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1. Introduction

The advance of globalization and especially the demographic decline have been significant drivers for change on the Japanese labour market since the turn of the century. The rapid aging of the population and low birth rates jeopardizing the sustainable economic growth and social security systems have been constantly increasing the need for foreign workers (Akashi, 2014). The unemployment rate has fallen low and “81% of Japanese companies say it’s difficult to find new employees” (Haghirian, 2022). On the micro level, companies have also felt a need to hire more international staff and, reportedly, a small trend of increasing employee diversity has emerged (Conrad and Meyer-Ohle, 2019a, 2019b).

Even though Japan is often perceived as a country with restricted immigration, its policymakers have been increasingly trying to take part in the global competition for talent since the late 1980s. As the sociologist Oishi (2021, 2014, 2012) summarizes in her work, Japanese immigration policies have been quite lenient towards highly skilled workers for several decades, and since 2018 Japan has also opened its doors to unskilled migration as well. In comparison to other industrialized countries with similar economies, Japanese policymakers have not imposed restrictive mechanisms like numerical quotas, occupational restrictions or labour market tests. Nevertheless, migration to Japan has remained small. If we look at the average migration in the period 2012-2020 as a percentage of the total population, we can see that the migration to Japan is roughly 3 times smaller than that to the US, 4 times smaller than that to France, 5 times smaller than that to the UK and 8 times smaller than that to Germany (OECD, 2022). Oishi concludes that in Japan’s case the immigration policy itself is not the limiting factor, yet its success is allegedly impeded by corporate structures, business practices and overall integration policies (Oishi, 2014, 2012).

Taking Oishi’s suggestions, the main goal of this thesis is to build further on this research and look for some of the impediments to the needed migration, pertaining to economic actors’ business practices. Japanese companies’ ability to actively attract international talent hinges first and foremost on their employer branding and recruitment activities. Therefore, this master’s thesis focuses on the information, which companies put online in job advertisements. Using text mining and quantitative content analysis, I have explored the differences between German and Japanese job advertisements, in order to contribute towards answering the broader question: “Why does Japan attract a disproportionately small amount of international talent?”.

As a first step in this thesis, I give a brief overview of the literature that forms the backbone of this study, starting with Michael Spence's Job Market Signaling Theory (1973). I briefly discuss the information asymmetry on the labour market and focus on the need for employers to send signals. This need has led to the development of employer branding, as coined by Ambler and Barrow (1996). The subsequent research provides frameworks for classifying and better understanding the different signals employers send to potential employees. In conjunction to using these classifications, I have employed the text mining and statistical methods described in chapter 3, in order to produce the results which are visualised and presented in chapter 4.

2. Theoretical Background

2.1. Signalling Theory

2.1.1. Definition and Basics of Signalling

In 1973 the economist and now Nobel laureate Michael Spence developed a model that he called job market signalling. Acknowledging the information asymmetry that exists between employers and (potential) employees, he shows how signalling is used to reduce this asymmetry and consequently uncertainty on the labour market (Spence, 1973).

For his model he assumes that employees belong to one of two groups with regard to their performance capabilities – one with a higher level of productivity than the other. Which group any one person belongs to is unknown to the employer. In fact, an employer cannot know an employee's productive capabilities both before and for a significant amount of time after the start of the employment (Spence, 1973). So far this premise mimics that of George Akerlof's (1970) "Market for Lemons" and has the same implication – a problem of adverse selection. If the employer cannot distinguish between more and less productive employees, they can only offer the same compensation to all, which would be based on some average productivity that the employer could estimate. However, this compensation would be too low for the more productive employees, hence they will not agree to it and only the less productive people would be hired (Akerlof, 1970; Spence, 2002, 1973).

Spence (1973) illustrates a solution for these problems of information asymmetry and adverse selection in the use of observable personal attributes – indices and signals. He defines indices as those unalterable attributes of an individual (e.g. age), whereas signals

are subject to the individual's manipulation. These observable attributes are used by the employer to estimate expected productivity and to determine the offered compensation. A prime example for a signal would be education. Spence (1973) assumes that attaining a certain level of education would incur different costs for people of the two different productivity groups. Attaining a specific signal, e.g. education, would cost a less productive person more (money, time, energy etc.) than it would cost a more productive person. That is to say there is a negative correlation between signalling costs and productivity. By making use of this relationship, the employer can find an optimal level of education that separates more productive from less productive individuals. Consequently, individuals whose education level is a signal for higher productivity will be offered a higher compensation. This compensation would be such that a highly productive individual, who receives this higher compensation, would subtract their signalling costs and end up with a positive profit. However, a less productive individual with higher signalling costs would not be able to make a profit. Thus, the employer's decision to offer different levels of compensation based on the signal of education would affect individuals' behaviour in both productivity groups differently. The more productive individuals would invest in attaining the signal of education, whereas less productive individuals would rather not invest, receive the lower compensation and still make some profit. This way a more accurate separation of both groups can be achieved and the problem of adverse selection is avoided (Spence, 2002, 1973).

2.1.2. Further Premises of Signalling Theory

After its initial publication, signalling theory's popularity grew and it has been used for cases in a wide range of disciplines – from management to anthropology and even zoology (Connelly et al., 2011). Connelly et al. (2011) extensively review its use in the domains of strategic management, entrepreneurship and human resource management, in order to synthesize it in a more general manner. They come up with the following key concepts that are part of any signalling situation:

Signaller: In a situation with information asymmetry, the signaller is the actor who is an insider. As an insider, they have access to information (about an individual, product, organisation etc.) that an outsider does not have. This information may be positive or negative, but in either case it regards some underlying quality. By possessing this private information, the signaller is the privileged party in the given situation, i.e. the information

asymmetry works in favour of the signaller. This privilege stems from the signaller's ability to be dishonest. Therefore, a signaller has the attribute *signal honesty*, which is chosen relatively freely, such that it benefits the signaller. By definition, the level of signal honesty represents the extent to which the signaller accurately reveals through the signal their private information (Connelly et al., 2011).

Signal: A signal is usually an action that reveals some private information of the signaller. Even though signalling theory usually focuses on the deliberate communication of positive information, researchers have shown that signallers may also unintentionally send signals that reveal negative information. Regardless of the signaller's intent, a signal has three main characteristics that determine its effectiveness. The first is *signal observability*, which refers to the extent to which the signal is noticeable by outsiders (Connelly et al., 2011). The second is *signal costs*, which is identical to the signalling costs in Spence's (1973) early model. As described above, the signal costs are based on the notion that some signallers are better suited than others to absorb these costs. The signal costs determine the signal's effectiveness, because they have an effect on the signaller's honesty. If the costs of a signal are structured properly, false signals will not be profitable, thus the signaller will have no incentive to be dishonest (Connelly et al., 2011). The third characteristic is called *signal fit* and it refers to the correlation between the signal and the actual quality, which is unobservable for outsiders. This means that a signal may be inaccurate not only due to the signaller's dishonesty, but also due to the poor fit of the signal itself (Connelly et al., 2011).

Signal Reliability: Signal reliability is defined as the combination of honesty and fit, whereby honesty is a characteristic of the signaller and fit is a characteristic of the signal. It is important to note that a signal's reliability, i.e. credibility, is determined by two characteristics that are under the control of different actors (Connelly et al., 2011).

Receiver: The receivers are the outsiders mentioned in the definitions above, those who lack some information and would like to have it. The signaller wants to reveal private information to the receiver, in order to benefit from an action by the receiver that the receiver would not have otherwise taken. Given correct information, the receiver also stands to gain, however signallers and receivers have partially conflicting interests, which is why a successful deceit benefits the signaller at the expense of the receiver. The receiver has two characteristics that affect signalling effectiveness. *Receiver attention* is the extent

to which a receiver actively looks for signals in the environment. Once a signal is spotted, it is subject to *receiver interpretation*. Receiver interpretation is the process of translating the signal into perceived meaning, which is, of course, subjective. How signals are interpreted and how they are weighted is up to the receiver, which is why it is important to also consider the receiver's perspective (Connelly et al., 2011).

Feedback: Connelly et al. (2011) point out that a good number of studies have shown the importance of receivers sending information back to signallers. Especially in cases with iterative or sequential bargaining, receiver's feedback serves signallers to improve the reliability of their future signals. Receivers' feedback is seen as *countersignals* that follow the same logic as the signaller's signals, however they reveal information about the receiver's attention and interpretation (Connelly et al., 2011).

Signalling Environment: The environment in which signalling takes place may also have a significant effect on the effectiveness of signals. Environmental *distortion* can occur due to the channel of signal communication, or due to some characteristics of the signallers' and receivers' populations. If a signal is propagated through a medium (e.g. press release), that medium can potentially reduce the observability of the signal and cause a distortion to different extents. In addition, receivers look not only to the signal, but also to other receivers (their peers). Particularly those, who are uncertain about how to interpret the signal, may base their decision on their peers' opinion, which can lead to a bandwagon effect. Not only the population of receivers, but also that of signallers may bring forth distortions. A higher percentage of honest signallers will increase signal reliability, whereas a higher percentage of dishonest ones would naturally decrease signal reliability (Connelly et al., 2011).

2.2. Employer Branding

In this chapter I give a brief overview of what employer branding is, how it overlaps with signalling theory and I present the employer branding dimensions framework that is used for the analysis in chapter 4 (p. 23).

2.2.1. Definition of Employer Brand

The term "employer brand" was coined by Ambler and Barrow (1996) and defined as "the package of functional, economic, and psychological benefits provided by employment, and identified with the employing company" (Ambler and Barrow, 1996, p. 3). The types of

benefits that the employer brand provides employees are similar to those that a traditional (product) brand provides to customers. In an employer brand, however, the functional benefits may consist of learning opportunities and/or practical experiences; the economic benefits are tangible or monetary rewards; and psychological benefits are things such as a sense of belonging, direction, and purpose (Ambler and Barrow, 1996).

Other authors also talk about a “corporate identity”, which is described as the “personality of a company” (Krüger, 2012, p. 326). It includes the corporate culture – values, traditions, know-how, practices, as well as corporate policy and in particular the attitude of managers and employees towards their company (Krüger, 2012). In the literature one would also find terms like “corporate image”, “employer image” etc., which can be defined as the collection of temporary mental images of specific aspects of a corporation as an employer as held by various stakeholders (Highhouse et al., 2009).

In order to clarify the distinctions between corporate identity, image and employer brand, Lievens and Slaughter (2016) review a wide range of theory and research related to such concepts. They conclude that the two distinct concepts of image and identity are both considered part of the employer brand:

The external employer brand can then be mapped to an organization’s employer image (i.e., an outsider’s mental representations of attributes related to an organization as an employer), whereas the internal employer brand (i.e., an insider’s mental representations of attributes related to an organization as an employer) corresponds to an organization’s identity. External employer branding is then considered to be a synonym for employer image management. We equate the term internal employer branding with identity management (Lievens and Slaughter, 2016, p. 410).

The employer brand is therefore encompassing both outsiders’ and insiders’ mental representations of an employer’s attributes. The equation of external employer brand to employer image and that of internal employer brand to employer identity, as described by Lievens and Slaughter (2016), will be used throughout this thesis.

2.2.2. Definition and Basics of Employer Branding

Employer branding describes the strategic process of building and implementing the employer brand. Stotz and Wedel-Klein (2014) define employer branding as the part of strategic human capital management in which the special aspects of the company as an employer are developed, operationally implemented and communicated both internally and externally. Backhaus and Tikoo (2004) offer a similar definition, stating that “employer

branding represents a firm's efforts to promote, both within and outside the firm, a clear view of what makes it different and desirable as an employer" (Backhaus and Tikoo, 2004, p. 501). The underlying idea behind employer branding is that investing well in human resources may improve a company's success since they provide value to the organisation. Employer branding creates associations that influence how potential workers perceive an employer (their employer image), which in turn influences how appealing an organisation is to them. In addition, employer branding has an effect on organisational culture and identity, which in turn promotes loyalty (Backhaus and Tikoo, 2004).

The activities that make up employer branding can be seen as marketing principles applied to the domain of human resources management, where the goal is recruitment and retention of personnel (Edwards, 2010; Theurer et al., 2018). Current and potential employees form the target group, to whom a unique employment experience is being promoted. An essential employer branding activity is identifying this unique employment experience, which can be seen as the sum of all tangible and intangible benefits that a company offers to its employees (Edwards, 2010). This, of course, is no different than the "package of functional, economic, and psychological benefits", mentioned in the original employer brand definition by Ambler and Barrow (1996). Due to its similarity to the unique selling proposition from the field of marketing, this concept is also called "employer value proposition" or EVP (Biswas and Suar, 2016; Theurer et al., 2018).

Backhaus and Tikoo (2004) describe the process of employer branding in three steps, starting with the EVP. A company first develops the EVP that will be represented by the brand. Managers have to construct a vision of the unique value their firm gives employees by drawing on knowledge about the organization's culture, management style, characteristics of present employees, current employment image, and impressions of product or service quality. The EVP outlines the key message that is communicated by the brand and is meant to be an accurate depiction of what the company gives to its employees. Then, the company markets the EVP to its target group of potential employees, recruiting agencies etc. Even though the main goal of external marketing of the employer brand is to attract the target group, it also supports and enhances the corporate or product brands. The employer brand must be consistent with the company's other branding initiatives in order to be effective. The third and final step of employer branding is the internal marketing of the employer brand. It should keep the promise made to recruits and shore it up as a part of the organisational culture. The objective is to create a workforce that is dedicated to the firm's set of values and organisational goals (Backhaus and Tikoo, 2004).

Similarly to Backhaus and Tikoo (2004), Stotz and Wedel-Klein (2014) distinguish between internal and external employer branding. The internal employer branding targets current employees and aims to create an employment experience in line with the brand, i.e. it develops the employer's quality as such. Internal employer branding measures encompass all HR products and processes from the moment an employee joins the company through to their departure. An example would be employee management, including management style and management development, the design of the working environment and internal communication. Providing spaces for employee communication and structured employee appraisal interviews is also seen as a part of the internal employer branding activities (Stotz and Wedel-Klein, 2014).

The external employer branding mainly targets potential employees, but also the public at large as a means to improve its reputation. External employer branding measures include networking, applicant management and personnel marketing as a means of communication to the outside of a company (Stotz and Wedel-Klein, 2014).

2.2.3. The Need for Employer Branding

Employer branding has become a hot topic in management since it was introduced by Ambler and Barrow (1996). A company's human capital is considered a primary competitive enabler by many and attracting and retaining high-quality employees is essential to a business's success. To achieve this, companies act as competitors on the labour market, who need to aim for a high level of attractiveness and differentiate themselves in order to be successful (Biswas and Suar, 2016; Brusch et al., 2018; Edwards, 2010; Elving et al., 2013). In their cross-country and cross-industry study, Hochegger and Terlutter (2012) find that employer branding is especially crucial when a firm is growing and its development necessitates the hiring of a large number of new employees. According to the company representatives polled, employer branding strategies help to promote the firm as an attractive employer on different labour markets, so that the quality of employees does not degrade as a result of the number of new hires. Especially in cases where a company expands internationally, employer branding helps to position the employer advantageously in those countries where their products are not as well-known as in the country of origin (Hochegger and Terlutter, 2012).

Since labour markets can be highly competitive, businesses suffer from not being perceived as the most appealing offer that the 'best' employees would choose. A differentiation strategy based on employer branding is thus extremely important, not only

for large and medium-sized businesses, but also for smaller businesses (Hochegger and Terlutter, 2012). This high level of competition on the labour market is seen as one of the primary challenges for employer branding strategists and is commonly dubbed the ‘war for talent’ (Biswas and Suar, 2016; Brusch et al., 2018; Collins and Kanar, 2013; Elving et al., 2013). This war for talent is being exacerbated by economical and socio-demographic changes. The growing global economy increases the need for workers, whereas low birth rates and the ageing societies of developed countries reduces the supply (Collins and Kanar, 2013). Another contributor to this problem could be found in particular professions. If, due to some economic or political reasons, specialists in a field struggle to find employment over a larger period of time, their profession loses its appeal. Consequently, less people acquire the necessary education and qualifications. Should the situation change and companies suddenly find themselves needing such specialists, they will be met with a severe shortage problem (Brusch et al., 2018).

2.2.4. Dimensions of Employer Branding

Having a successful employer brand heavily hinges on the EVP, as described above. Therefore, a lot of employer-branding-related analysis focuses on specific EVPs. Ambler and Barrow (1996) already distinguish between functional, economic, and psychological benefits or value propositions, however more recent research by Dabirian et al. (2017) has provided a better, more detailed framework for analysing the different aspects of the EVP. In addition to it, I will be also referring to the instrumental-symbolic framework as a further means of categorisation, following the example of Lievens and Highhouse (2003).

The instrumental-symbolic framework was developed in the field of product marketing, however Lievens and Highhouse (2003) show how it can be applied to employer branding. The authors argue that potential employees’ attraction to an organization is explained on the basis of not only job and organizational factors, but also of inferred symbolic meanings. The employer brand, just like any brand, conveys both instrumental and symbolic attributes, and it is the symbolic attributes that are most relevant for differentiation, considering that the instrumental differences between brands are often small (Lievens and Highhouse, 2003).

