ROLE OF HUMAN CAPITAL IN INVESTOR RELATIONS MANAGEMENT: EVIDENCE FROM GERMAN DAX30 COMPANIES

Sophia Jäger
FOM Hochschule für Oekonomie & Management, Frankfurt, Germany
304633@fom-net.de

Cam-Duc Au
FOM Hochschule für Oekonomie & Management, Düsseldorf (Germany), Masaryk University, Brno (Czech Republic) & ISF Institute for Strategic Finance, Essen, Germany
cam-duc.au@fom-net.de

Abstract

Current global trends and discussions in media are mainly focusing on sustainable development goals with an emphasis on the reduction of environmental damages caused by companies. However, another important social/sustainable criterion is constituted by the role of how the company employees are reflected: the human capital. Human capital is defined as the sum of an employee’s experience and skills, which he/she profitably brings into a company. Although being perceived for increasing productivity and thus profitability, the intangible asset is not listed on a company’s balance sheet. In the context of investor relations management, the financial community is more frequently demanding additional (soft) facts on personnel data (e.g. mean age, employee satisfaction, training opportunities) for company valuations. Solely evaluating (hard) facts – such as profits, turnovers, and further classical figures – are no longer adequate to gain the true value of a
company. On that basis, we investigate the relevance of human capital within the investor relations management context for all 30 German DAX-companies. In doing so, our research consists of a mixed-methods-approach, thereby combining quantitative and qualitative elements. In the first step, the company reporting – annual reports, personnel reports, CSR-reports, and non-financial reports – for all DAX30-companies is analyzed by using specific criteria model based on the Global Reporting Initiative (GRI). The findings are taken into the qualitative part by interviewing company representatives from DAX30-companies as well as management consulting firms. The overall findings provide empirical evidence, that the German DAX30-companies lack proper strategies to assess personnel data as well as represent proper information for fair company valuations.

Keywords
Human Capital, Sustainability, Investor Relations Management, Personnel Management

1. Introduction: Problem Statement and Research Relevance

The technological progress associated with its digitization of the economy enables the financial community easy and fast access to information procurement (Zerfaß & Pleil, 2017; Hackl et al, 2017). The motivation behind the seek for information can differ due to the different groups and the intention behind it. (Hoffmann et al., 2018). Especially the field of investor relations management takes an important role when it comes to the communication policies of a company (Janik, 2002). The objective of investor relations management is to purposefully deliver company information to the financial community. In doing so, a realistic view and evaluation of the company is facilitated with regards to the current market situation or the potential for future developments (Esch et al., 2006; Rummel, 2001).

Present market development is the increasing interest of the financial community in ethical actions and the sense of responsibility according to the idea of sustainability (Paech, 2012). Living and demonstrating sustainability has become a crucial factor for competitiveness and may allow companies to stand out from the market (Wannenwetsch, 2014). A sustainable company strategy, which can be transferred to all company departments, experiences a lot of positive attention from the financial community. The functional diversity as well as the actions of investor relations management underwent a major change because now there is more to it than just hard financial information respectively facts or key figures (Nix, 2000; Rummel, 2001).
Another important driver for this trend is the strong change in the population structure, which can be observed in the current market (Hullen, 2004). While the own workforce is constantly growing, it becomes harder for companies to find qualified personnel in order to cover the current as well as the future need for skilled workers (Adenauer, 2015). Thus, companies more often find themselves in a “war for talents” (Hansen & Hauff, 2019). The management firm McKinsey already stated in a study from 2011, that Germany will be facing a skills shortage of up to a number two million workers. For the year 2030, the management firm even estimates a deficit of up to 5.2 million skilled workers. As a consequence, companies may not be able to provide sufficient numbers of qualified personnel, which may have negative influences on the competitiveness of the market (McKinsey Deutschland, 2011).

Due to the rise of the illustrated problems, investor relations management is currently dealing with the evaluation of human capital in companies (Nix, 2004). Consequently, intangible assets gradually find more recognition besides traditional information such as classic financial key figures or hard profitability goals (Wuckitz, 2002). More companies understand their duty regarding social sustainability and responsibility. This can be referred to as the increasing pressure from society with its requirements and expectations towards modern companies. Current studies in Germany have proven, that companies already understood the relevance of human capital and social sustainability (McMurrer, 2007).

Against the background of the formulated facts, the given paper deals with the central research issue: In what way does the concept of human capital play a role in investor relations management of German DAX30-companies?

2. Mixed-Methods-Research

To start with, there is no standardized definition of what the mixed-methods-approach should consist of. The existing literature rather focuses on a variety of different approaches towards definitions (Kuckartz, 2014; Johnson et al., 2007). Considering this fact, it is safe to state that the mixed-methods-approach unifies quantitative and qualitative research elements in one work. Both elements lead to the generation of new research data (Kuckartz, 2014; Kelle, 2019; Bortz & Döring, 2006). It serves two purposes. Firstly, the combination of both elements ensures an adequate empirical foundation, thereby leading to higher quality in research results. Secondly, it allows
gaining a better understanding of the research problem when combining different perspectives to one final picture (Johnson et al., 2007; Brewer & Hunter, 1989; Tashakkori & Teddlie, 1998).

