

TECHNISCHE UNIVERSITÄT MÜNCHEN

Lehrstuhl für Betriebswirtschaftslehre – Strategie und Organisation

Univ.-Prof. Dr. Isabell M. Welpé

**Finding the keys to recruiting talent: The role of employer image in
new ventures and large firms**

Kilian Johannes Moser

Vollständiger Abdruck der bei der Fakultät für Wirtschaftswissenschaften der Technischen
Universität München zur Erlangung des akademischen Grades eines Doktors der
Wirtschaftswissenschaften (Dr. rer. pol.) eingereichten Dissertation.

Vorsitzender: Univ.-Prof. Dr. Christoph Fuchs

Prüfer der Dissertation: 1. Univ.-Prof. Dr. Isabell M. Welpé
2. Univ.-Prof. Dr. Reiner Braun

Die Dissertation wurde am 27.11.2017 bei der Technischen Universität München eingereicht
und durch die Fakultät für Wirtschaftswissenschaften am 15.04.2018 angenommen.

Acknowledgements

I would like to acknowledge several people who have supported me during the process of writing this thesis. First, I would like to thank Prof. Dr. Isabell Welpé for providing me the opportunity, academic freedom and support to conduct the research that has led to this thesis. Her insights into the scholarly process, her encouragement for my academic endeavors, and her passion for both academic and practical research questions have been a great source of inspiration. I am grateful for her support. Next, I would like to thank Prof. Dr. Reiner Braun for taking the role of the second advisor for this thesis. Experiencing his and his colleagues' teaching during my undergraduate studies has sparked my interest in entrepreneurial research questions. I would also like to thank Prof. Dr. Christoph Fuchs for serving as the chairman of the examination board for this thesis. Moreover, I feel honored to have worked with Prof. Dr. Dres. h.c. Arnold Picot and Prof. Dan Cable. I thank them for their valuable advice and academic insights. In particular, I want to thank Andranik Tumasjan for his academic guidance as well as the inspiring, productive, and enjoyable collaboration on many projects. His tremendous support throughout the entire process of writing this thesis has been beyond compare, and I look forward to continuing our work.

Full-heartedly, I would like to thank many individuals at the Center for Digital Technology & Management. To Ms. Weber and my colleagues, our time together has been a blast, and I am proud of the many things that we have achieved together. Many thanks also go to the Board for providing me with the opportunity to be part of the Management Team, as well as to many CDTM students who have been a great source of inspiration to me in many areas. My special thanks go to Hanna Schneider. Her energy and enthusiasm are contagious, and I thank her for her invaluable support as an academic sparring partner and partner for life. Finally, I am more than grateful to my family and friends who have supported me at all times. Their understanding and encouragement have brought me here.

Table of contents

Acknowledgements	I
Abstract	IV
Kurzfassung (German abstract)	VI
1 Introduction	1
1.1 Motivation and research questions	1
1.2 Theoretical background	7
1.3 Research methods and data sources	19
1.4 Structure of the thesis, main results and contributions of each chapter.....	22
1.5 References.....	26
2 Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors	35
3 What is the right mix? Toward a compensatory theory of new ventures' employer attractiveness	37
4 Don't be so emotional: Employer image communication on social media	81
5 Conclusion	117
5.1 General discussion and summary of findings	117
5.2 Implications for theory.....	119
5.3 Implications for practice	122
5.4 Directions for future research	124
5.5 References.....	128
Appendix	131

Abstract

Within today's digital era, finding and retaining talented employees has increasingly become one of the top concerns of startup founders and corporate managers alike. To address this challenge, recent large firm recruitment literature investigates the role of employer positioning as a means to increase firms' employer attractiveness. The present thesis brings this focus to the new venture context and investigates the question of how both new ventures and large firms can attract talented and entrepreneurially-minded employees. To this end, this thesis introduces the theory of legitimate distinctiveness as an overarching theoretical framework to study firms' employer attractiveness. Accordingly, this thesis argues that firms make claims related to their distinctiveness as well as claims related to their legitimacy to increase their employer attractiveness. More specifically, firms make heterogeneous identity claims (i.e., distinctiveness claims such as a unique company culture) to promote attractive and distinct elements of their employment offering that distinguish them from other new ventures competing for the same talent pool, as well as homogeneous identity claims (i.e., legitimacy claims such as endorsements by renown investors) that position firms as trustworthy, credible, and legitimate employers. Based on three studies, this thesis empirically investigates the role of heterogeneous and homogeneous identity claims as antecedents of firms' employer image and their employer attractiveness. Overall, the results of this thesis attribute a central role to heterogeneous claims in shaping firms' employer image and employer attractiveness, because they help potential employees to decide between firms based on the unique features of their employment offering. The results also show that the influence of new ventures' recruitment-related claims on firms' employer attractiveness highly dependent on job seekers' personality, as well as their work experience and interest in startup employment. For example, this thesis shows that firms that manage to appeal to job seekers with a strong innovative behavior are more likely to attract entrepreneurially-minded potential employees. It also demonstrates the influence of firms' business model focus and human capital needs. For firms' recruitment-related social media activities, the results of this thesis attribute a pivotal role to the specific content and style of firms' recruitment communication in shaping firms' employer image. Based on the empirical results of these studies, the present work contributes to theory by demonstrating the usefulness of the legitimate distinctiveness concept as an overarching theory to advance the understanding of different aspects related to firms' employer image and employer attractiveness in both the entrepreneurship and human resource management literature. For entrepreneurs, recruiters, and managers in general, this thesis contains strategies to recruit entrepreneurially-minded applicants, such as highlighting