Instrumental attributes of an organization or a job are objective, factual characteristics that are utilitarian or functional in nature, whereas the symbolic attributes are subjective, intangible characteristics (Lievens and Highhouse, 2003). As a part of an EVP, examples of instrumental value propositions would include organizational structure,

remuneration, working hours, overtime, work location, training programs etc. (Celani and Singh, 2011; Highhouse et al., 2007; Lievens and Highhouse, 2003). As symbolic value propositions would be considered corporate culture, work climate, opportunities for personal development, perceived innovativeness and competence, corporate social responsibility etc. (Backes-Gellner and Tuor, 2010; Boswell et al., 2003; Celani and Singh, 2011; Highhouse et al., 2007).

Regardless of this instrumental-symbolic dichotomy, Dabirian et al. (2017) have analysed thousands of Glassdoor reviews, in order to identify the main value propositions that current, former and potential employees consider when evaluating employers. They have provided the following seven value propositions:

Social Value: The social value of work encompasses the various social elements of the workplace and is predominantly emotional. People usually take into consideration the enjoyment they derive from a positive work environment, congenial co-workers who share their values, a collaborative approach to problem solving, and an organisational culture that prioritises its employees (Dabirian et al., 2017).

Interest Value: The interest value depends on whether the employer provides work tasks that are considered interesting and reasonably challenging. Interest is assessed based on the extent to which the work necessitates innovative methods and creative thinking in order to execute challenging but doable tasks (Dabirian et al., 2017).

Application Value: The application value refers to the extent to which the work is considered meaningful. Employees want to apply their expertise and abilities in a considerate and meaningful way.

Development Value: The development value is measured by the extent to which a company values its workers' contributions and offers chances for personal growth, professional development and career advancement (Dabirian et al., 2017).

Economic Value: The economic value relates to economic issues tied to compensation. This includes not only employees' pay, but also all other benefits such as healthcare, pension contributions, job security, and other quantifiable perks (Dabirian et al., 2017).

Management Value: The management value is representative of the perceived quality of management. People are looking for good, honest leaders who inspire, trust, protect, enable and respect them, because both excellent and terrible managers have a significant impact on employees. Both really good and bad experiences can impact employees' free time and relationships even outside the workplace (Dabirian et al., 2017).

Work-Life Balance: Work-life balance refers to the flexibility of the work arrangements. People usually want to identify with the organisation as well as their identity as more than simply employees. Having a healthy work-life balance enables people to manage all of their identities (such as employee, parent, friend, traveller etc.) in harmony and without stress (Dabirian et al., 2017).

2.2.5. Applying Signalling Theory to Employer Branding

Looking at the basic premises of signalling theory and employer branding, one can clearly see an overlap. In his initial work on signalling theory, Spence (1973) writes in a footnote:

Just as employers have less than perfect information about applicants, so also will applicants be imperfectly informed about the qualities of jobs and work environments (Spence, 1973, p. 356).

Even though Spence (1973) focuses on the uncertainty of employers, his signalling theory is fully applicable to the reverse situation where employers are in the role of signallers and the potential employees want for information. The resulting signalling 'game' could be seen as (a part of) employer branding, as expressed in this neat summary:

One of the main purposes of an employer brand is to create an image of the organization as a good working place hence it has emerged as a concept for differentiating employers from competitors by providing distinct employment experiences. To do this, employers must clarify the unique aspects of their offerings by sending signals to their stakeholders in order to appear different than competitors and yet remain socially legitimate in the eyes of their stakeholders (Taj, 2016).

This perspective of signalling theory considers that employees face a risk when choosing their jobs, because it might cost them a lot if they accept an offer without sufficient knowledge about non-observable attributes, i.e. the general quality of the workplace. They may have rejected other job offers and invested in firm-specific human capital, such as moving house, before they can reliably learn about the real quality of the company, making

it difficult or expensive to change their minds about the initial employment choice. Therefore, employees would look for reliable ways to lower their risk (Backes-Gellner and Tuor, 2010). Employers aim to provide this risk reduction through their external employer branding activities. There has been a good amount of research dealing with how employers use employer branding to send signals to potential employees, in order to reveal private information about their quality as an employer and recruit the right people (Backes-Gellner and Tuor, 2010; Celani and Singh, 2011; Ehrhart and Ziegert, 2005; Lievens and Slaughter, 2016; Moore and Khan, 2020; Taj, 2016; Tanwar and Prasad, 2016).

Lievens and Slaughter (2016) summarise and review the antecedents of the employer image. The external employer branding is mainly driven by an organisation's observable actions and characteristics; by pieces of information coming directly from the organisation itself on its website or in advertisements, as well as information shared in the media or by word of mouth; and also by the recruiters themselves. All these can be seen as signals in the sense of signalling theory (Lievens and Slaughter, 2016). Similarly, Tanwar and Prasad (2016) conduct a literature review on the antecedents of employer branding and focus on signals such as the work environment, culture, compensation, work-life balance, corporate social responsibility, training and development opportunities. Celani's and Singh's (2011) research revolves around the organisation's recruitment activities. The authors argue how signals sent by the recruiting organisation can be categorized in two types of recruitment sources – individual (e.g. interviews and word-of-mouth endorsements) and organisational-level sources (e.g. corporate and recruitment advertising). Both types of signals have an influence on an individual level – applicant's attraction to the organization, job pursuit and offer acceptance intentions; as well as on an organisational level – quantity and quality of the applicant pool (Celani and Singh, 2011).

When examining how signals sent through employer branding activities translate to applicant attraction, Ehrhart and Ziegert (2005) highlight the difference between the actual and the perceived environment of an organization. As mentioned earlier, the receiver's interpretation plays an important role, however, since it is highly subjective, virtually any piece of information or observable characteristic that is available to the receiver can serve as a signal (Ehrhart and Ziegert, 2005). Therefore, the aforementioned seven value propositions, as defined by Dabirian et al. (2017), were used as broader categories for signals, in order to guide the methods of analysis described in the following chapter.

3. Methodology

In order to achieve the goal of this thesis, I have analysed texts published by Japanese and German companies in the years 2022 and 2023. The analysis was done using KH Coder for text mining, as well as Python and R for data management and statistics. KH Coder is an open source software for computer assisted quantitative content analysis, developed and distributed by Koichi Higuchi, a professor of social sciences at Ritsumeikan University. The main reason for choosing this software are its integrated natural language processing capabilities for both Japanese and German texts (Higuchi, 2017, 2016). In this chapter, I first describe that data that is the object of this study and then give an overview of the methods used for generating and evaluating the results.

3.1. Data Description

For the purposes of this research, I have collected a sample of publicly available Japanese and German job advertisements via web scraping. In the following I describe the data in more detail.

3.1.1. Japanese Data

The Japanese data is collected from CFN (CareerForum.Net) – a relatively popular recruitment website which describes itself as a “Career Site for Japanese-English Bilingual Job Seekers”. It is a Japanese online platform that specializes in connecting Japanese companies with international talent. I have specifically chosen this website in order to get a representative sample of companies that are looking for international talent. The website hosts company profiles and job advertisements that go in tandem with on-site job fairs held in different parts of the world. During the time leading to and during these events, the participating companies create a company profile page on the website and also post job advertisements and receive applications. After going through the initial screening process, it is common to hold a (final) interview on-site during the job fair. I will be analysing the information that participating companies have provided both on their profile pages and in job advertisements during the biggest two of these events – one that took place in Tokyo and one in Boston.

Table 1 CFN Participating Companies

Job Fair Location	Number of Companies	Number of Job Ads
Boston	145	495
Tokyo	137	284
Total	282	779

As can be seen in Table 1, during both job fairs there was a total of 282 participating companies that posted a total of 779 job advertisement. Each company has created a company profile page and has posted at least one job ad. The information in both is somewhat structured as it seems that all companies are given templates to fill out. The templates for both profile pages and job advertisements consist of pre-defined sections, where the companies freely write a couple paragraphs of text, and also of tables that companies fill in with shorter or numerical information. They can seemingly choose to omit any information and the pre-defined field will simply not appear on their page. In Table 2 and Table 3 an overview of these templates is provided. In addition, textual sections that refer to a similar topic based on their titles are grouped together for the sake of the analysis as described in the next chapter.

Table 2 CFN Company Profile Page Template

Section/Item Title (JP)	Section/Item Title (EN)	Occurrences	Corpus group
職務内容	Job Description	779 (100%)	1. Job Description
採用担当者からのメッセージ	Message from Hiring Manager	779 (100%)	2. Message from Hiring Manager
勤務時間	Working Hours & Weekly Schedule	779 (100%)	3. Compensation and working hours
給与	Salary	779 (100%)	3. Compensation and working hours
休日・休暇	Holidays & Vacation	779 (100%)	3. Compensation and working hours

Table 3 CFN Job Advertisement Template

Section/Item Title (JP)	Section/Item Title (EN)	Occurrences	Corpus group
PR メッセージ	PR Message	274 (97%)	1. Company PR
ビジョン/ミッション	Vision / Mission	111 (39%)	2. About us
企業理念	Corporate Philosophy	98 (35%)	2. About us

私たちの魅力	Our Appeal	282 (100%)	2. About us
組織の特徴	Our Characteristic Qualities	150 (53%)	2. About us
事業・商品の特徴	Service / Product Features	75 (27%)	3. Our Business and Products
事業内容	Business Description	282 (100%)	3. Our Business and Products
事業戦略	Business Strategy	58 (21%)	3. Our Business and Products
私たちの仕事	What We Do	243 (86%)	3. Our Business and Products
人事・人材開発制度	HRD System	257 (91%)	4. HRD
働く仲間	Future Co-Workers	113 (40%)	5. Work environment
オフィス紹介	Our Office	95 (34%)	5. Work environment
働く環境	Work Environment	282 (100%)	5. Work environment
受動喫煙対策	Countermeasures against Passive Smoking	2 (1%)	5. Work environment
社風	Corporate Culture	127 (45%)	6. Culture and Work Climate
職場の雰囲気	Work Climate	72 (26%)	6. Culture and Work Climate

In order to identify the language of the company profile pages and the job advertisements, I used spaCy, a natural language processing library in Python. More specifically, I used the spacy_language_detection extension with spaCy 3.0, which assigns a probability score for each (i.e. profile page or job advertisement) based on a machine learning algorithm. In this case, anything with a score of 0.9 or above is considered to be fully written in that language, whereas everything else is classified as mixed. The results of this analysis are summarized in Figure 1. We can see that the Japanese language dominated during both job fairs, however there was noticeably more English for the job fair in Boston. Texts that were written in multiple languages, and therefore classified as mixed, were a very small percentage overall. The vast majority of those were written in Japanese and English.

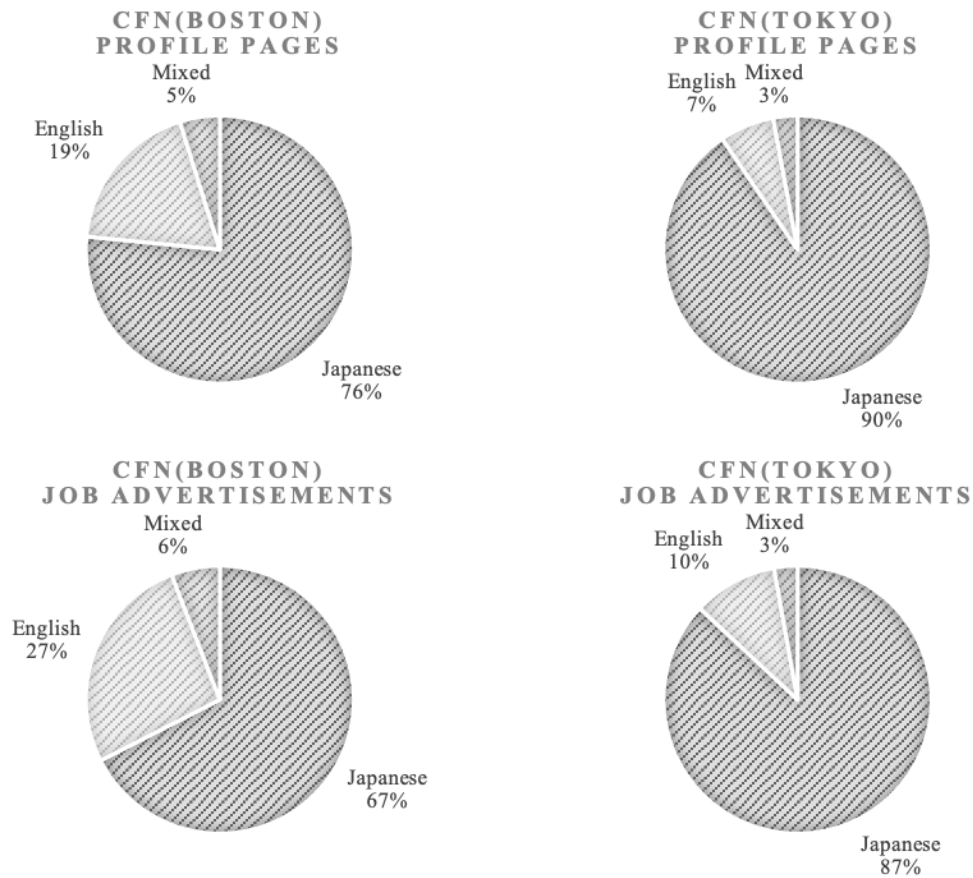


Figure 1 Language of CFN Texts

Within the confines of this thesis, the companies that took part in the aforementioned job fairs are classified as Japanese in the sense that they are either headquartered in Japan or have a significant presence on the Japanese market, which is why they would require Japanese-English bilingual talent. Figure 2 shows that the majority of the companies are such that have their headquarters in Japan.

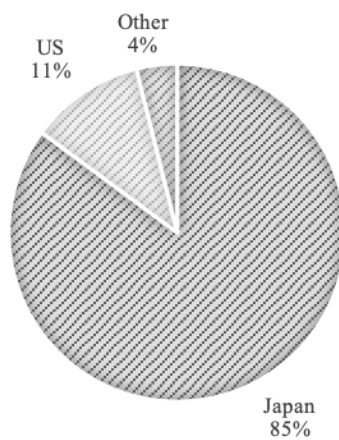


Figure 2 HQ Locations of CFN Participating Companies

Aside from the companies' headquarters, the work location for most job advertisements (86%) was designated as Japan, as can be seen in Figure 3.

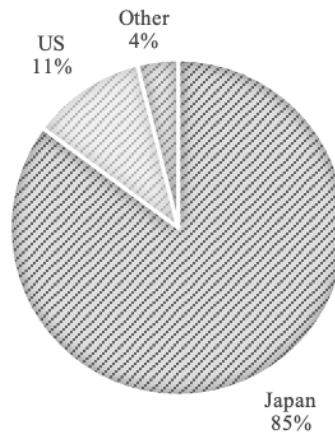


Figure 3 Work Locations in CFN Job Advertisements

In 4% of the cases there was either no work location given or more commonly a number of different work locations were listed, which also include Japan.

As a final means of classifying the companies, I have used industry. All companies' given field of business descriptions were manually sorted according to the Japan Standard Industrial Classification, which is used by the Statistics Bureau of Japan (Statistics Bureau of Japan, 2019). As a result, we can see in Figure 4 that the most common industries represented were manufacturing; scientific research, professional and technical services (i.e. various consultancies and BPOs); information and communications (i.e. IT, telecommunications and internet-based services); finance and insurance; wholesale and retail; services, not elsewhere classified (i.e. recruitment and dispatch work agencies).

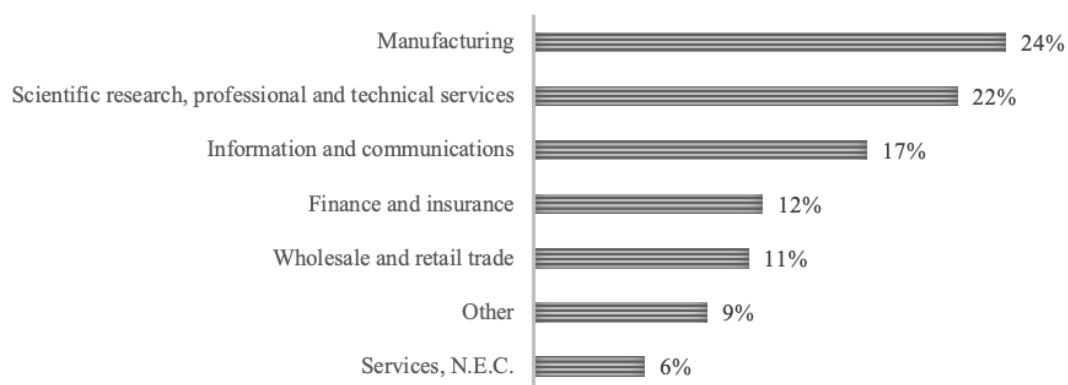


Figure 4 Industry Classification of CFN Participating Companies

3.1.2. German Data

In order to get a point of reference for the Japanese data, a sample of German job advertisements and company profiles were collected from XING. XING is a recruitment-focused social networking website based in Germany. Even though it is most popular in the DACH region, it is used throughout many other European countries as well, which is why the sampled job advertisements were filtered by country – Germany. The sample consists of 1434 job advertisements from a total of 924 companies, as can be seen in Table 4.