Due to the multi-dimensional-perspective as well as the empirical structure, the mixed-methods-approach states an optimal approach for the given research question in this paper. The paper starts with a quantitative approach by conducting an extensive analysis of the financial reports of all 30 companies in the major German stock index DAX. The analysis takes place with a special focus on the relevant personnel criteria according to a defined set by the Global Reporting Initiative.

Based on this approach and the results, the findings are utilized to develop an interview guideline for qualitative research. Semi-structured expert interviews will be conducted with selected representatives from DAX30-companies as well as management firms, which advises the companies in their strategic orientation. All chosen experts either bring expert knowledge in the fields of (i) human resources and capital, (ii) investor relations management, or (iii) in both disciplines.

2.1 Choice of Research Data and Valuation Factors

In the course of the quantitative analysis, the financial reporting from the year 2018 is taken into evaluation. This encompasses financial reports, personnel reports, CR- and CSR-reports as well as sustainability reports and non-financial reports. The information is accessed via the conventional way of how the financial community would do it. Hence, reports are often accessed via company homepages or physically in company branches.

The financial reports as well as the non-financial reports can be regarded as fixed components of a transparent communication policy of companies. Capital market-oriented corporations are obliged to create a non-financial report when they employ more than 500 employees (Methner & Reiter, 2018). The report consists of a detailed description of the operative business and information on the protection of employment matters such as social-environmental needs (Deloitte, 2017). On the contrary, the financial report intends to demonstrate the economic developments within a business year. In doing so, it serves to purposefully inform the different stakeholders about the past and upcoming years, which enables the evaluation and derivation of strategic implications. This is of great importance to understand the economic situation and to make investment decisions based on their own opinion regarding the future relevance on market (Keller, 2006).

The CSR-, CR- and sustainability reports inform about activities in the field of social actions and environmental engagements. In the best case, the reports convey the strategy to take
responsibility and make it visible for the financial community. The reports often refer to the Sustainability Reporting Guidelines (GRI). Observing the existing literature base, the terms of CSR, CR, and sustainability are often used as synonyms (Greiling, 2019).

The personnel reports focus specifically on personnel information and key figures such as fluctuation quote, number of employees, and multiple demographic facts. Besides, the reports intend to demonstrate the pursuit of personnel strategies with regard to diversity or work-life-balance. Fundamentally, it serves to inform the stakeholders about the personnel situation and the plans to keep executing a chosen strategy (Bröckermann, 2016).

As mentioned beforehand, the given paper uses reports from the year 2018. This implies that it refers to the then companies in the German index. For instance, the German bank Commerzbank was a member of the index in the year 2018. Today it was replaced by Wirecard AG, which may change due to the existing fraudulent circumstances. The composition of an index is dynamic and may change due to relevant events. However, the given paper focuses solely on 2018 as a research base (Commerzbank AG, 2018).

The presented reports are an integral part of the research evaluation based on the criteria of the Global Reporting Initiative (GRI). The GRI is an international, charitable, and non-profit organization, which created guidelines for sustainable reports. The organization pursues a sustainable usage of resources with its sustainable development to provide a future for upcoming generations (World Commission on Environment and Development, 1987). Through the implementation of the defined criteria, companies can easily find alignment for transparently reporting regarding their social, ecological, and economic objectives as well as duties (Frese & Colsmann, 2018; Global Reporting Initiative, 2018). Companies, which follow the GRI, aim to pay justice to their ethical and societal responsibilities. Thus, they commonly report about specific environmental activities or their engagement in human rights. This may have positive impacts such as an enhanced reputation or a competitive advantage on market (Global Reporting Initiative, 2019; Nelke, 2017, Deloitte, 2017).

The companies within the German DAX30-index also make use of the GRI-criteria to show their commitment to social, ecological, and economic responsibilities, thereby trying to convey their strategic approach to the financial community (Hentze & Thies, 2014).

The GRI-criteria consists of several standards, which are interconnected due to their related topics. Reports based on the criteria enable a comprehensive and balanced information provision to
all stakeholders. Both the operative business as well as the resulting impacts can be communicated at once and in a holistic picture (Global Reporting initiative, 2018; Hentze & Thies, 2014).

In the following table 1, the G4 Sustainability Reporting Guidelines, which is the current framework for the GRI, is briefly illustrated.

**Table 1: Overview of Global Reporting Initiative Standards**

| GRI Number | GRI Name          | Type of Standard       |
|------------|-------------------|------------------------|
| GRI 101    | Foundation        | Universal Standards    |
| GRI 102    | General Disclosures | Universal Standards  |
| GRI 103    | Management Approach | Universal Standards  |
| GRI 200    | Economic          | Topic-specific Standards|
| GRI 300    | Environmental     | Topic-specific Standards|
| GRI 400    | Social            | Topic-specific Standards|

The criteria catalog of GRI 101 poses the initial document, which contains the principles for content-related design to ensure quality safety. It also possesses the first requirements for drafting a sustainability report (Global Reporting Initiative, 2018).