the firm's vision to innovate. It also presents a summary of frequently communicated aspects of firms' employment offerings and practical advice on how to communicate these offerings through social media platforms such as Twitter. In delineating directions for further research on the employer attractiveness of new ventures and established firms, the present works clearly calls for a holistic research approach to applicant attraction that, for example, compares the unique employment features of new ventures and established firms, studies the influence of their age and size, and incorporates job seekers' personality.

Kurzfassung (German abstract)

Für Startup-Gründer und Unternehmensmanager stellt es im heutigen digitalen Zeitalter umso mehr denn je eine der größten Herausforderungen dar, talentierte Mitarbeiter zu finden und längerfristig zu halten. Jüngere Literatur über moderne Personalbeschaffung sucht ihre Antwort auf diese Frage in dem Aufbau einer starken Arbeitgeberpositionierung zur Steigerung der Arbeitgeberattraktivität. Die vorliegende Dissertation setzt an dieser Stelle an, in dem sie die Forschungsfrage adressiert, wie es neu gegründeten und etablierten Unternehmen gelingen kann, talentierte und unternehmerisch handelnde Mitarbeiter zu rekrutieren. Die sogenannte *legitimate distinctiveness theory*, wonach Firmen zur Steigerung ihrer Arbeitgeberattraktivität sowohl ihre Alleinstellungsmerkmale (*distinctiveness*) als auch ihre Legitimität (*legitimacy*) hervorheben müssen, bildet dabei den übergeordneten theoretischen Rahmen. Demnach treffen Firmen sowohl heterogene Identitätsaussagen (i.e., Aussagen zu ihren Alleinstellungsmerkmalen wie bspw. ihre besondere Unternehmenskultur) durch die sie die attraktiven und zugleich unikalen Eigenschaften ihres Arbeitgeberangebots in Abgrenzung zu anderen Firmen herausstellen als auch homogenen Identitätsaussagen (i.e., Aussagen zu ihrer Legitimität wie bspw. die Unterstützung durch einen namhaften Investor) anhand derer sie sich als vertrauenswürdige, zuverlässige und legitime Arbeitgeber positionieren. Die vorliegende Dissertation untersucht dabei in drei empirischen Studien, inwiefern diese Identitätsaussagen das Arbeitgeberimage und die Arbeitgeberattraktivität von Firmen beeinflussen. Zusammenfassend weisen die Forschungsergebnisse dieser Dissertation den heterogenen Identitätsaussagen eine ausgesprochen wichtige Rolle bei der Gestaltung des Arbeitgeberimages und der Arbeitgeberattraktivität zu, da sie potenzielle Arbeitnehmer darin unterstützen, sich basierend auf einem Vergleich der Alleinstellungsmerkmale zwischen verschiedenen Arbeitgebern zu entscheiden. Weiterhin zeigen die Resultate zum einen auf, dass die Wirkung heterogener Identitätsaussagen auf potenzielle Mitarbeiter zum einen im Zusammenhang mit deren Persönlichkeit, Arbeitserfahrung sowie ihrem Interesse an Startups als Arbeitgeber an sich zu sehen ist. So zeigt sich beispielsweise, dass Firmen, denen es gelingt, innovative Jobsuchende zu begeistern, höhere Erfolgchancen bei der Rekrutierung unternehmerisch denkender Mitarbeiter haben. Zum anderen zeigt die Arbeit aber auch, dass der Fokus des jeweiligen Geschäftsmodells sowie der spezifische Bedarf an Arbeitnehmern innerhalb der Firmen eine wichtige Rolle spielen. Hinsichtlich der Social Media Aktivitäten betonen die Studienergebnisse die Rolle des konkreten Inhalts und Stils der Recruiting-Kommunikation von Firmen bei der Entwicklung des Arbeitgeberimages zu. Die vorliegende Dissertation liefert anhand der empirischen Studienergebnisse einen entscheidenden