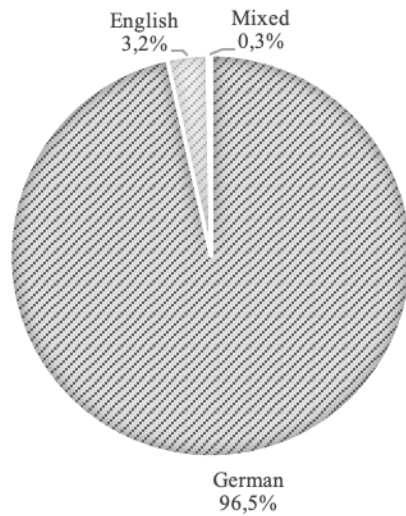
Table 4 DE Companies

Number of Companies	Number of Profiles	Number of Job Ads
924	486	1434

The reason why the number of company profiles is only about half of the number of companies, while all Japanese companies on CFN have a profile page, lies in the structure of the respective job boards. On CFN one gets a list of companies with the job advertisements being secondary, linked pages, whereas on XING it is the other way around. XING’s job board is a list of job advertisements and the company profile pages are linked in the job advertisements themselves, meaning that job seekers may not even (need to) go there, which is probably why some companies have decided to leave the “About us” on the company profile page blank. Another difference to the Japanese data is that the German texts cannot be separated in sections by simple coding logic like the Japanese texts, even when they, in fact, all follow a similar structure.

Regarding the languages used in the data, the same method of analysis using SpaCy was used to determine the results in Figure 5. We see that, similarly to the Japanese data, the majority of the texts were written in the local language and only a small amount in English or both.

DE JOB ADVERTISEMENTS



DE COMPANY PROFILE PAGES

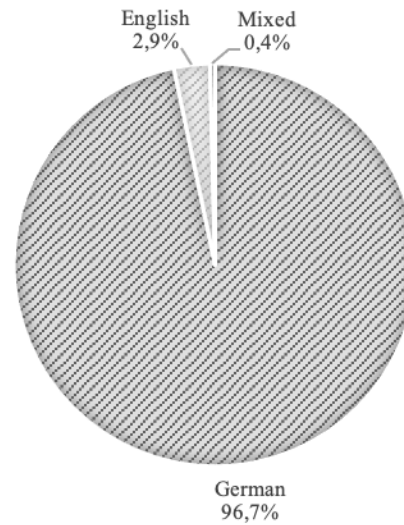


Figure 5 Language of XING Texts

Analogous to the Japanese data, the companies were classified by industry. In order to allow for easy comparison, all German companies' given industry descriptions were also manually sorted according to the Japan Standard Industrial Classification (Statistics Bureau of Japan, 2019). The results are summarized in Figure 6. The most common industry is services, not elsewhere classified (i.e. recruitment and dispatch work agencies), which is not entirely accurate. The reason for this is that the industry classification on XING seems to be tied to the company posting the advertisement, so when recruitment agencies make posts on behalf of their clients, it is the agencies' industry that is given. Closely following are companies in manufacturing; information and communications (i.e. IT, telecommunications and internet-based services); scientific research, professional and technical services (i.e. various consultancies and BPOs).

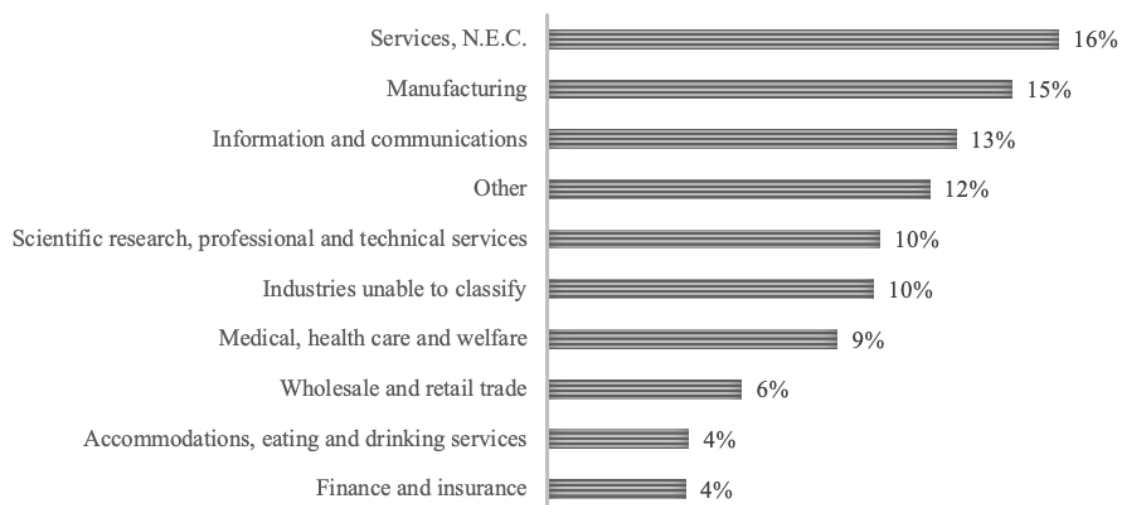


Figure 6 Industry Classification of DE Companies

3.2. Quantitative Content Analysis

The research method of this study can be generally described as quantitative content analysis. I have followed the two-step approach as introduced by the creator of KH Coder (Higuchi, 2017, 2016). The first step consists of automatically extracting words from the raw data and statistically analysing them to explore the features of the data, while avoiding as much personal bias as possible. In the second step, then, I specified coding rules such as “if keywords combination is present, then this is an instance of concept A”, and extract concepts from the data, which are then statistically analysed. In the context of this thesis, the concepts I have extracted and analysed are equated to employer value propositions, i.e. signals from employers to potential employees.

3.2.1. Data Pre-Processing

After gathering the data and formatting it in accordance to the requirements of KH Coder, the first step is to have the software automatically extract all keywords by employing lemmatisation and part-of-speech-tagging. In the case of the German texts, this is done using an implementation of the FreeLing library. The lemmatisation consists of transforming conjugated verbs or plural forms of nouns etc. into their base form (lemma). For example, ‘kaufen’, ‘kaufte’, ‘gekauft’ will all be extracted and counted as ‘kaufen’. In addition to this transformation, the software recognises and notes the part of speech that any given word is, so that, among other reasons, words that carry little meaning on their own, like auxiliary verbs (e.g. ‘sein’), can be excluded from the analysis.

The Japanese texts were processed in an identical way using the ChaSen library. However, since there are no spaces between words in the Japanese language, an additional step had to be taken. Similarly to German, splicing words together to create compound words is a common occurrence in the Japanese language. However, without having the whitespace as a marker for the start and end of a word, a machine cannot accurately extract compound words, so instead it splits them down to their smallest possible parts. To circumvent this issue, KH Coder has incorporated TermExtract, an automatic keyword extraction system published by the University of Tokyo. It extracts clusters of words and scores them in descending order from most likely to be a compound word. Whether or not it is a valid compound word, however, has to be determined by a human reviewer before proceeding with the lemmatisation and part-of-speech-tagging.

As described above, the data consists of German and Japanese profile pages and job advertisements, each being its separate body of text. However, since the Japanese texts

follow a rather strict template, which was hard coded in html on the CFN website, a further separation in smaller corpus groups was possible. Therefore, the Japanese texts were split as shown in Table 2 and Table 3, in order to ease the following data exploration step.

3.2.2. Co-Occurrence Network, Word Association and Coding

Following the data preparation and pre-processing, I made use of the co-occurrence analysis and word association functionalities of KH Coder, in order to explore the text data and create coding rules.

The co-occurrence analysis, sometimes also called contingency analysis, has been used successfully since the early stages of content analysis. It is based on the idea that greater-than-chance co-occurrences of items in a message are indicative of associations in the thinking of the source (Osgood, 1959). However, later applications of this method have been made on texts from multiple sources, like newspaper articles, in order to read out the main themes of a social discourse for example. By counting the extracted words and measuring the Jaccard distance between them, the software draws a network of frequently appearing words that tend to be used together. These co-occurrence networks visualise common patterns and phrases in the text corpus and allow the viewer to infer the prevalent messages (Higuchi, 2017, 2016). All co-occurrence network diagrams generated for this study can be found in the appendix (A.1, A.2).

Since these diagrams are limited by their size, less frequent, yet still greater-than-chance co-occurrences may be omitted. To make sure no notable patterns were overlooked, multiple co-occurrence networks of both the German and the Japanese texts were generated. When exploring the German text corpus, I started with the most frequently used words and went down the list in batches of no more than 200 words at a time, until the co-occurrences no longer made sense, as they were likely due to pure chance. In case of the Japanese texts, a similar effect was achieved by examining each corpus group separately. In addition, notable words were put through a word association search. While the co-occurrence network diagram displays only a few of the words that tend to appear close to a given word, the word association search produces a full list of closely related words. This function is very useful for discovering less frequently used synonyms, alternative phrasings and related messages.

In order to avoid misinterpreting the meaning of the words from the co-occurrence analysis due to the lack of context, the keyword in context search function was also heavily utilised. This function displays every occurrence of the word in question in the raw text as

is, with a small portion of the text on both sides, and allows for a quick readthrough and comparison of just these parts of the texts that are of interest.

By employing these methods, I was able to discover common concepts or messages in the text. Those that could be seen as signals belonging to one of the seven employer value proposition described in subchapter 2.2.4. were encoded for further analysis. By using mostly simple logic operators such as ‘and’ (&) and ‘or’ (|), I created data specific coding rules for the purpose of quantifying the appearances of common signals. These coding rules are Boolean expressions that check the presence of certain words within a sentence, in order to infer the appearance of a specific signal. These rules are data specific in the sense that they are not necessarily applicable to any text, but just to the one they were generated from. By using the aforementioned search functions, one can see which words are sufficient to conclude the appearance of a certain message. Even though other ways of expressing the same meaning may exist in a language, words that do not appear in the raw text are not included in the coding rules. Moreover, since the text data consists of job advertisements, one can safely make some assumptions about the content. For example, if the phrase ‘work-life balance’ is mentioned, it stands to reason that the statement is positive, as no employer would state in an advertisement that their workplace is lacking in work-life balance.

3.2.3. Contingency Table and Correspondence Analysis

Creating coding rules, in order to extract concepts of interest as described in Higuchi (2017), makes it possible to quantify the appearances of employers’ signals and make comparisons between the different text corpora. To this end, sentences fulfilling each coding rule’s condition were counted, the result was summarised in a contingency table and then analysed using Pearson’s chi-squared test and correspondence analysis.

First, the chi-squared test is used to determine whether there are statistically significant differences between the different text corpora. By rejecting the null hypothesis which states that the categorical variables are independent, it can be proven that the different appearance frequencies of certain signals are not by chance.

Further, correspondence analysis is used to see more precisely how the text corpora relate to these signals and to each other. Correspondence analysis is a commonly used multivariate technique for summarising tables, often employed for brand position studies. The most common visualisation of correspondence analysis is a scatterplot, which isn’t always easy to interpret. In this thesis, the text corpora are the row categories and the signals

are the column categories, which means that the relative relationships within the row categories, as well as the relative relationships between the row and column categories are of interest. In the standard scatterplot visualisation, the relationships within row categories can be easily interpreted by looking at the points' proximity. However, the relationships between row and column categories are hard to read and easily misinterpreted. In case of a scatterplot with an aspect ratio of 1 and a row principal normalisation, the relationships between rows and columns are represented by the scalar product of the vectors connecting the origin point to the two points in question. Having to consider both points' distances from the origin as well as the angle, is quite cumbersome, therefore the easier-to-read moon plot, introduced by Bock (2011), is used in this thesis. Using a row principal normalisation, the row points are plotted the same way as in the traditional scatterplot. The column points, however, are plotted equidistant from the origin, retaining the same direction relative to the origin as in the traditional scatter plot, while the information traditionally communicated by the distance of the points to the origin is mapped to the font size of the labels instead. This sacrifices the information regarding the relativities within the column categories, however it allows the viewer to interpret the relationships between row and column categories by the points' proximity, in addition to just between row categories (Bock, 2011).

4. Analysis Results

In this chapter I present the findings of the quantitative content analysis and briefly discuss their implications. I start with an overview of the signals that were extracted from the raw text, then highlight the differences found between the German and Japanese job advertisements overall and for each of the seven employer value propositions described in subchapter 2.2.4. All of the final results are included either in the following text or in the appendix, however intermediary results, such as word frequency lists and word association lists that were used for composing the coding rules, could not be included due to space constraints¹.

4.1. Coding Rules

Following the aforementioned two-step approach by Higuchi (Higuchi, 2017, 2016), I explored multiple co-occurrence networks (A.1, A.2) and used both the word association as well as the keyword in context search functions of KH Coder, in order to discover

¹ Can be provided by the author upon request.

common signals in the texts that can be categorized in the seven main employer value propositions.

For Social Value, the messages that stood out were regarding the general work climate, vague descriptions of the relationships between co-workers and general statements about diversity and inclusion. Those messages were easy to find in both the German and Japanese texts.

The signals of Interest Value were more difficult to extract. Regardless of it being highly subjective what is considered interesting, it seems logical that a job's interest value would be conveyed by a somewhat detailed description of specific tasks. However, the sampled texts are from a wide variety of industries and advertise a wide variety of jobs, which makes each job description too specific, in order to show up in the co-occurrence analysis. Therefore, only direct statements about "interesting" or "exciting" tasks were coded as a quantifiable signal.

Similarly to the Interest Value, the Application Value would also stem from the specific job description, which were too varied to be analysed by this method. Nevertheless, direct mentions of challenges and chances to apply oneself, as well as direct claims that the job is meaningful were encoded.

The Development Value of the workplace was expressed in mainly in two distinguishable ways. One was by claiming there are opportunities for personal and professional growth, career building etc. The other one was by mentioning trainings and learning opportunities.

There were ample distinguishable signals of Economic Value, most of which regarded different types of fringe benefits. Since most German job advertisements did not disclose a salary, whereas most Japanese ones did, however in tabular form, there was no meaningful way to make a comparison in that regard. Therefore, the coding rules in this category focus on the fringes in general sense that were mentioned in the texts.

The prevalent signal in the category of Management Value was saying the organisation has a flat hierarchy. In addition, there were mentions of trainings for managers, as well as direct statements regarding the quality of management.

Last but not least, multiple signals regarding Work-Life Balance were discovered. The texts contained information about different types of leave, home office and flexible working hours arrangements, among others. An overview of all coding rules that were extracted from the co-occurrence analysis can be found in Table 5. The exact codes in the text format required for KH Coder are all listed in the appendix (A.3, A.4).

Table 5 Overview of Coding Rules

*collegial communication	Counts sentences including any mention of the internal communication and exchange of ideas and opinions.
*diversity and inclusion	Counts sentences including any mention of any type of employee diversity, including personal attributes like age, gender, nationality etc.
*work climate	Counts sentences including any mention of descriptions of the workplace's work climate, work atmosphere etc.
*Social Value	Counts sentences including any of the codes above that pertain to the Social Value of a workplace.
*interesting tasks	Counts sentences including any mention of interesting, exciting or varied tasks.
*Interest Value	Counts sentences including any of the codes above that pertain to the Interest Value of a workplace.
*challenges and applicaitons	Counts sentences including any mention of challenges and opportunities to apply some skill(s).
*contributions to society/meaning	Counts sentences including any mention of contributing to society, the greater good or of a job's meaningfulness.
*Application Value	Counts sentences including any of the codes above that pertain to the Application Value of a workplace.
*professional growth	Counts sentences including any mention of career building, promotion opportunities etc.
*training	Counts sentences including any mention of trainings, further education and learning.
*Development Value	Counts sentences including any of the codes above that pertain to the Development Value of a workplace.
*bonuses and incentive pay	Counts sentences including any mention of bonuses or incentive pay.
*company housing	Counts sentences including any mention of company or corporate housing or a housing allowance.
*corporate pension/insurance	Counts sentences including any mention of company funded elective benefits like pension/insurance plans.
*other benefits (misc)	Counts sentences including any mention of miscellaneous benefits like free coffee, gym membership, gifts etc.
*overtime pay	Counts sentences including any mention of compensation for overtime work (including extra time off).