With respect to the central research question in this paper, the evaluation of relevant personnel information can be performed with regards to the GRI 400 criteria. GRI 400 stands for social matters, whereas GRI 200 stands for economics and GRI 300 for ecology. The GRI 400 encompasses over 19 different social criteria. Not all of the criteria are suitable for evaluating the given research question. Therefore, only a subset of the GRI 400 criteria is chosen for the evaluation of human capital relevance.

As mentioned before, the GRI 400 criteria belong to the so-called topic-specific standards. Some of the criteria will be stated in the following table to illustrate the connection to the fields or functions of human capital.

**Table 2: Exemplary Criteria based on GRI 400 Standard**

| GRI-Criterion          | Function for Human Capital                                      |
|------------------------|-----------------------------------------------------------------|
| 1. Diversity-Philosophy| • Promotion of diversity, acceptance, and equality at work      |
|                        | • Employees can develop their full potential and motivation      |
| 2. Talent Program      | • Companies invest in the knowledge and skills of employees      |

135
Table 2 describes the relevance of five exemplary GRI criteria under the aspect of human capital. The depicted criteria are eligible due to their ability to influence the value of human capital within a company. Especially in the current situation, the criteria already have shown the chance to create competitive advantages in order to – for instance – attract new potential skilled workers (Austrup & Bloomberg, 2014).

2.2 Evaluation Model according to the Global Reporting Initiative (GRI)

The analysis starts with the observation of how many reports are available to the financial community and to what extent it is given. In the following step, the reports underwent an evaluation process, which is presented in table 2 (see further below). The reports are analyzed along with the criteria if a company reports about the GRI content. The depth or level of detail does not play a role in this given research due to its rather new or young presence. This may be a suitable approach in the future when sustainability is established globally and can be seen as a matter of fact. The overview of this evaluation can be taken from table 3 and 4, which shows the overall landscape of GRI criteria presented in all examined reports for each of the 30 DAX-companies.
Table 3: *Individual GRI Criteria Catalog for Evaluation (1/2)*

|                                | Commerzbank AG | Bayer AG | Deutsche Bank AG | Deutsche Lufthansa AG | Völkswagen SE | Adidas AG | BASF SE | Allianz AG | Beiersdorf AG | BMW AG | Continental AG | Covestro AG | Daimler AG | Deutsche Börse AG | Deutsche Post AG |
|--------------------------------|----------------|----------|------------------|-----------------------|--------------|-----------|--------|------------|--------------|--------|-----------------|------------|-------------|-------------------|-----------------|
| **Employment figures**         |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    |                 |
| Information according to       | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| business units                 |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    |                 |
| Age structure                  | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Apprentices                    | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Fixed-term contracts           | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Average employment period      | x              | x        | x                 | x                     |               | x         |        | x          | x            |        |                 |            |             |                    |                 |
| Fluctuation rate               | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Proportion of male and female  | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Manager                        | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Disabled persons               | x              | x        | x                 | x                     |              |           |        |            |              |        |                 |            | x           | x                  |                 |
| Part-time employees            | x              | x        | x                 | x                     |              |           |        |            |              |        |                 |            | x           | x                  |                 |
| **Relationship employees and management** |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    |                 |
| Employee representative        | x              | x        | x                 | x                     | x            | x         | x      | x          | x            |        |                 |            |             | x                  |                 |
| committee                      |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    |                 |
| Employee survey                | x              | x        | x                 | x                     | x            | x         | x      | x          | x            |        |                 |            |             | x                  |                 |
| Internal code of conduct       | x              | x        | x                 | x                     | x            | x         | x      | x          | x            |        |                 |            |             | x                  |                 |
| **Health and security**        |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    |                 |
| Employees in OHS-Committee     |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    | x               |
| Number of work accidents       | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Work-related illness           | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| Own health insurance           | x              | x        | x                 | x                     |              |           |        |            |              |        |                 |            |             | x                  |                 |
| Absence rate                   | x              | x        | x                 | x                     | x            | x         | x      | x          | x            |        |                 |            |             | x                  |                 |
| Formal agreements with         | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |
| employee representative        |                |          |                  |                       |              |           |        |            |              |        |                 |            |             |                    |                 |
| Health and prevention          | x              | x        | x                 | x                     | x            | x         | x      | x          | x            | x      | x               | x          | x           | x                  | x               |

