitment	21
Frameworks	Talent	HR practices	12
Frameworks	Talent	HR systems	9
Frameworks	Talent	Development	85
Frameworks	Talent	Participation	11
Frameworks	Talent	Compensation	7
Frameworks	Strategic talent managment		33
Frameworks	Talentship		-
Frameworks	Talent pool		12
Frameworks	HR Architecture		26
Frameworks	Talent Retention		16
Theoretical model	Talent		193
Theoretical model	Talent	External	3
Theoretical model	Talent	Psychological	15
Theoretical model	Talent	Key positions	5
Theoretical model	Talent	Pivotal Positions	2
Theoretical model	Talent	Succession	3
Theoretical model	Talent	Recruitment	8
Theoretical model	Talent	HR practices	4
Theoretical model	Talent	HR systems	2
Theoretical model	Talent	Development	28
Theoretical model	Talent	Participation	2
Theoretical model	Talent	Compensation	1
Theoretical model	Strategic talent managment		14

Theoretical model	Talentship		-
Theoretical model	Talent pool		6
Theoretical model	HR Architecture		8
Theoretical model	Talent Retention		4
		Total number of results	749

Appendix II

Article nr.	Titel	Authors	Year	Name of framework (or description of what the framework discusses)	Journal/publisher	Citations (Web of Science)	Citations (Scopus)
1	From talent management to talent optimization	Schiemann, W.A.	2014	ACE Framework	Journal of World Business	0	2
2	Strategic Talent Management: a review and research agenda	Collings, D. Mellahi, K.	2009	Framework on strategic talent management strategy	Human Resource Management Review	84	102
3	Generational challenges to talent management: A framework for talent retention based on the psychological-contract perspective	Festing, M. Schäfer, L.	2013	Framework explaining the impact of TM on the psychological contract moderated by the role of generational effects.	Journal of World Business	1	2
4	The 5-C framework for managing talent	Schuler, R.S.	2015	The 5-C framework for managing talent	Organizational Dynamics	0	0
5	The ethics of talent management	Swailles, S.	2013	Four-stage evaluation framework on ethical questions that arise with Talent Management	Business Ethics: A European Review	6	7
6	Strategic Human Resources Management: Where Do We Go From Here?	Becker, B.B. Huselid, M.A.	2006	Differentiating the HR Architecture Contingent on Strategic Business Practices	Journal of Management	-	-
7	How do MNCs establish their talent pools? Influences on individuals' likelihood of being labeled as talent	Mäkelä, K. Björkman, I. Ehrnrooth, M.	2010	Determinants of the identification and evaluation of employee talent.	Journal of World Business	41	44
8	What is the meaning of 'talent' in the world of work?	Gallardo-Gallardo, E. Dries, N. González-Cruz, T.	2013	Framework for the conceptualization of talent within the world of work.	Human Resource Management Review	11	13

9	An Effectiveness of Human Resource Management Practices on Employee Retention in Institute of Higher learning: - A Regression Analysis	Chee Hong, E. Hao, Z. L. Kumar, R. Ramendran, C. Kadiresan, V.	2012	Framework on employee retention	International Journal of Business Research and Management	-	-
10	Talent management: A critical review	Heckman, R.J. Lewis, R. E.	2006	Framework on Talent classified by difficulty-to-replace and value	Human Resource Management Review	-	142
11	A multidisciplinary review into the definition, operationalization, and measurement of talent	Nijs, S. Gallardo-Gallardo, E. Dries, N. Sels, L.	2014	Conceptual model of the definition, operationalization and measurement of talent	Journal of World Business	4	5
12	Examining the Human Resource Architecture: The Relationships Among Human Capital, Employment, and Human Resource Configurations	Lepak, D.P. Snell, S.A.	2002	Framework on Human capital characteristics and employment modes	Journal of Management	286	345
13	Incorporating the macro view in global talent management	Khilji, S.E. Tarique, I. Schuler, R.S.	2015	Macro global talent management (MGTM): a conceptual framework.	Human Resource Management Review	-	-
14	The role of perceived organizational justice in shaping the outcomes of talent management: A research agenda	Gelens, J. Dries, N. Hofmans, J. Pepermans, R.	2013	Framework on the role of perceived organizational justice in explaining differential outcomes for talent management practices	Human Resource Management Review	13	15
15	Global talent management: Literature review, integrative framework, and suggestions for further research	Tarique, I. Schuler, R.S.	2010	Integrative Framework of Global Talent Management (GTM) in MNEs	Journal of World Business	72	115

16	'High potential' programs: Let's hear it for 'B' players	Raza Malik, A. Singh, P.	2014	Proposed conceptual model about perceptions of high potential programs and employee outcomes.	Human Resource Management Review	0	-
17*	Retaining Talent: Replacing Misconceptions With Evidence-Based Strategies	Allen, D.G. Bryant, P.C. Vardaman, J.M.	2010	Developing Strategic Evidence-Based Retention Management Strategies	Academy of Management Perspectives	32	36
18*	Retaining Talent: Replacing Misconceptions With Evidence-Based Strategies	Allen, D.G. Bryant, P.C. Vardaman, J.M.	2010	Evidence-Based Guidelines for Retention Management	Academy of Management Perspectives	32	36
19	Talentship, talent segmentation and sustainability: a new HR decision science paradigm for a new strategy definition	Boudreau, J.W. Ramstad, P.M.	2005	HC Bridge Framework	Human Resource Management	64	92
20	Global talent management and global talent challenges: Strategic opportunities for IHRM	Schuler, R.S. Jackson, S.E. Tarique, I.	2011	Framework for Global Talent Challenges and Global Talent Management Initiatives	Journal of World Business	42	49

*These frameworks are found in the same article

Appendix III

	Identification of pivotal talent positions	Development of a talent pool			Development of a differentiated human resource architecture	
	Identification of strategic important positions	The identification/ classification of talents	Decisions about psychological and ethical side of talent management	Decisions about employee retention/ external sourcing of talent	Frameworks about HR architecture as a whole	Decisions about HR practices/systems
Article nr.						
1						1
2			1			
3			1	1		
4						1
5			1			
6					1	
7	1	1				
8		1				
9				1		
10		1				
11		1				
12		1			1	
13						1
14			1			
15						1
16			1			
17*				1		

18*				1		
19						1
20						1
Total	1	5	5	4	2	6

*These frameworks are found in the same article