*social contributions	Counts sentences including any mention of the mandatory social contributions.
*transportation benefits	Counts sentences including any mention of a transportation fee allowance, company car / bike etc.
*Economic Value	Counts sentences including any of the codes above that pertain to the Economic Value of a workplace.
* (direct) management	Counts sentences including any direct mention of the quality of management.
*flat hierarchy	Counts sentences including any mention of a flat organization / flat hierarchy.
*management training	Counts sentences including any mention of management training programs etc.
*Management Value	Counts sentences including any of the codes above that pertain to the Management Value of a workplace.
*carer's leave	Counts sentences including any mention of a leave for the sake of taking care of a relative in need.
* (direct) work-life balance	Counts sentences including any direct mention of work-life balance.
*flexible working hours	Counts sentences including any mention of a flexible working time arrangement.
*maternity and parental leave	Counts sentences including any mention of maternity, parental/childcare leave.
*no overtime	Counts sentences including any mention of not having to work overtime.
*paid vacation	Counts sentences including any mention of paid leave.
*seasonal leave	Counts sentences including any mention of fixed paid leave at certain times of the year (additional days off, not including public holidays).
*sick leave	Counts sentences including any mention of leave due to sickness.
*special/force majeure leave	Counts sentences including any mention of additional types of leave that are granted as an incentive or in the case of unforeseen circumstances etc.
*teleworking	Counts sentences including any mention full or partial remote work, home office etc.
*Work-Life Balance	Counts sentences including any of the codes above that pertain to the Work-Life Balance Value of a workplace.

4.2. Broad Employer Value Propositions

The results of the chi-square test and the correspondence analysis are displayed in table 6 and figure 7 respectively. As mentioned earlier, the contingency table contains the total count of sentences for which the coding rule holds true. CFN_Boston and CFN_Tokyo refer to the two samples of Japanese job advertisements and DE refers to the sample of German job advertisements described in subchapter 3.1. The result of the chi-square test can be found in the last column, with its p-value expressed by an asterisk.

Table 6 Employer Value Propositions Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*Social_Value</i>	369	312	1007	1688	3.932
<i>*Interest_Value</i>	36	35	409	480	153.785**
<i>*Application_Value</i>	765	696	276	1737	1243.296**
<i>*Development_Value</i>	1359	1328	1704	4391	663.155**
<i>*Economic_Value</i>	608	524	1371	2503	6.723*
<i>*Management_Value</i>	117	132	286	535	8.734*
<i>*Work-Life-Balance</i>	1068	893	1126	3087	565.516**
<i>N of Sentences</i>	21612	18363	53625	93600	

** p < 0.05; ** p < 0.01*

Table 6 lists the coding rules that count the appearances per sentence of any of the coded signals that belong to each EVP. We can see that Social Value is the only one that does not have a statistically significant result, meaning the null hypothesis cannot be rejected and the observed differences are likely due to chance. In contrast, Economic Value and Management Value are statistically significant with a p-value smaller than 0.05, while the rest of the value propositions are statistically significant with a p-value less than 0.01. Even though these results show there notable differences between the appearance frequencies of the signals, the chi-square test does not carry any information about the nature of these differences. As already mentioned above, the correspondence analysis was conducted for this reason.

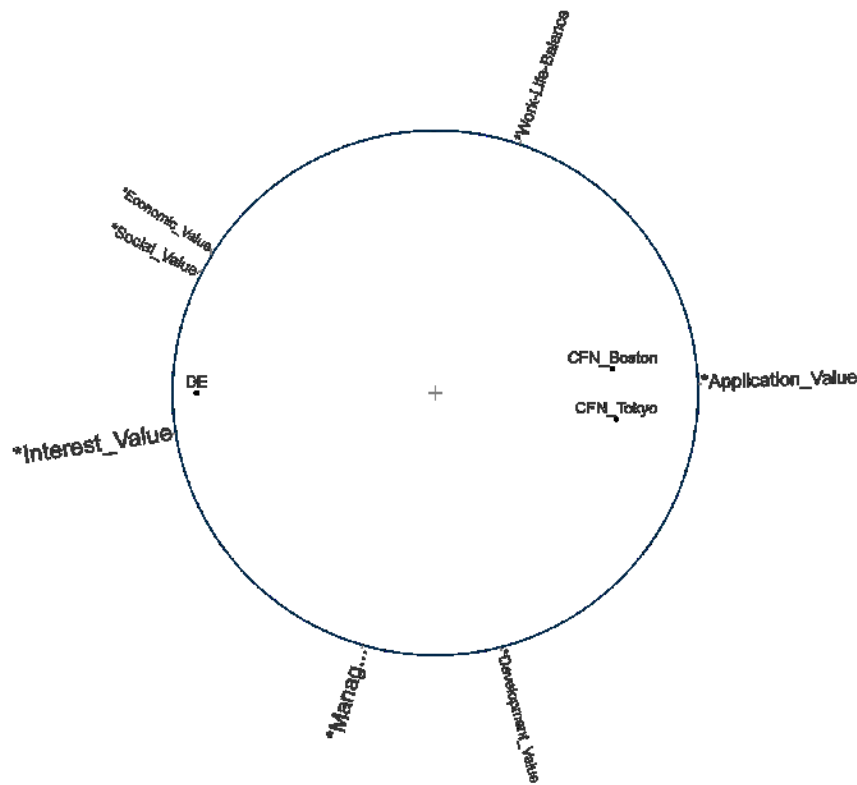


Figure 7 Correspondence Analysis Moon Plot – Employer Value Propositions

Figure 7 plots the results of the correspondence analysis conducted with the data from Contingency Table 6. The first thing to note is that the three text corpora are a good distance away from the origin, meaning they are quite distinct. Both samples of Japanese texts are relatively close to each other, which indicates high similarity, whereas the point representing the German texts is far on the other side of the origin, indicating a strong negative correlation. This pattern shows up in a lot of the following correspondence analysis plots, which indicates, on one hand, that the Japanese and German job advertisements contain a significantly different amount of the signals in question. On the other hand, it also shows that the Japanese companies use the same type of job advertisements regardless of where they are conducting their recruitment activities. It stands to reason that participating in job fairs in different parts of the world is done in order to reach people residing in those geographical locations. Therefore, a successful marketing strategy would require adjusting to the different target groups. It would not be reasonable to expect the advertisement texts meant for the Boston job fair to be similar to the German ones, solely because Germany and the US are both part of ‘the west’. However, seeing the stark difference between the Japanese and German texts, one would expect a larger dissimilarity between the Japanese texts meant for Boston and those meant for Tokyo.

Figure 7 also shows the relationships to the seven value propositions. Indicated by their position and larger font size, the strongest discriminators are Interest Value, Application Value. While the Interest Value is highly characteristic of the German texts, the Application Value is highly characteristic of both samples of Japanese texts. We see that the presence of Development Value and Work-Life Balance signals is slightly more characteristic of the Japanese texts than of the German ones, whereas the opposite is true for Economic and Management Value signals.

4.3. Social Value

Taking a closer look at the Social Value results, we can see in Table 7 that although the chi-squared result is not statistically significant for the differences in appearance frequencies of any Social Value signals, there are statistically significant differences when looking at specific signals of Social Value.

Table 7 Social Value Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*collegial_communication</i>	53	56	483	592	144.294**
<i>*diversity_and_inclusion</i>	236	178	245	659	111.873**
<i>*work_climate</i>	102	86	420	608	34.752**
<i>*Social_Value</i>	369	312	1007	1688	3.932
N of Sentences	21612	18363	53625	93600	

**p < 0.05; **p < 0.01*

From Figure 8 we can infer that sentences mentioning diversity and inclusion, age, gender, sexual orientation, nationality, culture etc. are much more characteristic for the Japanese job advertisements. Mentions of a good work climate and an environment with good and open communication amongst co-workers are moderately more characteristic of the German job advertisements.

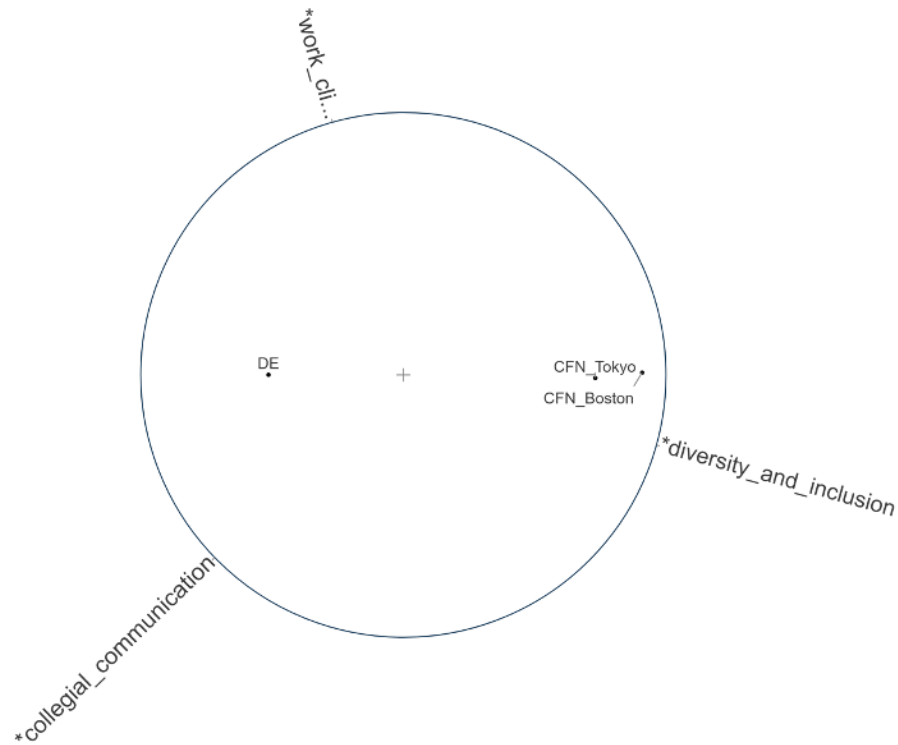


Figure 8 Correspondence Analysis Moon Plot – Social Value

4.4. Interest Value

For the Interest Value, there is only one coding rule, however the chi-square test result is statistically significant at a p-value less than 0.01, as can be seen in Table 8.

Table 8 Interest Value Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*interesting_tasks</i>	36	35	409	480	153.785**
<i>*Interest_Value</i>	36	35	409	480	153.785**
<i>N of Sentences</i>	21612	18363	53625	93600	

** p < 0.05; ** p < 0.01*

As we already saw in Figure 7, the Interest Value as measured by the mentions of interesting tasks is highly characteristic of the German texts.

4.5. Application Value

In contrast to the Interest Value, the Application Value is on the other side of Figure 7 and is far more characteristic of the Japanese job advertisements. The Application Value in this thesis is measured by two distinct signals. One consists of mentions of challenges and opportunities to apply one's skills, whereas the other is made of claims that the job is

meaningful, as well as explanations of how the job or the organisation make valuable contributions to the society. Both have a statistically significant chi-square result, as can be seen in Table 9.

Table 9 Application Value Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*challenges_and_applicaitons</i>	536	462	230	1228	756.321**
<i>*contributions_to_society/meaning</i>	244	251	47	542	536.44**
<i>*Application_Value</i>	765	696	276	1737	1243.296**
<i>N of Sentences</i>	21612	18363	53625	93600	

** $p < 0.05$; ** $p < 0.01$*

The correspondence analysis result in Figure 9 is a bit of a stand-out amongst the other results so far. We can see that **challenges and applications* is very characteristic of the German texts, whereas the code **contributions to society* is on the opposite side and thus more characteristic of the Japanese texts. However both of the Japanese text samples are closer to the origin than before, while the job advertisements for the Boston fair are very close to the origin. This positioning has several implications. First, the signals of *Application Value* were significantly more characteristic of the Japanese texts in Figure 7, however splitting these signals in two more specific signals shows that the one mentioning

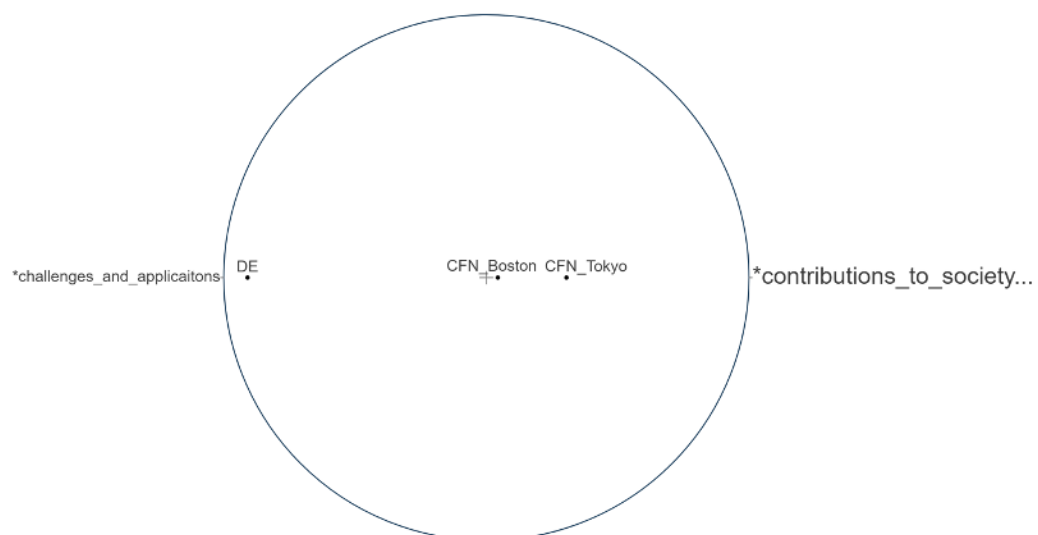


Figure 9 Correspondence Analysis Moon Plot – Application Value

challenges is significantly more characteristic of the German texts, just like the signal of interesting tasks. One could make the observation that both offers of interesting tasks, challenges and application of one's skills can be seen as individualistic, whereas the offering an opportunity to do something meaningful and contribute to society is rather collectivistic. Considering this individualistic-collectivistic dichotomy between the east and the west, one could expect the Japanese texts to lean more towards the collectivistic signal and the German ones – towards the individualistic signals. And that is true to an extent when looking at the German sample and the CFN Tokyo sample. However, the fact that the CFN Boston sample is pulled in the direction of the German sample, away from the distinctively Japanese signal (as indicated by the larger font size and proximity to the Japanese text samples) and is nearly at the origin point, strongly suggests that there is some adjustment, albeit small, towards a more 'western' employer value signalling.

4.6. Development Value

The signals of Development Value are made up of mentions of opportunities for professional and personal growth and also of offers of training programs and learning opportunities. Table 10 shows that there are statistically significant differences in the appearance frequencies of both of these signals.

Table 10 Development Value Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*professional_growth</i>	471	336	559	1366	160.243**
<i>*training</i>	931	1033	1261	3225	503.523**
<i>*Development_Value</i>	1359	1328	1704	4391	663.155**
<i>N of Sentences</i>	21612	18363	53625	93600	

** p < 0.05; ** p < 0.01*

In Figure 10 we see that the German texts are least distinct in regard to these two signals, even though the mentions of professional growth are more characteristic. Interestingly, we see a wide gap between the two Japanese samples. Signals of training offers are much more characteristic of the CFN Tokyo job advertisements, whereas professional growth is most characteristic of CFN Boston advertisements. Japanese companies focusing mainly on internal training and talent development is in line with Haghirian's (2022) report, however it is again interesting to see how the CFN Boston texts are going the other way and being closer to the German texts with regards to this value proposition.

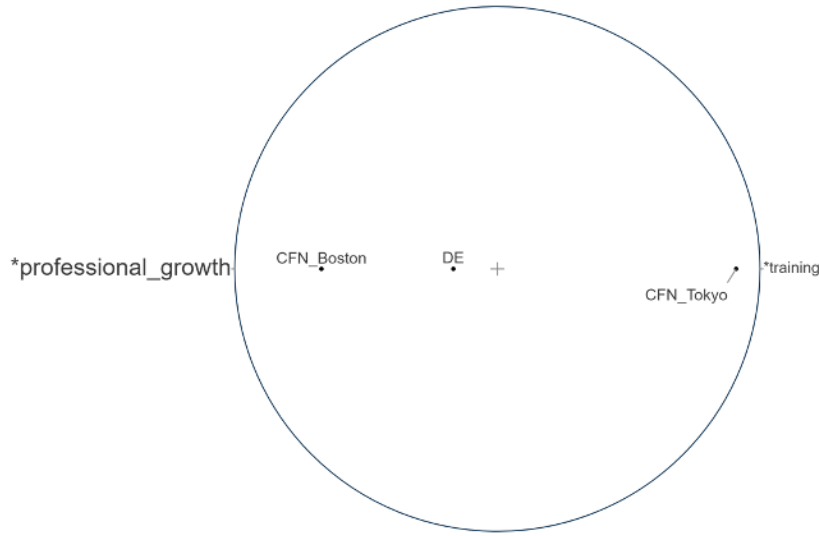


Figure 10 Correspondence Analysis Moon Plot – Development Value

4.7. Economic Value

Table 11 summarises the signals of Economic Value, which all show statistically significant differences in appearance frequencies. Here, it is necessary to note that the signal **company housing* was only present in the Japanese texts and no instance of it could be found in the German advertisements. Therefore, even though it would seem this signal is somewhat more characteristic of the CFN Tokyo texts, there is a higher probability that is by chance (see A.5).