Note: "x" indicates the presence of the criterion for each company.
measures

| Training                     |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Feedback programmes         | x | x | x | x | x | x | x | x | x | x | x | x |
| Promotion of women          | x | x | x | x | x | x | x | x | x | x | x | x |
| Idea management             | x | x | x | x | x | x | x | x | x | x | x | x |
| Investments in education    | x | x | x | x | x | x | x | x | x | x | x | x |
| Youth development           | x | x | x | x | x | x | x | x | x | x | x | x |
| Personnel development      | x | x | x | x | x | x | x | x | x | x | x | x |
| Personnel development      |   |   |   |   |   |   |   |   |   |   |   |   |
| (p.a., per employee, in h)  | x | x | x | x | x | x | x | x | x | x | x | x |

| Diversity & Chances         |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Diversity philosophy        | x | x | x | x | x | x | x | x | x | x | x | x |
| Payment gap male/female     | x | x | x | x | x | x | x | x | x | x | x | x |
| Work-life-balance           | x | x | x | x | x | x | x | x | x | x | x | x |
| Diversity criteria in       | x | x | x | x | x | x | x | x | x | x | x | x |
| employment                  |   |   |   |   |   |   |   |   |   |   |   |   |

| Compensation system         |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Company pension             | x | x | x | x | x | x | x | x | x | x | x | x |
| Collective agreements       | x | x | x | x | x | x | x | x | x | x | x | x |
| Variable remuneration       | x | x | x | x | x | x | x | x | x | x | x | x |

| Strategies                  |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Demographic change          | x | x | x | x | x | x | x | x | x | x | x | x |
| Lifelong-learning           | x | x | x | x | x | x | x | x | x | x | x | x |

| Facebook                    |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Company page                | x | x | x | x | x | x | x | x | x | x | x | x |
| Career portal               | x | x | x | x | x | x | x | x | x | x | x | x |

| Reporting                   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual report               | x | x | x | x | x | x | x | x | x | x | x | x |
| Personnel report            | x |   |   |   |   |   |   |   |   |   |   |   |
| Sustainability report       | x | x | x | x | x | x | x | x | x | x | x | x |
| Non-financial report        | x | x | x | x | x | x | x | x | x | x | x | x |

| Symbol                      |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| x – information is reported and publicly available |   |   |   |   |   |   |   |   |   |   |   |   |
### Employment figures

| Employment figures                        | Deutsche Telekom AG | E.ON SE | Fresenius SE | Fresenius Medical Care | HeidelbergCement AG | Henkel AG | Infineon AG | Linde AG | Merck KGaA | Münchener Rück AG | RWE AG | SAP SE | Siemens AG | ThyssenKrupp AG | Volkswagen AG |
|------------------------------------------|---------------------|---------|--------------|------------------------|---------------------|-----------|-------------|----------|------------|-------------------|--------|--------|------------|-----------------|----------------|
| Information according to business units | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |
| Age structure                            | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |
| Apprentices                              | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |
| Fixed-term contracts                     |                     |         |              |                        |                     |           |             |          |            |                   | x      | x      | x          | x               | x               |
| Average employment period                |                     |         |              |                        |                     |           |             |          |            |                   | x      | x      | x          | x               | x               |
| Fluctuation rate                         |                     |         |              |                        |                     |           |             |          |            |                   | x      | x      | x          | x               | x               |
| Proportion of male and female            |                     |         |              |                        |                     |           |             |          |            |                   | x      | x      | x          | x               | x               |
| Manager                                  |                     |         |              |                        |                     |           |             |          |            |                   | x      | x      | x          | x               | x               |
| Disabled persons                         | x                   |         |              |                        |                     |           |             |          |            |                   |        | x      | x          | x               | x               |
| Part-time employees                      | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |

### Relationship employees and management

| Relationship employees and management    | Deutsche Telekom AG | E.ON SE | Fresenius SE | Fresenius Medical Care | HeidelbergCement AG | Henkel AG | Infineon AG | Linde AG | Merck KGaA | Münchener Rück AG | RWE AG | SAP SE | Siemens AG | ThyssenKrupp AG | Volkswagen AG |
|------------------------------------------|---------------------|---------|--------------|------------------------|---------------------|-----------|-------------|----------|------------|-------------------|--------|--------|------------|-----------------|----------------|
| Employee representative committee        | x                   | x       | x            | x                      | x                   | x         |             |          |            |                   |        |        | x          | x               | x               |
| Employee survey                          | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 |        |        | x          | x               | x               |
| Internal code of conduct                 | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |

### Health and security

| Health and security                      | Deutsche Telekom AG | E.ON SE | Fresenius SE | Fresenius Medical Care | HeidelbergCement AG | Henkel AG | Infineon AG | Linde AG | Merck KGaA | Münchener Rück AG | RWE AG | SAP SE | Siemens AG | ThyssenKrupp AG | Volkswagen AG |
|------------------------------------------|---------------------|---------|--------------|------------------------|---------------------|-----------|-------------|----------|------------|-------------------|--------|--------|------------|-----------------|----------------|
| Employees in OHS-Committee               | x                   | x       | x            | x                      | x                   | x         |             |          |            |                   |        |        | x          | x               | x               |
| Number of work accidents                 | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |
| Work-related illness                     | x                   | x       | x            | x                      | x                   | x         |             |          |            |                   |        |        | x          | x               | x               |
| Own health insurance                     | x                   |         |              |                        |                     |           |             |          |            |                   |        |        | x          | x               | x               |
| Absence rate                             |                     |         |              |                        |                     |           |             |          |            |                   | x      | x      | x          | x               | x               |
| Formal agreements with employee representative | x                 | x       | x            | x                      | x                   | x         |             |          |            |                   |        |        | x          | x               | x               |
| Health and prevention                    | x                   | x       | x            | x                      | x                   | x         | x           | x        | x          | x                 | x      | x      | x          | x               | x               |
| measures               | Training                                                                 | Diversity & Chances                                      | Compensation system                              | Strategies                                                   | Facebook                                         | Reporting                                      | Symbol                          |
|-----------------------|--------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|------------------------------------------------|---------------------------------|
|                       | Feedback programmes                                                      | Diversity philosophy                                    | Company pension                                 | Demographic change                                     | Company page                                    | Annual report                   | x – information is reported and publicly available |
|                       | Promotion of women                                                       | Payment gap male/female                                  | Collective agreements                           | Lifelong-learning                                      | Career portal                                   | Personnel report                |                                 |
|                       | Idea management                                                           | Work-life-balance                                       | Variable remuneration                           |                                                             |                                                 | Sustainability report             |                                 |
|                       | Investments in education                                                 | Diversity criteria in employment                        | Variable remuneration                           |                                                             |                                                 | Non-financial report             |                                 |
|                       | Youth development                                                         |                                                          | Strategies                                      |                                                             |                                                 | Reporting                                     |                                 |
|                       | Personnel development programmes                                         |                                                          |                                                 |                                                             |                                                 | Annual report                   |                                 |
|                       | Personnel development                                                     |                                                          |                                                 |                                                             |                                                 | Personnel report                |                                 |
|                       | (p.a., per employee, in h)                                               |                                                          |                                                 |                                                             |                                                 | Sustainability report         |                                 |

x – information is reported and publicly available
As demonstrated in table 3 and 4, the quantitative research takes place with respect to seven overarching categories. Each category consists of sub-categories or criteria, which serves for the given analysis. If a DAX-company reports about a criterion, a mark has been placed to indicate the existence and relevance of this topic for the specific company. If there are no reports available for a criterion, then a mark has not been placed and space is left blank to indicate the missing report in this matter. The following steps were performed to gain the result in table 2:

1. Gathering of all available reports of all DAX30-companies for the business year 2018
2. Determination of suitable GRI-criteria for the evaluation of the research question
3. Examination of all reports along with the determined individual criteria catalog
4. Data capture (as given in table 2) to gain an overview of the reporting situation in the index
5. Descriptive evaluation and explanation of the results respectively findings

2.3 Qualitative Expert Interviews and Structured Content Analysis

In this part, the results from the qualitative research were additionally used – besides the insights from an extensive literature review – to create an interview guideline. The intention is to dig deeper into the understanding and how the company behaves in terms of their reporting manner. This is important because written reports only show a one-dimensional perspective on the matter. For instance, you cannot understand why a company is reporting about diversity and but not about work-life-balance. There is no chance to read between the lines. Hence, expert interviews with company representatives are a vital approach to gain a deeper understanding of the company’s actions and reports.

Crucial for this qualitative approach is to choose only experts, which either work in a DAX-30 company or advises these companies due to their nature of work (e.g. consulting services). Furthermore, experts are only eligible when they can show a proven work record and work in the fields of human capital, investor relations, or both. Also, they have to show a working experience of at least five years within the company. This requirement is necessary to ensure that the interview partner is a reliable source of information. Table 5 shows an overview of interview partners and from which industry they are coming from. Of course, the principle of anonymity and personal security is applied, thereby not indicating any personal information on the interview partner.
Table 5: List of Interview Partners

| # Expert | Company Industry | Date | Duration |
|----------|------------------|------|----------|
| Expert 1 | Real Estate      | 2019 | 35 Min.  |
| Expert 2 | Banking          | 2019 | 45 Min.  |
| Expert 3 | Pharmaceuticals  | 2019 | 30 Min.  |
| Expert 4 | Banking          | 2019 | 30 Min.  |
| Expert 5 | Consulting       | 2019 | 25 Min.  |
| Expert 6 | Banking          | 2020 | 50 Min.  |
| Expert 7 | Tech             | 2020 | 40 Min.  |

The interviews underwent a transcription process and the audio files were deleted due to the nature of data protection. All transcripts served as the basis for the structured content analysis by using software to perform the coding process. In doing so, it was possible to gain the key messages from a large chunk of text and aggregate them to specific research findings.

3. Research Findings

The overall objective of the paper is to research the role of human capital in reporting of German DAX-companies. In the following, we present our research findings based on the methodical approach we outlined in the previous section.

3.1 Quantitative Findings on the Company Reports

All DAX-companies report according to the G4 Standards of the Global Reporting Initiative. The results emphasize the relevance of transparent reporting about activities and responsibilities with regard to social, ecological, and economic sustainability. Stakeholders seem to demand transparent reports as well as the pursuit of social responsibility. It becomes gradually important to find a stable market position with solid competitive advantages (Schaltegger, 2014).