Table 11 Economic Value Contingency Table

	CFN_Boston	CFN_Tokyo	DE	Total	chi-square
<i>*bonuses_and_incentive_pay</i>	164	114	459	737	9.974**
<i>*company_housing</i>	99	94	0	193	260.835**
<i>*corporate_pension/insurance</i>	52	47	319	418	62.157**
<i>*other_benefits(misc)</i>	78	77	352	507	31.315**
<i>*overtime_pay</i>	169	142	30	341	328.957**
<i>*social_contributions</i>	79	86	2	167	221.031**
<i>*transportation_benefits</i>	82	88	306	476	11.519**
<i>*Economic_Value</i>	608	524	1371	2503	6.723*
<i>N of Sentences</i>	21612	18363	53625	93600	

* $p < 0.05$; ** $p < 0.01$

In Figure 11 we see that the strongest discriminator is the mention of mandatory social contributions. These are barely mentioned in the German texts as they are absolutely mandatory in Germany. In Japan, however, there are some very few exceptions of businesses that do not have to pay social contributions for their employees. Even though there is probably no companies on CFN that would fall in this category, it would seem it is a common practice to also mention the mandatory social contributions as ‘benefits’. Nevertheless, when it comes to the electives like corporate pension plans and additional employer-funded health or life insurances, these are most characteristic of the German job

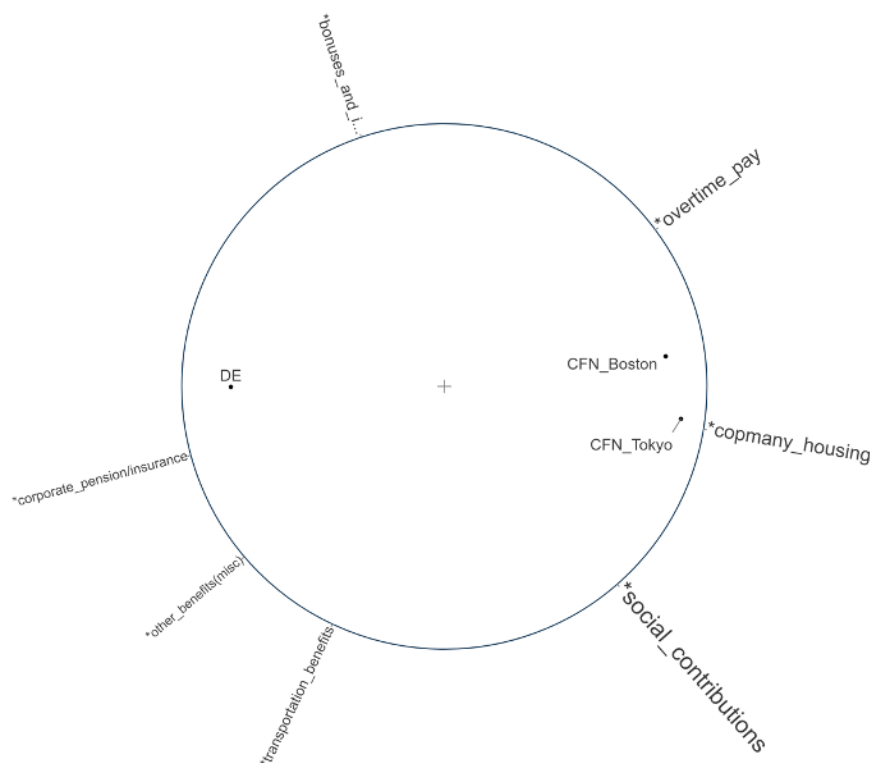


Figure 11 Correspondence Analysis Moon Plot – Economic Value

advertisements. Sentences regarding benefits and incentive pay tend to be somewhat more characteristic of the German texts, while overtime compensation is rather more associated with the Japanese texts. Talk of transportation benefits is not too far off from all three text corpora, whereas the miscellaneous benefits, which include free drinks and fruit at the office, gym membership etc., are more characteristic of the German advertisements.

4.8. Management Value

The flat hierarchy was the most common signal for Management Value. In addition, direct statements about the quality of management as well as offers of management training

programs were discovered as signals. The chi-square test shows there are statistically significant differences in the frequencies of appearance of all three.

Table 12 Management Value Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*(direct)_management</i>	29	30	39	98	13.081**
<i>*flat_hierarchy</i>	33	33	240	306	56.293**
<i>*management_training</i>	56	71	7	134	159.978**
<i>*Management_Value</i>	117	132	286	535	8.734*
<i>N of Sentences</i>	21612	18363	53625	93600	

* $p < 0.05$; ** $p < 0.01$

Looking at Figure 12, we can tell that direct statements regarding the quality of management are not particularly strongly correlated with any of the texts. The management trainings are much more characteristic of the Japanese advertisements, which is to be expected considering the previous results about Development Value. On the other hand, the flat hierarchy is significantly more characteristic of the German texts.

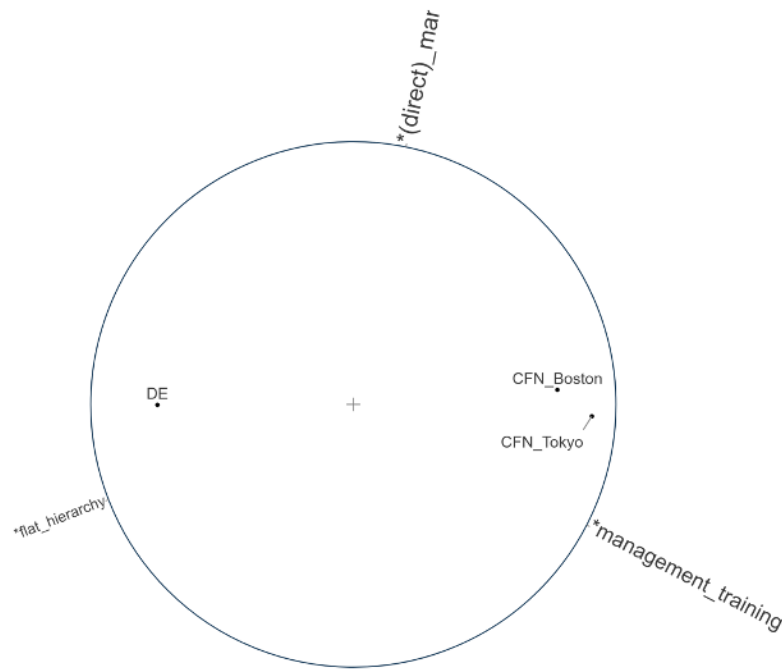


Figure 12 Correspondence Analysis Moon Plot – Management Value

4.9. Work-Life Balance

The Work-Life-Balance-related signals that were discovered all had a statistically significant result in the chi-square test, as can be seen in Table 13. In this category there are also some signals that only appeared in the Japanese texts. In the case of carer's leave and sick leave, these are likely not present in the German advertisements due to the fact that these are regulated by the government. In Japan, however, they are not a matter of national law, but are only part of company regulation. The seasonal leave was also only present in the Japanese advertisements. This code refers to paid vacations days, outside of the usual paid leave allowance, that are usually given to all employees at certain times of the year to extend public holidays.

Table 13 Work-Life Balance Contingency Table

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>DE</i>	<i>Total</i>	<i>chi-square</i>
<i>*carer's_leave</i>	184	172	0	356	481.29**
<i>*(direct)_work-life-balance</i>	23	18	187	228	57.136**
<i>*flexible_working_hours</i>	204	139	389	732	9.664**
<i>*maternity_and_parental_leave</i>	250	208	3	461	607.555**
<i>*no_overtime</i>	11	12	5	28	18.494**
<i>*paid_vacation</i>	298	242	277	817	184.665**
<i>*seasonal_leave</i>	253	246	0	499	678.325**
<i>*sick_leave</i>	41	41	0	82	111.374**
<i>*special/force_majeure_leave</i>	282	269	10	561	714.99**
<i>*teleworking</i>	97	83	419	599	39.48**
<i>*Work-Life-Balance</i>	1068	893	1126	3087	565.516**
<i>N of Sentences</i>	21612	18363	53625	93600	

** p < 0.05; ** p < 0.01*

Taking a look at the correspondence analysis plot in Figure 13, we clearly see that, apart from the paid vacation, the other types of leave are more heavily associated with the Japanese texts, since these are not as regulated in Japan as in Germany and are, therefore, a subject of corporate policy. The mention of the standard paid vacation is not particularly correlated with any of the text corpora and the flexible working time arrangement is somewhat more characteristic of the German advertisements. Direct appeals regarding Work-Life Balance, as well as various teleworking options are noticeably more characteristic of the German texts.

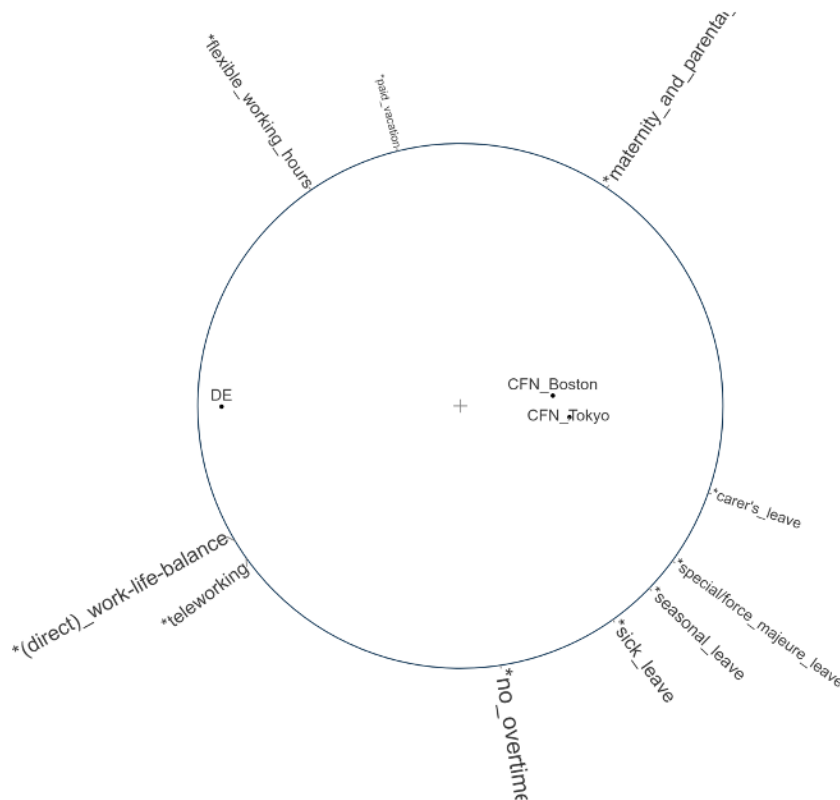


Figure 13 Correspondence Analysis Moon Plot – Work-Life Balance

5. Conclusion

The goal of this thesis was to explore the notion that Japan's needed immigration of talent is being impeded by economic actors' business practices, namely their employer branding in the form of job advertisements. By relying on the academic literature regarding signalling theory and employer branding, I was able to focus on a manageable number of important employer value propositions that were studied in the quantitative content analysis.

The analysis itself was done on three text corpora – one of German job advertisements and two of Japanese ones. The Japanese samples were taken from two CFN job fairs, which took place in Tokyo and Boston. The results showed notable, statistically significant differences between the appearance frequencies of employers' signals. The Japanese job advertisements had notably dissimilar content to that of their German equivalents, with regard to most of the value propositions. The Japanese texts meant for the Boston job fair were only slightly more different to the ones meant for Tokyo, relative to the dissimilarity to the German texts. This finding leads me to the conclusion that, in fact,

Japanese companies' employer branding is most likely a limiting factor for the attraction of international talent.

However, the conclusion of this thesis should not be equated to a definite cause for the disproportionately small inflow of international talent in Japan. Nevertheless, it is a starting point for examining employer branding effectiveness. A next possible step in this line of research would be to measure the preferences of applicants with different backgrounds, in order to test to what extent the signals most characteristic of Japanese employers are translating into organisational or job attractiveness. It would also be interesting to see what thought and decision processes within an organisation bring forth these specific characteristic signals. Of course, there would be other possible research angles, as this thesis has demonstrated that there is indeed some link between Japanese companies' recruitment practices and the disproportionately small amount of incoming international talent in Japan.

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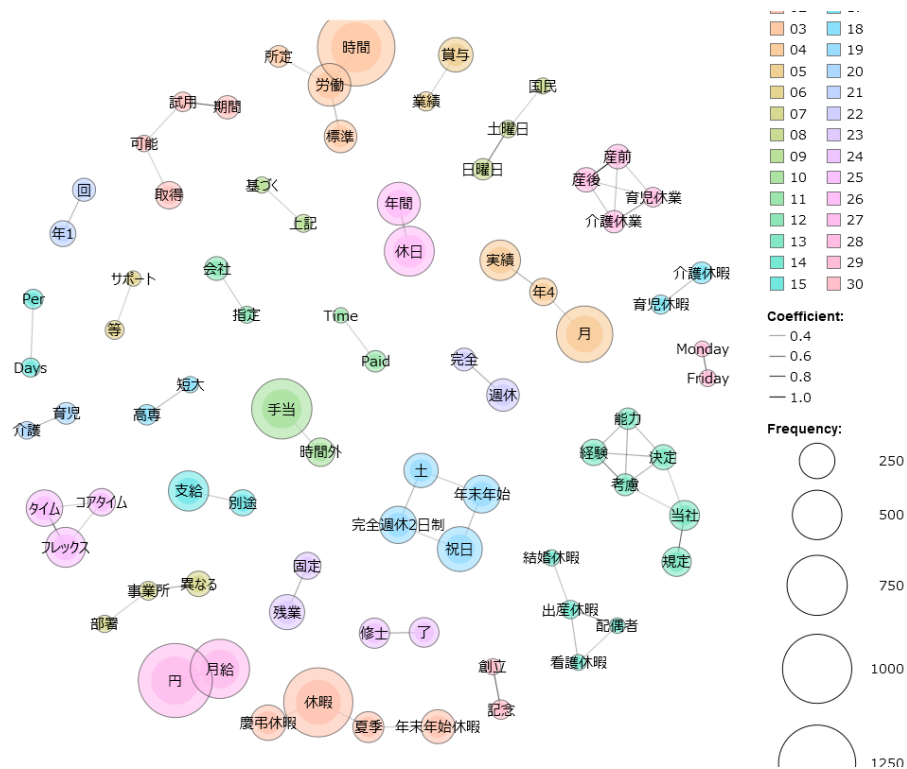


Figure 16 Co-Occurrence Network; Job Ads; Corpus Group 3; unit: sentences; min. TF = 40

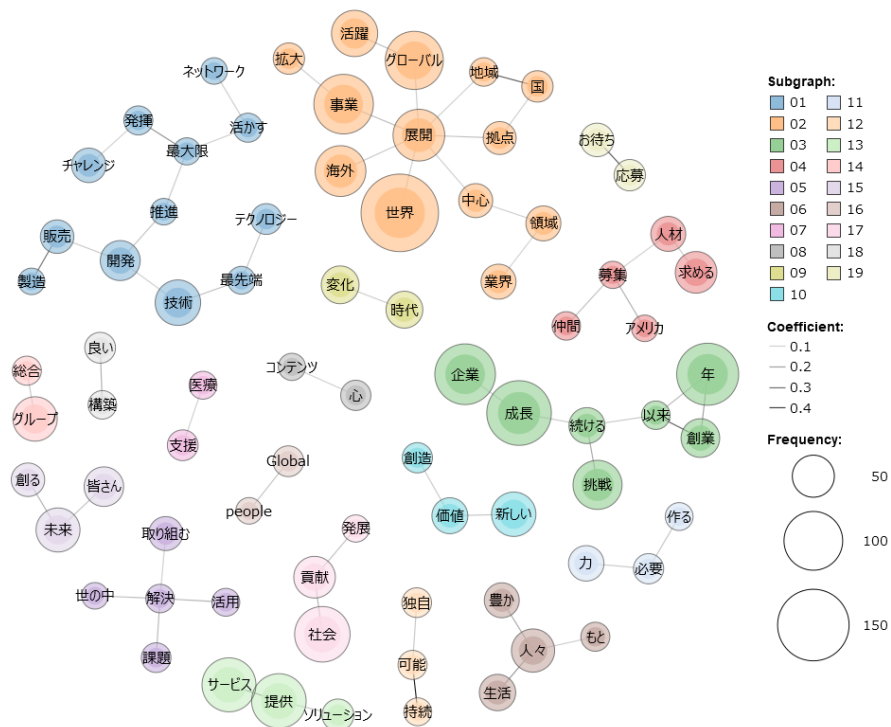


Figure 17 Co-Occurrence Network; Profiles; Corpus group 1; unit: sentences; min. TF = 19