Besides, the entirety of DAX-companies publishes a financial report as well as a non-financial statement. This result is no surprise because both formats are mandatory for large companies, which you will always find in the DAX index. 23 out of 30 companies additionally provide a CSR-/CR or sustainability report. This stresses the already existing trend of illustrating further soft information for specific stakeholders. A separate personnel report is only provided by 3 out of 30 companies. The average number of pages in the personnel report lies at 50.
Moreover, the average number of elaborated GRI-criteria lies at 25 out of 36. If a company does only provide a financial statement and a non-financial statement, then the average number decreases to 20 out of 36 GRI-criteria. The results are not surprising since the sustainability and personnel reports are additional sources of information. Providing more sources offers the chance to focus on a higher number of personnel matters or criteria. Thus, it is safe to say: with the increasing number of available reports goes an increasing reporting quality in terms of more GRI-criteria along. A summary of the stated quantitative results can be seen in the following figure 1:

**Figure 1: Overview of Global Reporting Initiative Standards**

### 3.2 Qualitative Findings on Human Capital in Investor Relations

All experts have a common understanding of the term human capital and state it as the sum of capabilities, skills, and the motivation of employees. They are in alignment, that companies should pay close attention to the development of human capital. Companies must provide appropriate tools or possibilities to strengthen the knowledge of employees and increase their company affiliation. But the majority of the interview partners stress that it is also depending on the willingness of the staff to take the provided opportunities. No employee can or should be forced to invest in her or his human capital.
We pursue the idea, that each employee is responsible for her or his human capital value. Our employees have the opportunity to develop capabilities along with their interests. We provided it to them. But they have to take the chance and we are not forcing anyone.”

(Expert 3, 2019)

The relevance of human capital is confirmed due to the personal opinions of the experts. However, all experts are certain, that companies could do more in the reports to pay justice to the relevance. Reports are often heavily focused on financial figures rather than on soft information such as personnel data or human capital. According to their personal opinions, this still lies in the major interest of the financial community in financial data. Financial data allow calculations and estimations of the future business. This also stands for performance data from the past. One example is that the information on paid dividends still experiences higher recognition than the number of provided employee training. Reports are said to be designed according to the stakeholder’s interests. Although social sustainability and human capital is an increasing trend, the majority of analysts and stakeholders still rather rely on financial and quantitative data.

Another reason for the under-representation of human capital in reports is that there is no common base to calculate the value of human capital in companies. Human capital as an intangible asset of a company is hard to calculate when the academic discussion is still ongoing and approaches still seem to be insufficient. Therefore, many experts state this argument for the lack of presence in reports. Counting material and giving them specific values is easier than quantifying the worth of company staff. Furthermore, it is hard or almost not possible to connect the impact of personnel measures with the profitability result. Providing training measures for employees is regarded in the first instance as a cost block. The impact of this block is uncertain and still cannot be directly linked to economic performance figures.

In the following listing, the main reasons - experts invoke for the under-representation of personnel information - are demonstrated and explained.

1. Employees as Cost Factor: there is still the prevalent opinion, that employees are a major cost factor of a company. The financial community still demands financial facts over soft information. Hence, there is not sufficient incentive to change communication politics (Expert 2, 2019; Expert 3, 2019).

2. No Direct Connection to a Company’s Financial Success Possible: human capital as an intangible asset cannot be measured. Besides, the employee is no constant asset. Again, the
3. **Reporting for Advertising Purposes**: personnel reports can vary in terms of the level of detail and depth. It can be a vital way of advertising the company to attract new employees (e.g. diversity, modern mindset, flat hierarchies). But current reports are still lacking detailed and extensive information. The companies have not fully understood the possible potential in sustainable and personnel reports. (Expert 4, 2019, Expert 7, 2020).

All experts agree that reporting will play a more important role in the future. One reason is the growing impact of digital technologies and the changing way of information procurement. Information can be accessed within seconds and via smartphones or tablets. Young generations also show a new mindset, when it comes to economic developments. Ecological and societal awareness is a growing trend among younger generations. Also, changing the working requirements in terms of flexible hours or working in other countries are among the current trends. There has to be a shift in strategy from shareholder value to stakeholder value in order to stay competitive and attractive on the labour market (Expert 4, 2019; Expert 6, 2020).

4. **Conclusion and Outlook**

The objective of the given paper is to assess the relevance of human capital within the DAX30-companies under the aspect of investor-relations management. On this basis, a mixed-methods-approach was conducted, to gain a multi-dimensional view of the research question. In the following, the conclusion of the paper as well as an outlook for further research will be presented. The latter shows existing limitations in the given research design by providing possible actions for other researchers to support the research in this field.