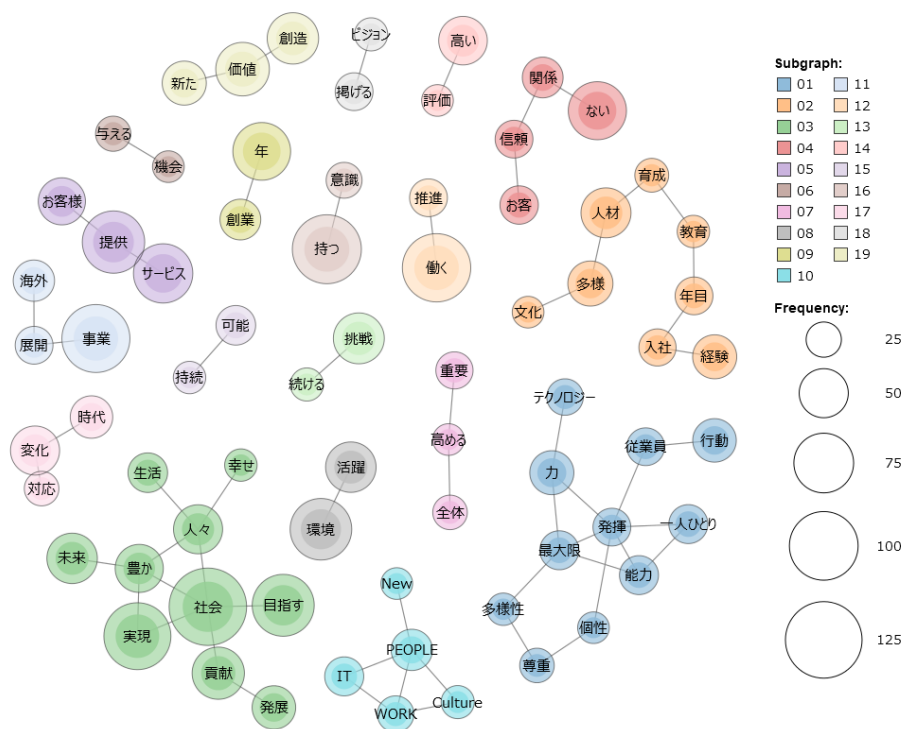


Figure 18 Co-Occurrence Network; Profiles; Corpus group 2; unit: sentences; min. TF = 20

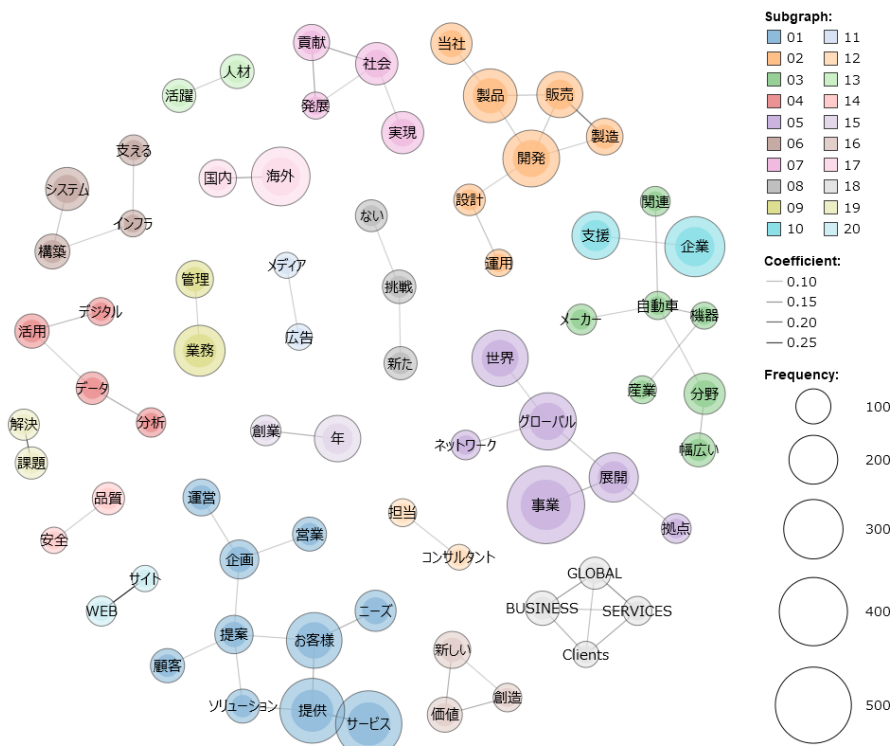


Figure 19 Co-Occurrence Network; Profiles; Corpus group 3; unit: sentences; min. TF = 50

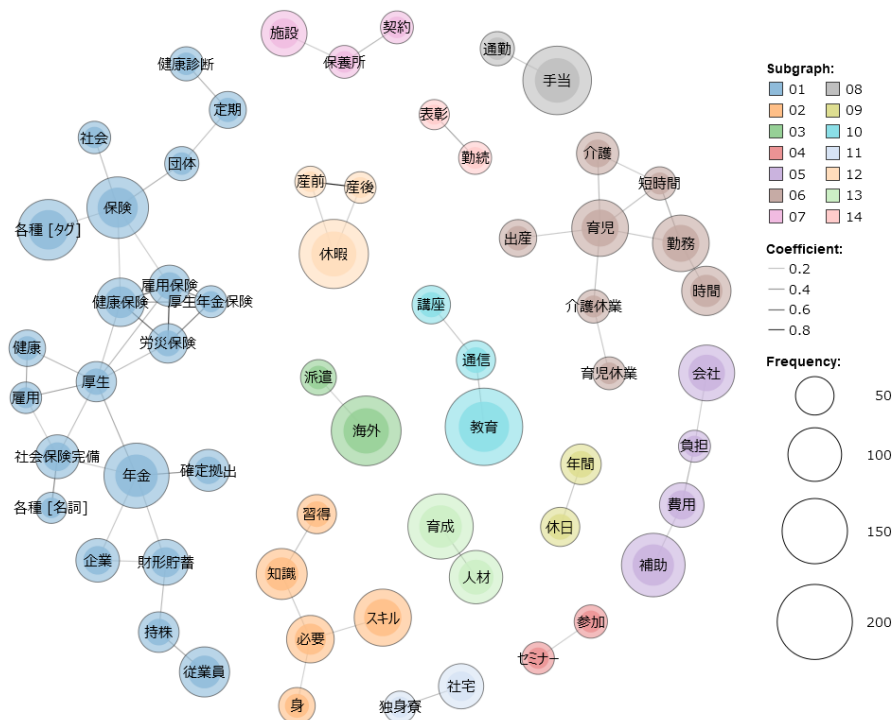


Figure 20 Co-Occurrence Network; Profiles; Corpus group 4; unit: sentences; min. TF = 30

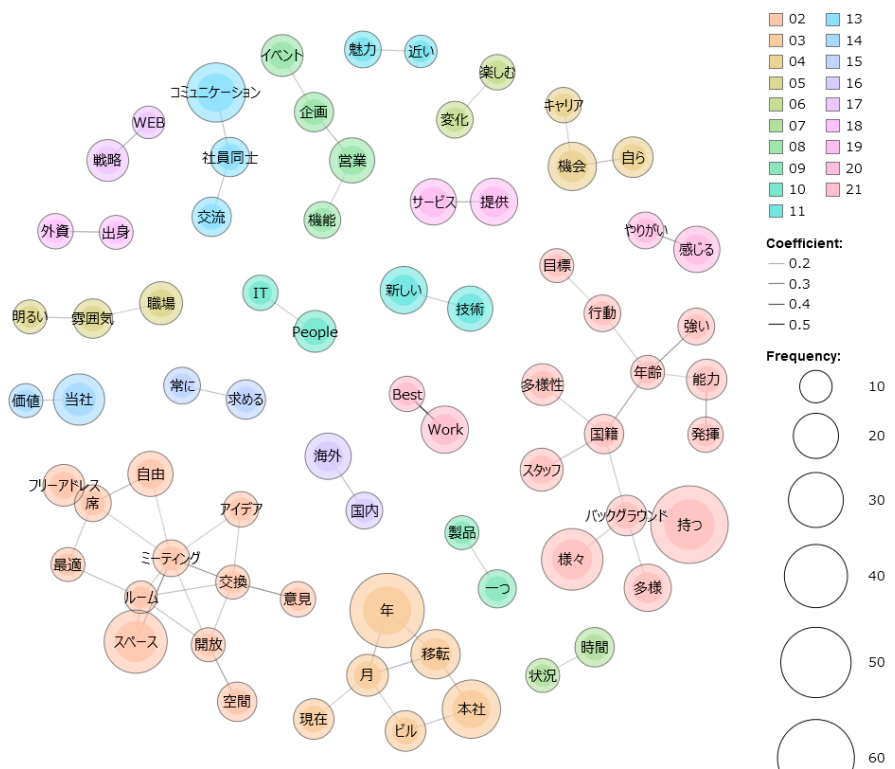


Figure 21 Co-Occurrence Network; Profiles; Corpus group 5; unit: sentences; min. TF = 10

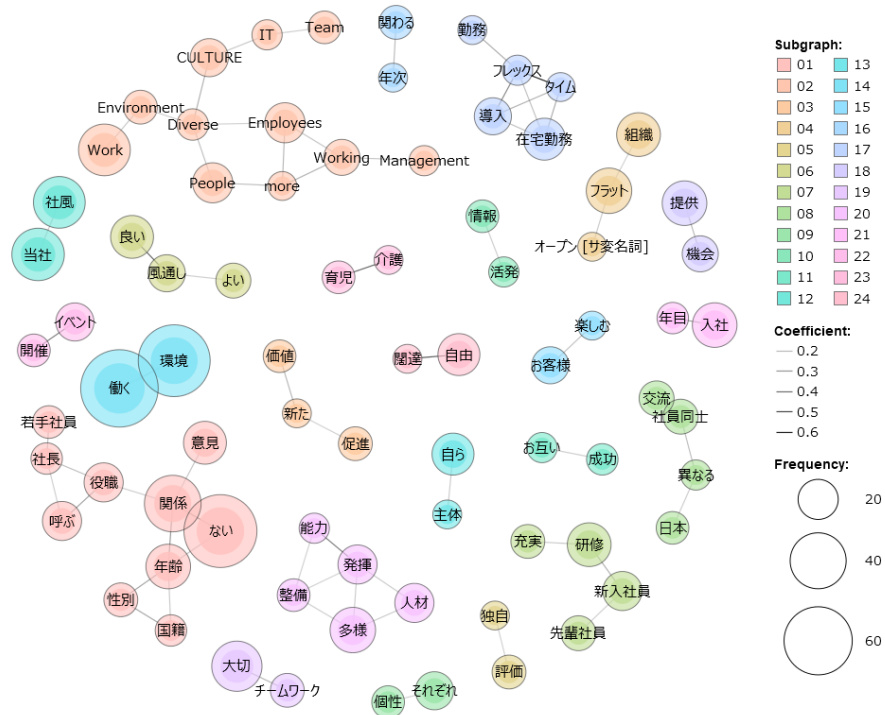


Figure 22 Co-Occurrence Network; Profiles; Corpus group 6; unit: sentences; min. TF = 10

A.2. Co-Occurrence Networks (German)