4.1 **Summary of Research Findings and Critical Appraisal**

While the literature base emphasizes the relevance of human capital and the promotion of corresponding reports, there is still little evidence in practice or reality. The results from the quantitative analysis of the reports show, that only 10 percent of the companies publish an additional personnel report. On average, DAX-companies only reported on 25 of 36 relevant personnel GRI-criteria. Besides, the analysis shows that there are strong quality differences when it comes to the commitment of reports. Some companies demonstrate extensive detailed information about personnel matters whereas other companies solely rely on superficial statements. It is hard for
the stakeholders or readers to perform comparisons when huge differences in reports are existent. Also, there is no sign of critical analyses with regards to personnel actions or strategies. Best practices and positive stories are among the most popular approaches to fill reports. The still existing potential for improvement is confirmed by the qualitative expert interview findings. There are still huge differences in terms of quality and depth of reporting, which can be linked to the high interest in hard facts. The experts show common alignment that human capital reporting will always lead to benefits and that they invest in such reporting would not be in vain. However, it is still not the preferred information demanded by stakeholders, which has led to the current level of perception and importance.

4.2 Research Limitations

Additional to the research findings in this paper, information on the research limitations or approaches for further research will be given to contribute to the existing academic debate.

First of all, there is a little number of experts, who were interviewed for this research. There is an opportunity to include more experts and gain more expert knowledge on this topic. Also, given the availability of interview partners, only a few industries were covered in the German index. There is still room to perform research on different industries to receive a more holistic view of human capital and the current investor relations management strategies. This can also imply to interview not only representatives from human resources and investor relations but also from other departments within the company. The personnel matter concerns every employee and considering a different point of view may add greater value to the research findings.

Furthermore, the paper is focused on the index with the 30 biggest German companies. However, there are more indices such as MDAX or TechDax to perform the same research design and conduct comparisons among the three company groups. One assumption could be that smaller companies in a smaller index may invest even less in reports. This could be referred to less available funds or employees to create the reports or even that there is no demand for this kind of information due to a limited stakeholder base.
REFERENCES

Brewer, J., Hunter, A. (1989): Multimethod Research: Synthesis of Styles, Thousand Oaks: Sage Publications, 1989

Bröckermann, R. (2016): Personalwirtschaft: Lehr- und Übungsbuch für Human Resources Management, Stuttgart: Schäffer-Poeschel Verlag, 2016

Deloitte (2017): CSR-Richtlinie-Umsetzungsgesetz: Ausweitung der nichtfinanziellen Unternehmensberichterstattung, https://www2.deloitte.com/content/dam/Deloitte/de/Documents/risk/Deloitte_CSR_Brochure_final.pdf (2017) [Accessed on 2019-10-12]

Esch, F.-R., Tomczak, T., Kernstock, J., Langner, T. (2006). Corporate Brand Management: Marken als Anker strategischer Führung von Unternehmen, 2nd edition, Wiesbaden: Gabler/GWV Fachverlage GmbH, 2006

Frese, M., Colsman, B. (2018): Nachhaltigkeitsreporting für Finanzdienstleister, Wiesbaden: Springer Fachmedien, 2018 https://doi.org/10.1007/978-3-658-17217-6

Global Reporting Initiative (2016): Empowering sustainable decisions. GRI’s Annual Report 2015-2016, https://www.globalreporting.org/resourcelibrary/GRI-AnnualReport2015-2016.pdf (2015-2016) [Accessed on 2019-09-15]

Global Reporting Initiative (2018): Consolidated set of GRI Sustainability Reporting Standards 2018, https://www.globalreporting.org/standards/gri-standards-download-center/consolidated-set-of-gri-standards/?g=18880164-1b72-4961-b2f3-26d78b60c668 (2018) [Accessed on 2019-09-10]

Global Reporting Initiative (2019): About GRI, https://www.globalreporting.org/Information/about-gri/Pages/default.aspx (2019) [Accessed on 2019-09-15]

Greiling, D. (2019): Nachhaltigkeitsberichterstattung: Eine Rechenschaftslegungsinnovation für Nonprofit-Organisationen?, in: Fröse, Marlies, W., Naake, Beate, Arnold, Maik (Hrsg.), Führung und Organisation: Neue Entwicklung im Management der Sozial- und Gesundheitswissenschaft, 2019, p. 91-120 https://doi.org/10.1007/978-3-658-24193-3_5

Hackl, B., Wagner, M., Attmer, L., Baumann, D. (2017): New Work: Auf dem Weg zur neuen Arbeitswelt: Management-Impulse, Praxisbeispiele, Studien, Wiesbaden: Springer Fachmedien, 2017 https://doi.org/10.1007/978-3-658-16266-5
Hansen, N.-K., Hauff, S. (2019): Talentmanagement - Trends, Herausforderungen und strategische Optionen, in: Busold, M. (Publisher), War for Talents: Erfolgsfaktoren im Kampf um die Besten, 2nd edition, 2019, p. 35-46 https://doi.org/10.1007/978-3-662-57481-2_3

Hentze, J., Thies, B. (2014): Stakeholder-Management und Nachhaltigkeits-Reportings, Berlin, Heidelberg: Springer-Verlag, 2014 https://doi.org/10.1007/978-3-642-54917-5

Hoffmann, C., Tietz, S., Fetzer, M., Winter, J. (2018): Digital Leadership im Investor Relations: Wie digital ist die Investor Relations in Deutschland?, Frankfurt: Deutscher Investor Relations Kreis e.V., 2018