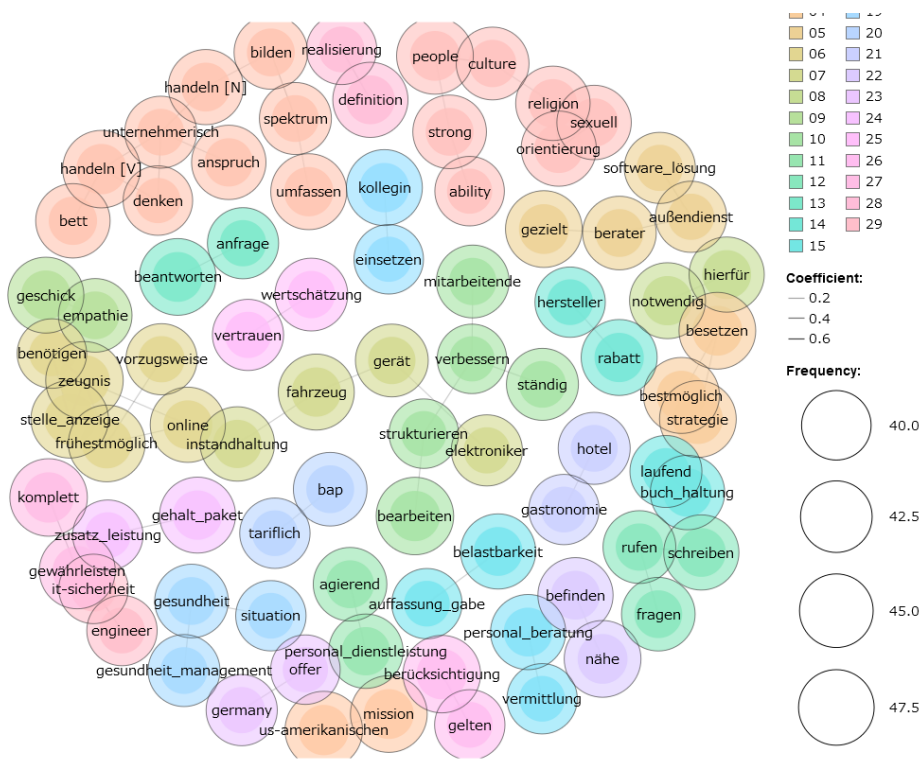


Figure 23 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 40; max. TF = 50

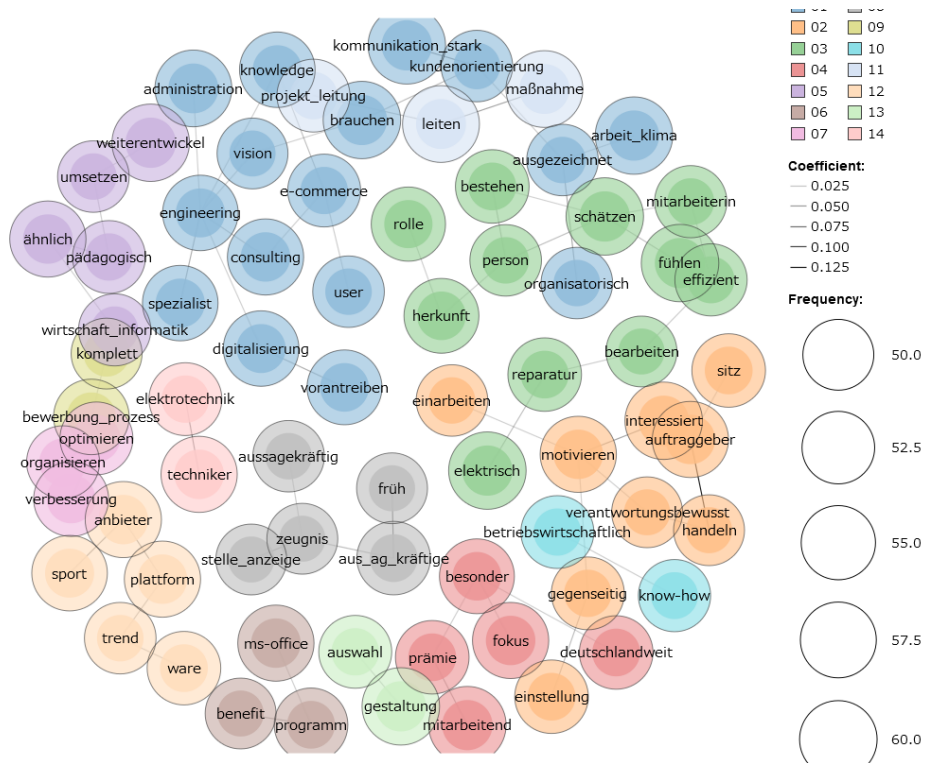


Figure 24 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 50; max. TF = 60

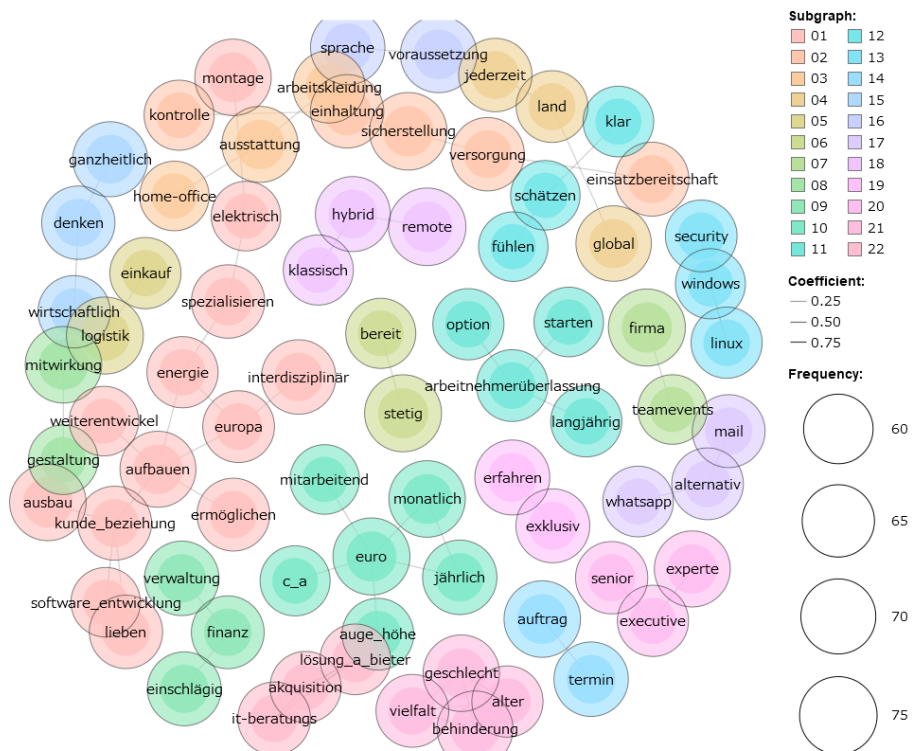


Figure 25 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 60; max. TF = 75

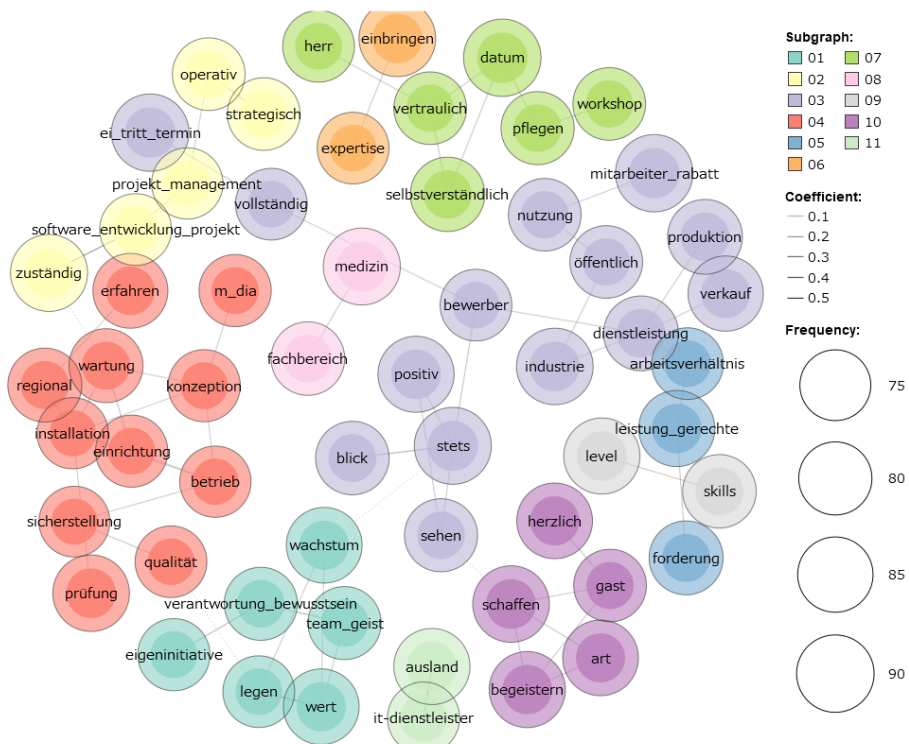


Figure 26 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 75; max. TF = 90

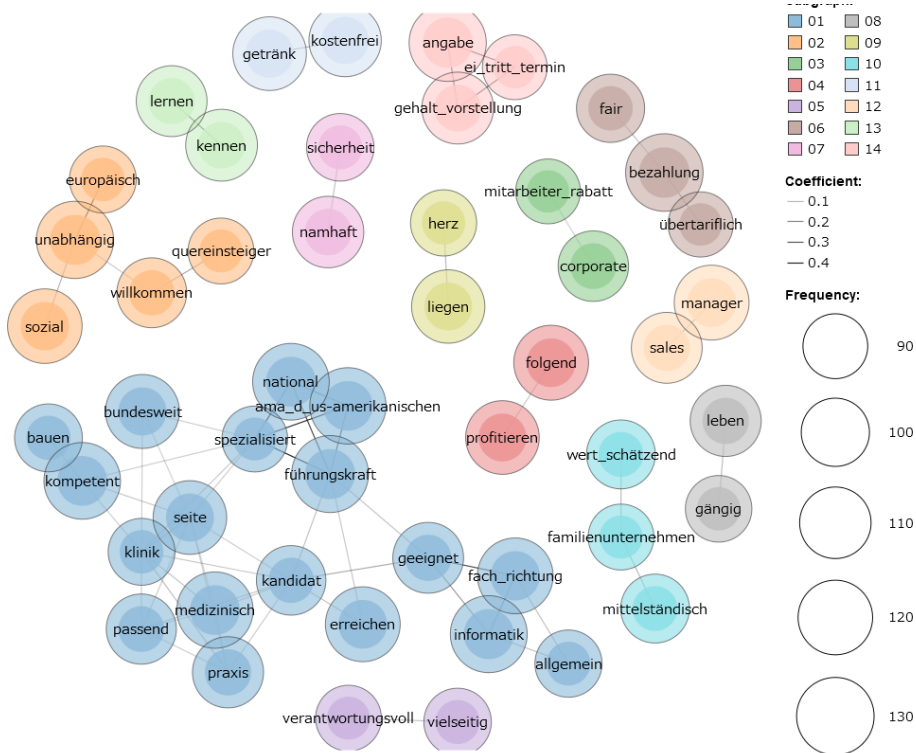


Figure 27 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 90; max. TF = 130

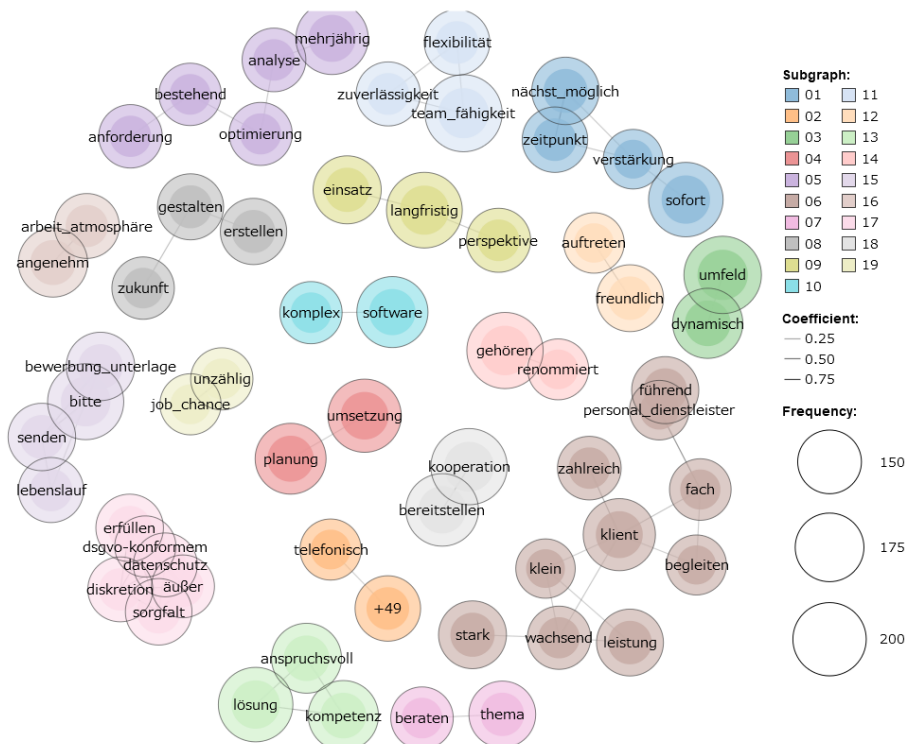


Figure 28 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 130; max. TF = 225

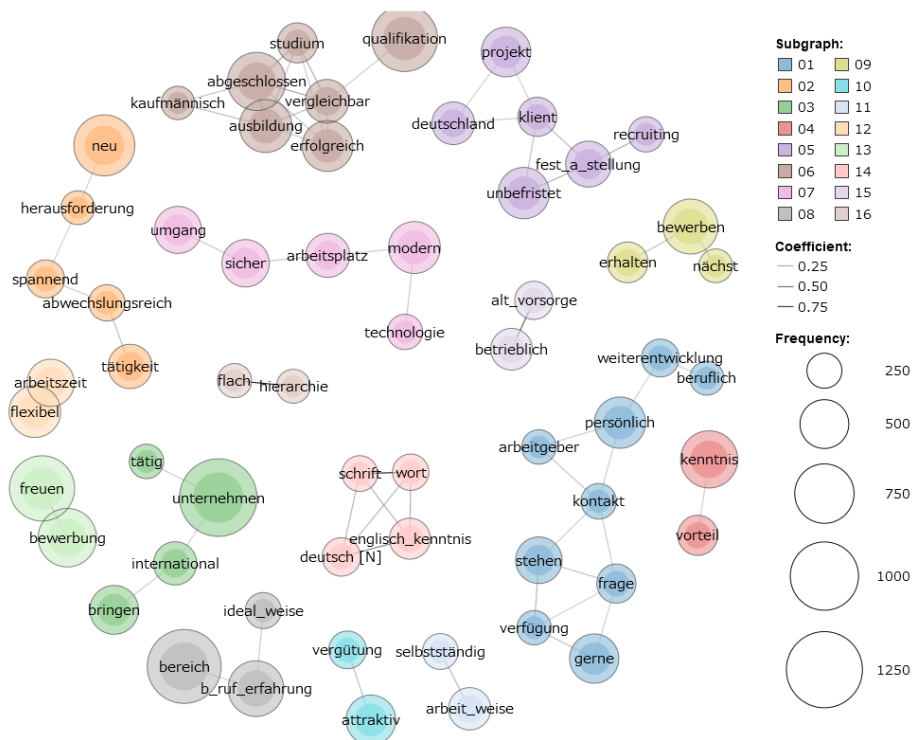


Figure 29 Co-Occurrence Network; Job Ads; unit: sentences; min. TF = 225

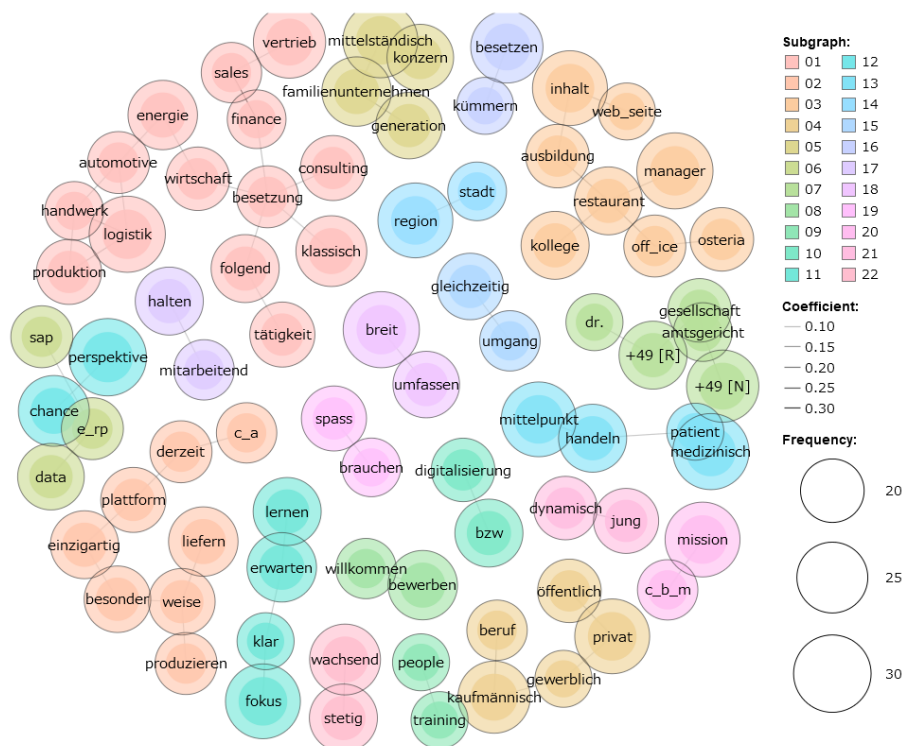


Figure 30 Co-Occurrence Network; Profiles; unit: sentences; min. TF = 16; max. TF = 30

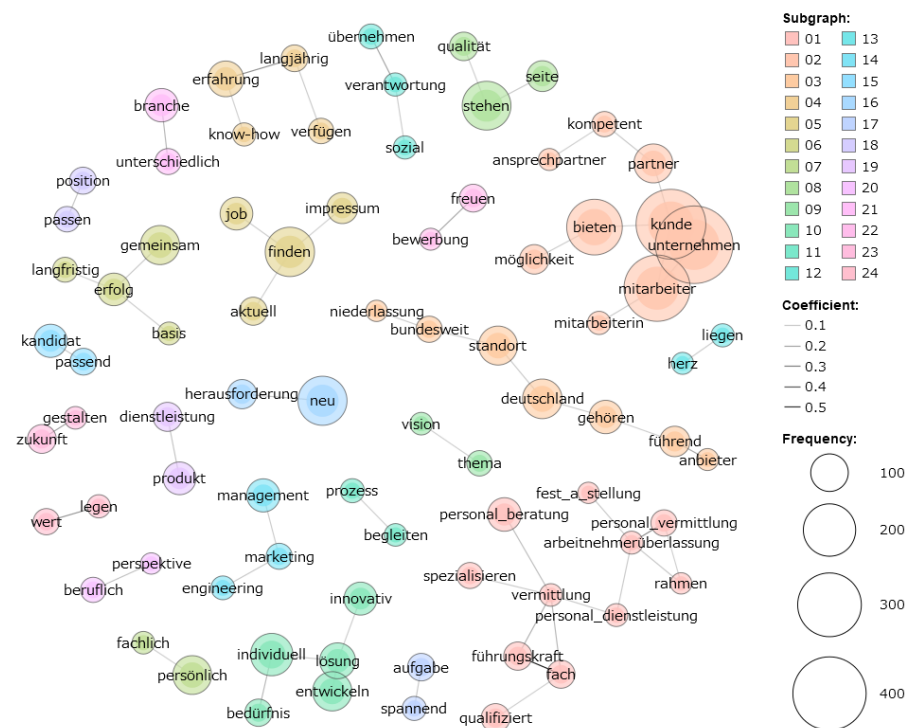


Figure 31 Co-Occurrence Network; Profiles; unit: sentences; min. TF = 30

A.3. Coding Rules (Japanese)

```
*collegial_communication
( コミュニケーション & ( 社員同士 | 社内 ) ) | 交流 | ( ( 意見 | アイディア | アイデア ) & 交換 )
*diversity_and_inclusion
多様性 | Inclusion | インクルージョン | ( お互い & 尊重 ) | diversity |
Diverse | ダイバーシティ | ( ( 多様 | 様々 ) & ( 文化 | 人材 | 人財 | バックグラウンド | 国籍 ) ) | ( ( 年齢 | 性別 | 国籍 ) & ( 関係 & ない ) )
*work_climate
社風 | ( 働く & 環境 )
*Social_Value
<*collegial_communication> | <*diversity_and_inclusion> |
<*work_climate>

*interesting_tasks
面白み | 面白い | わくわく | 多彩
*Interest_Value
<*interesting_tasks>

*challenges_and_applicaitons
( 能力 | 強み | 力 | スキル ) & ( 発揮 | 活かす ) | 挑戦 | チャレンジ
*contributions_to_society/meaning
( ( 社会 | 生活 | 未来 ) & ( 貢献 | 構築 | 豊か | 良い | 実現 ) ) | 意義 | やりがい
*Application_Value
<*challenges_and_applicaitons> | <*contributions_to_society/meaning>

*professional_growth
キャリア | キャリアパス | キャリアアップ | キャリア形成 | キャリア支援 | キャリア開発 | キャリアプラン | キャリア構築 | 昇進 | 昇格
*training
育成 | OJT | 研修 | トレーニング | トレーニングプログラム | 教育 | 学習 | 習得 | スキルアップ | オンボーディング | オンボーディングプロセス
*Development_Value
<*professional_growth> | <*training>

*bonuses_and_incentive_pay
ボーナス | 賞与 | インセンティブ
*company_housing
社宅 | 独身寮 | 寮 | 社員寮 | ( 住宅 & ( 手当 | 支給 | 支援 | 補助 | 費用 ) )
*corporate_pension/insurance
団体+保険 | ( ( 企業 | 確定拠出 ) & 年金 ) | 401K
*other_benefits(misc)
( ( 手当 | 支給 | 支援 | 補助 | 費用 | 無料 | フリー ) & ( 家族 | 飲む | ドリンク | コーヒー | スナック | フルーツ | 飲み物 ) ) | 退職金 | 祝い金 | 祝金
*overtime_pay
( ( 超過+勤務 | 残業 | 時間外 ) & ( 手当 | 支給 | 支援 | 補助 | 費用 ) ) |
( ( 固定+残業 | みなす+残業 ) & ! seq(残業-ない) [b3] )
*social_contributions
```

((雇用 | 労災 | 健康 | 厚生) & 保険) | 社会保険完備 | 厚生+年金 | 厚生年金保険 | 健康保険 | 雇用保険 | 労災保険

*transportation_benefits
((通勤 | 交通+費) & (手当 | 支給 | 支援 | 補助 | 費用)) | 交通費支給

*Economic_Value
<*bonuses_and_incentive_pay> | <*company_housing> |
<*corporate_pension/insurance> | <*other_benefits(misc)> |
<*overtime_pay> | <*social_contributions> | <*transportation_benefits>