Hullen, G. (2004): Bevölkerungsentwicklung in Deutschland, in: Frevel, Bernhardt (Hrsg.), Herausforderungen demografischer Wandel, Wiesbaden: VS Verlag für Sozialwissenschaften, 2004, p. 15-25 https://doi.org/10.1007/978-3-322-80562-1_2

Janik, A. (2002): Investor Relations in der Unternehmenskommunikation: Kommunikationswissenschaftliche Analysen und Handlungsempfehlungen, Wiesbaden: Springer Fachmedien, 2002 https://doi.org/10.1007/978-3-663-10407-0_4

Johnson, R. B., Onwuegbuzie, A. J., Turner, L. (2007): Toward a Definition of Mixed Methods Research, in: Journal of Mixed Methods Research, 1/2007, p. 112-133. https://doi.org/10.1177/1558689806298224

Keller, R. (2006): Der Geschäftsbericht: Überzeugende Kommunikation durch klare Sprache und gutes Deutsch, Wiesbaden: Gabler Verlag, 2006

Kuckartz, U. (2010): Einführung in die computergestützte Analyse qualitativer Daten, Wiesbaden: VS Verlag für Sozialwissenschaften, 2010 https://doi.org/10.1007/978-3-531-92126-6

Kuckartz, U. (2014): Mixed Methods: Methologie, Forschungsdesigns und Analyseverfahren, Wiesbaden: Springer Fachmedien, 2014

Kuckartz, U. (2016): Qualitative Inhaltsanalyse: Methoden, Praxis, Computerunterstützung, Wiesbaden: VS Verlag für Sozialwissenschaften, 2016

McKinsey Deutschland (2011): Wettbewerbsfaktor Fachkräfte: Strategien für Deutschlands Unternehmen, https://www.jobadu.de/pdfs/01052.pdf (2011-05) [Accessed on 2019-09-15]

McMurrer, D., Bassi, L. (2007): Die klügere Personalarbeit, in: Harvard Business Manager, September 2007, p. 2-11

Methner, O., Reiter, J. (2018): Rechtliche Rahmenbedingungen für CSR und Compliance in deutschen Unternehmen, in: Kleinfeld, Anette, Martens, Annika (Hrsg.), CSR und
Compliance: Synergien nutzen durch ein integriertes Management, 2018, p. 49-62
https://doi.org/10.1007/978-3-662-56214-7_3

Nelke, A. (2017): Interne und externe Unternehmenskommunikation für nachhaltige Innovationen und gesellschaftliche Verantwortung von Unternehmen am Beispiel des Employer Brandings, in: Gordon, Gesa, Nelke, Astrid (Hrsg.), CRS und Nachhaltige Innovationen: Zukunftsfähigkeit durch soziale, ökonomische und ökologische Innovationen, 2017, p. 25-37
https://doi.org/10.1007/978-3-662-49952-8_3

Nix, P. (2000): Die Zielgruppe von Investor Relations, in: Deutscher Investor Relations Kreis (Hrsg.), Investor Relations: Professionelle Kapitalmarktkommunikation, 2000, p. 35-43
https://doi.org/10.1007/978-3-322-84420-0_3

Nix, P. (2004): Der Geschäftsbericht - Flaggschiff der Unternehmenskommunikation, in: DIRK e.V., Handbuch Investor Relations, 2004, p. 95-144
https://doi.org/10.1007/978-3-322-90343-3_6

Paech, N. (2012): Befreiung vom Überfluss: Auf dem Weg in die Postwachstumsökonomie, München: Oekom Verlag, 2012

Rummel, S. (2001): Einschätzung der IR-Arbeit von Unternehmen,
https://www.faz.net/aktuell/finanzen/investor-relations-einschaetzung-der-ir-arbeit-von-unternehmen-121571.html#void (2001-05-25) [Accessed on 2019-09-15]

Schaltegger, S. (2014): Nachhaltigkeitsberichterstattung zwischen Transparenzanspruch und Management der Nachhaltigkeitsleitung, in: Fifka, Matthias, Schmidpeter, René, CSR und Reporting: Nachhaltigkeits- und CSR-Berichterstattung verstehen und erfolgreich umsetzen, 2014, p. 21-34
https://doi.org/10.1007/978-3-642-53893-3_2

Tashakkori, A., Teddlie, C. (1998): Mixed methodology: Combining qualitative and quantitative approaches, Thousand Oaks: SAGE Publications, Inc., 1998

Wannenwetsch, H. (2014): Integrierte Materialwirtschaft, Logistik und Beschaffung, Heidelberg: Springer Vieweg, 2014
https://doi.org/10.1007/978-3-642-45023-5

World Commission on Environmental and Development (1987): Our common future. Oxford: Oxford University Press, 1987

Zerfaß, A., Pleil, T. (2017): Handbuch Online-PR: Strategische Kommunikation in Internet und Social Media Web, 2nd edition., Cologne: Herbert von Halem Verlag, 2017