*(direct)_management
(Transparent & Management) | メンター

*flat_hierarchy
フラット | (役職 & (関係 & ない))

*management_training
((マネージャー | マネジメント | 管理職 | 管理者 | リーダー | リーダーシップ | 経営者) & (育成 | 研修 | トレーニング | トレーニングプログラム | 教育 | 学習))

*Management_Value
<*(direct)_management> | <*flat_hierarchy> | <*management_training>

*carer's_leave
介護休暇 | 介護休業 | 介護 | 看護休暇 | 看護 | 看病

*(direct)_work-life-balance
ワークライフ | ワークライフバランス | ワーク・ライフ・バランス

*flexible_working_hours
フレックス

*maternity_and_parental_leave
((産前 | 産後 | 出産) & (休暇 | 休業)) | (出産休暇 & (配偶者+出産休暇)) | 産休 | 育児 | 育児休暇 | 育児休業

*no_overtime
seq(残業-ない) [b3]

*paid_vacation
年次有給休暇 | 有給休暇

*seasonal_leave
((夏季) & (休暇 | 休業)) | 年末年始 | 年末年始休暇 | ゴールデンウィーク

*sick_leave
傷病 | 病欠 | 病気

*special/force_majeure_leave
慶弔休暇 | 特別休暇 | 特別有給休暇 | ((結婚 | 出産 | 忌引) & 休暇) | 生理+休暇 | 結婚休暇 | 配偶者+出産休暇 | リフレッシュ休暇

*teleworking
テレワーク | リモートワーク | 在宅勤務

*Work-Life-Balance
<*carer's_leave> | <*(direct)_work-life-balance> |
<*flexible_working_hours> | <*maternity_and_parental_leave> |
<*no_overtime> | <*paid_vacation> | <*seasonal_leave> | <*sick_leave> |
<*special/force_majeure_leave> | <*teleworking>

A.4. Coding Rules (German)

```
*collegial_communication
zusammenhalt | ( kommunikativ & ( team | mitarbeiter ) ) | kollegial |
miteinander | ( gegenseitig &! kennenlernen ) | freundschaftlich |
kameradschaftlich | familiär
*diversity_and_inclusion
geschlecht | gender | geschlechtsneutral | geschlecht_identität |
nationalität | nationalities | nationality | sexuell | sexual |
sexuality | color | colour | ethnicity | ethnisch | herkunft | hautfarbe
| religion | religiös | religions | alter | behinderung | diversity |
diversität | diversitäts | diversitätssensiblen | diversity-kultur |
inclusion | inclusive | inclusivity | inklusion | ( vielfalt & ( kultur
| kulturell ) ) | kultursensibel | chancengleichheit | disability |
disabled
*work_climate
arbeit_atmosphäre | arbeit_klima | team_atmosphäre | btrieb_klima |
atmosphäre | ( ( kollegial | angenehm | familiär | teamorientiertes |
nett ) & ( arbeit_umfeld ) )
*Social_Value
<*collegial_communication> | <*diversity_and_inclusion> |
<*work_climate>

*interesting_tasks
( aufgabe | tätigkeit | aufgabe_feld | arbeit_umfeld | projekt |
herausforderung ) & ( spannend | vielseitig | abwechslungsreich |
interessant )
*Interest_Value
<*interesting_tasks>

*challenges_and_applicaitons
( ( aufgabe | tätigkeit | aufgabe_feld | arbeit_umfeld | projekt |
herausforderung ) & ( herausfordernd | anspruchsvoll ) ) |
( ( herausforderung ) & neu )
*contributions_to_society/meaning
( ( gesellschaftlich | sozial ) & ( verantwortung | beitrag |
beitragen ) ) | sinnvoll | sinn_stiftende | sinn_stift_d |
sinn_stift_des | sinn_erfüllung | sinn_erfüllte | sinnhaftigkeit
*Application_Value
<*challenges_and_applicaitons> | <*contributions_to_society/meaning>

*professional_growth
( ( beruflich | persönlich ) & ( entwicklung | weiterentwicklung ) ) |
entwicklungsmöglichkeit | entwicklungsperspektive | entwicklungschance |
entwicklungspotenzial | aufstieg_möglichkeit | aufstieg_chance |
aufstieg | karriere | karriere_möglichkeit | karriere_chance |
karriere_perspektive | karriere_entwicklung | karriere_aussicht |
karriere_förderung | karriere_laufbahn | karriereplan | karriere_pfad
*training
weiterbildung | weiterbildung_möglichkeit | weiterbildungs-möglichkeiten
| weiterbildung_a_gebot | weiterbildung_maßnahme | weiterbildungs |
weiterbildung_programm | weiterbildung_zeit | weiterbildung_kurs |
weiterbildung_budget | weiterbildung_option | weiterbildung_chance |
weiterbildung_zentrum | weiterbildung_akademie | fortbildung |
fortbildung_möglichkeit | fortbildungs | fortbildung_a_gebot |
fortbildung_seminar | fortbildung_maßnahme | fortbildung_programm |
fortbildung_zentrum | mentoring | mentoring-programm | mentoringprogramm
| training | training-on-the-job | schulung | schulungs |
schulung_maßnahme | schulung_programm | schulung_a_gebot |
schulungsprogramm | schulung_akademie | schulung_system |
schulung_möglichkeit | schulungszentrum | einarbeitung |
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einarbeitung_phase | einarbeitung_konzept | einarbeitung_zeit |
einarbeitung_plan | einarbeitung_programm | einarbeitungs |
einarbeitung_prozess | onboarding | onboarding-prozess | onboarding-
programm | onboarding-plan
*Development_Value
<*professional_growth> | <*training>

*bonuses_and_incentive_pay
prämie | prämie_zahlung | prämie_regelung | prämie_system |
prämie_modell | provision | weihnachts | urlaub_geld | weihnachtsgeld |
weihnacht_geld_vergütung | weihnacht_geld | urlaub_zuschuss | bonus |
bonus_zahlung | bonus_chance | bonus_programm | bonus_modell |
bonus_leistung | bonusvereinbarung | bonuses | bonussystem | incentive-
programm | incentives | jahr_bonus | team-bonus | einstieg_bonus |
mitarbeiter_bonus_programm | unternehmen_bonus | boni | jahresboni |
erfolgsboni | quartalsboni | erfolg_prämie | leistung_prämie |
leistung_entgelt | geld_prämie | jahressonderprämien |
mitarbeiter_prämie | sonderprämien | ziel_prämie | zusatz_prämie |
zusatz_leistung | zulage | zusatz_zahlung
*company_housing
#0
*corporate_pension/insurance
( ( betrieblich | arbeitgeber_finanzierte | zusätzlich ) &
( alt_vorsorge | altersversorgung | krankenversicherung ) ) | pension |
bav | zusatzversicherung | zusatz_versorgung |
zusatz_kranke_versicherung | krank_zusatzversicherung |
b_ruf_unfähigkeit_versicherung | unfallversicherung |
gruppe_unfallversicherung | pflege_zusatzversicherung
*other_benefits(misc)
( mitgliedschaft & sport ) | fitnessstudio | obst | obst_korb | getränk
| mitarbeiter_rabatt | rabatt | willkommen_prämie | willkommen_bonus |
empfehlung_prämie | inflation_ausgleich_prämie | jubiläum_prämie |
jubiläum_zuwendung | mitarbeiter_empfehlung_prämie |
weiterempfehlungsprämie | kita_zuschuss | ( kita & zuschuss )
*overtime_pay/compensation
überstunde_vergütung | überstunde_verrechnung | überstunde_entgelt |
überstunde_b_zahlung | überstunde_zuschlag | überzeitkompensation |
überstunde_ausgleich | überstunde_abbau | überstundentracking |
( überstunde & ( abbauen | freizeitausgleich | vergüten | auszahlen |
ausgleichen | absetzen | auszahlung ) )
*social_contributions
sozialversicherung_pflichtige+beschäftigung |
sozialversicherungspflichtiger+fest_a_stellung_vertrag
*transportation_benefits
bvg-ticket | bvg | bike | job_rad | dienst_fahrrad | fahrradleasing |
fahrrad-leasing | e-bike | e-bike-leasing | e-bikeleasing | fahrt_kosten
| fahrtkostenzuschuss | fahrtkostenzuschuss | fahrtkostenzuschüsse |
fahrtkostenerstattung | fahrtkostenersatz | fahrtkostenbezuschussung |
deutschlandticket | deutschland-ticket | deutschlandtickets | jobticket
| job-ticket | firmenticket | firmentickets | profiticket | monat_karte
| monat_fahrkarte | bvg-jobticket | bvg-ticket | öpnv | öpnv-ticket |
öpnv-jobticket | bahn_ticket | bahn_karte | mobilitätsticket |
nahverkehrsticket | nahverkehr_abonnement | hvv | hvv-abo | hvv-karte |
hvv-jobticket | hvv-profi | hvv-profitcard | hvv-profiticket | hvv-ticket
| jahresticket | offi-ticket | offi-tickets | öpnv | ticket-abo | vvo-
jobticket | ticketerstattung | ( ( firmenwagen | firma_pkw |
firmenwagenregelung | firmenwagens | geschäft_wagen | dienstwagen_option
| dienst_fahrzeug | pkw ) & ( privat | privat_nutzung ) ) | tank_karte
*Economic_Value
<*bonuses_and_incentive_pay> | <*company_housing> |
<*corporate_pension/insurance> | <*other_benefits(misc)> |

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<*overtime_pay/compensation> | <*social_contributions> |
<*transportation_benefits>
*(direct)_management
( management_team & inspirieren ) | ( führung_stil & ( auge_höhe |
kooperativ | partizipativen | kameradschaftlich ) ) | mentor
*flat_hierarchy
flach & hierarchie
*management_training
( ( management_orientierte | manager ) & ( training |
training_abteilung ) ) | management-trainees | führung_kraft_training |
führung_kraft_entwicklung_programm | führung_kraft_entwicklung |
leadership+training
*Management_Value
<*(direct)_management> | <*flat_hierarchy> | <*management_training>

*carer's_leave
#0
*(direct)_work-life-balance
work-life-balance | work-life-integration | work-life | work-live-
balance | ( ( vereinbarkeit | vereinbaren | balance ) & ( familie |
beruf | privatleben | work | life ) ) | familie_freundliche |
familienfreundliches | familienfreundlich | familienfreundlichkeit |
familienfreundlicher
*flexible_working_hours
gleitzeit | ( ( arbeitszeitmodell | arbeit_zeit_modell | arbeitszeit |
arbeitszeitgestaltung | arbeit_modell | arbeitszeitmodell_ob ) &
flexibel ) | gleitzeit_konto | gleitzeit_modell | gleitzeit_regelung |
gleitzeit_rahmen
*maternity_and_parental_leave
eltern_zeit
*no_overtime
überstunde & ( ohne | kein )
*paid_vacation
( urlaub & tag ) | urlaubstag | urlaub_a_spruch | urlaubsplanung |
urlaub_regelung | urlaub_zeit
*seasonal_leave
#0
*sick_leave
#0
*special/force_majeure_leave
( geburtstag & ( urlaub | urlaub_tag | urlaubstag ) ) | zusatz_urlaub |
zusatz_urlaub_tag
*teleworking
home-office | home-office-möglichkeiten | home-office-möglichkeit |
homeoffice-möglichkeiten | homeoffice-möglichkeit | home-office-regelung
| homeoffice-regelungen | homeoffice-regelung | home-office-option |
home-office-anteil | homeoffice-anteil | home-office-lösung | home-
office-tagen | homeoffice | homeoffice-einsatz | homeofficemöglichkeiten
| hybrid | remote
*Work-Life-Balance
<*carer's_leave> | <*(direct)_work-life-balance> |
<*flexible_working_hours> | <*maternity_and_parental_leave> |
<*no_overtime> | <*paid_vacation> | <*seasonal_leave> | <*sick_leave> |
<*special/force_majeure_leave> | <*teleworking>

```

A.5. Supplementary Crosstabulations

Table 14 Japanese Text Corpora Contingency Table²

	<i>CFN_Boston</i>	<i>CFN_Tokyo</i>	<i>Total</i>	<i>chi-square</i>
<i>*collegial_communication</i>	53	56	109	1 .092
<i>*diversity_and_inclusion</i>	236	178	414	1.34
<i>*work_climate</i>	102	86	188	0
<i>*Social_Value</i>	369	312	681	0 .001
<i>*interesting_tasks</i>	36	35	71	0 .202
<i>*Interest_Value</i>	36	35	71	0 .202
<i>*challenges_and_applicaitons</i>	536	462	998	0 .039
<i>*contributions_to_society/meaning</i>	244	251	495	4.401*
<i>*Application_Value</i>	765	696	1461	1 .699
<i>*professional_growth</i>	471	336	807	5.958*
<i>*training</i>	931	1033	1964	36.614**
<i>*Development_Value</i>	1359	1328	2687	13.953**
<i>*bonuses_and_incentive_pay</i>	164	114	278	2 .542
<i>*copmany_housing</i>	99	94	193	0 .492
<i>*corporate_pension/insurance</i>	52	47	99	0 .043
<i>*other_benefits(misc)</i>	78	77	155	0 .732
<i>*overtime_pay</i>	169	142	311	0 .002
<i>*social_contributions</i>	79	86	165	2 .308
<i>*transportation_benefits</i>	82	88	170	2 .106
<i>*Economic_Value</i>	608	524	1132	0 .045
<i>*(direct)_management</i>	29	30	59	0 .393
<i>*flat_hierarchy</i>	33	33	66	0 .291
<i>*management_training</i>	56	71	127	4.704*
<i>*Management_Value</i>	117	132	249	4.769*
<i>*carer's_leave</i>	184	172	356	0 .724
<i>*(direct)_work-life-balance</i>	23	18	41	0 .011
<i>*flexible_working_hours</i>	204	139	343	3.863*
<i>*maternity_and_parental_leave</i>	250	208	458	0 .032
<i>*no_overtime</i>	11	12	23	0 .153
<i>*paid_vacation</i>	298	242	540	0 .233
<i>*seasonal_leave</i>	253	246	499	2 .165
<i>*sick_leave</i>	41	41	82	0 .395
<i>*special/force_majeure_leave</i>	282	269	551	1 .755
<i>*teleworking</i>	97	83	180	0
<i>*Work-Life-Balance</i>	1068	893	1961	0 .115
<i>N of Sentences</i>	21612	18363	39975	

* $p < 0.05$; ** $p < 0.01$

² Since there are only two categories, Yates' continuity correction (Yates, 1934) was applied to the calculation of chi-square.

A.6. Abstract (English)

The rapid aging of the Japanese population and low birth rates are threatening the sustainable economic growth and social security systems in the country, which has led to need to hire more international staff. Even though Japan is often perceived as a country with restricted immigration, its policymakers have been increasingly trying to take part in the global competition for talent since the late 1980s. Nevertheless, migration to Japan has remained small in comparison to all other similarly developed countries. Previous research suggests that Japan's immigration policy is not the limiting factor, but that its success is impeded by corporate structures, business practices and overall integration policies. Thus, the goal of this thesis is to build further on this research and identify some of the likely impediments to the needed migration, pertaining to economic actors' business practices. Through text mining and quantitative content analysis, the differences between German and Japanese job advertisements are explored, in order to contribute towards answering the broader question: "Why does Japan attract a disproportionately small amount of international talent?".

A.7. Abstract (German)

Die rasche Alterung der japanischen Bevölkerung und die niedrige Geburtenrate gefährden das nachhaltige Wirtschaftswachstum und die Sozialversicherungssysteme des Landes, was zu einem höheren Bedarf an internationalem Personal geführt hat. Obwohl Japan häufig als ein Land mit eingeschränkter Einwanderungspolitik wahrgenommen wird, versuchen die politischen Entscheidungsträger Japans schon seit Ende der 1980er Jahre zunehmend, am globalen Wettbewerb um Talente teilzunehmen. Dennoch ist die Migration nach Japan im Vergleich zu allen anderen ähnlich entwickelten Ländern gering geblieben. Frühere Forschung deutet darauf hin, dass Japans Einwanderungspolitik nicht der limitierende Faktor ist, sondern dass ihr Erfolg durch Unternehmensstrukturen, Geschäftspraktiken und die allgemeine Integrationspolitik behindert wird. Ziel dieser Arbeit ist es daher, auf dieser Forschung aufzubauen und einige der wahrscheinlichen Hindernisse für die notwendige Migration zu identifizieren, die sich auf die Geschäftspraktiken der Wirtschaftsakteure beziehen. Mittels Text Mining und quantitativer Inhaltsanalyse werden die Unterschiede zwischen deutschen und japanischen Stellenanzeigen untersucht, um zur Beantwortung der übergeordneten Frage beizutragen: „Warum zieht Japan unverhältnismäßig wenig internationale Talente an?“