theoretischen Beitrag zur Entrepreneurship und Human Resources Management Literatur, da sie das Konzept der legitimen und zugleich distinktiven Arbeitgeberpositionierung (*legitimate distinctiveness theory*) als zweckmäßige übergeordnete Theorie herausarbeitet und veranschaulicht, wie dieser theoretische Ansatz zu einem besseren Verständnis der verschiedenen Aspekte von Arbeitgeberimage und Arbeitgeberattraktivität beitragen kann. Für Unternehmensgründer, Personaler und Manager im Allgemeinen bietet die Arbeit eine Reihe von Strategien für die Anwerbung unternehmerisch denkender Mitarbeiter wie beispielsweise die explizite Hervorhebung der Unternehmensvision gegenüber potenziellen Mitarbeitern. Weiterhin gibt sie einen Überblick über die von Firmen häufig aufgeführten Aspekte ihres Angebotes als Arbeitgeber sowie praktische Empfehlungen für ein hinsichtlich der Mitarbeitergewinnung erfolgsversprechendes Firmenauftreten innerhalb der sozialen Medien wie beispielsweise Twitter. Nicht zuletzt setzt die Arbeit richtungsweisende Impulse für die weitere Forschung im Bereich der Arbeitgeberattraktivität von Startups und etablierten Firmen. In diesem Zusammenhang schlägt die vorliegende Dissertation unter anderem einen ganzheitlichen Forschungsansatz für Fragen der Personalbeschaffung vor, in dessen Rahmen beispielsweise die Alleinstellungsmerkmale von Startups und etablierten Firmen verglichen und der Einfluss von Unternehmensgröße und –alter untersucht werden, dabei aber auch die Persönlichkeit potenzieller Mitarbeiter berücksichtigt wird.



1 Introduction¹

1.1 Motivation and research questions

‘At a time of unparalleled technological development, it is the human resources that paradoxically spell success or failure for all firms, and especially entrepreneurial ones’

(Katz, Aldrich, Welbourne, & Williams, 2000, p. 7).

The availability and recruitment of talented employees has long been among the top concerns of startup founders and corporate executives. In consecutive studies on the U.S. startup eco-system, over 90% of the founders and executives in question agreed that finding talent is challenging, if not extremely challenging (SVB, 2013, 2017). New ventures that are traditionally known for innovation and growth fear that “the lack of skilled workers inhibits product development and makes it difficult to scale operations” (SVB, 2017, p. 11). Similarly, in a global survey of 1,379 CEOs across 79 countries, 77% of the participating company executives mentioned the missing availability of key skills as one of the top ten threats for their businesses (Snowden, 2017). Since these hiring difficulties do not stem from the current state of the labor markets only, they call for an investigation of applicant attraction in new ventures and large firms.

In large part, the recruitment literature has focused on recruitment processes, practices and activities that an organization can carry out to increase its numbers of applicants, to maintain good standing with potential employees, and to positively influence their job choices (Barber, 1998; Cable & Turban, 2001; Uggerslev, Fassina, & Kraichy, 2012). Instead of following the literature’s focus on understanding recruitment processes (mainly in large firms), this thesis takes the image of a potential employer developed within the minds of potential applicants² as its starting point. With the employer image at the center of the analysis, this thesis asks what firms need to offer, communicate, and promote in order to be perceived as attractive employers. This thesis uses the concept of *legitimate distinctiveness* as its overarching theoretical framework (Moser, Tumasjan, & Welpel, 2017b; Navis & Glynn, 2011). Accordingly, firms have to find the strategic balance between making claims that highlight the extent to which they are different from other firms (i.e., distinctiveness) and making claims of their legitimacy as a company (Deephouse, 1999). In line with this

¹ This section is partly based on Moser, Tumasjan, and Welpel (2017a, 2017b), and Moser, Tumasjan, Cable, and Welpel (2017).

² The terms potential applicant, candidate, potential employee, and job seeker are used as synonymously in this thesis.

thinking, a central argument of this thesis is that firms make heterogeneous claims to emphasize the *distinctiveness* of their employment offering from other firms as well as homogeneous claims to emphasize the *legitimacy* of their employment offering by fulfilling the same market rules, standards, and norms that other firms fulfill.

Based on these heterogeneous and homogeneous recruitment-related identity claims, potential employees develop a set of beliefs about an employer (i.e., employer image) and its employment offering (Cable & Turban, 2001). If potential applicants hold a favorable employer image of an organization, they may also develop a positive attitude or affect towards a potential employer with the intentions of entering an employee-employer relationship with the employing firm (Aiman-Smith, Bauer, & Cable, 2001). In its study of antecedents of potential applicants' employer image and its effect on employer attractiveness, this thesis focuses in large part on new ventures.

New ventures (often referred to as "startups") are characterized by their young age, their small number of employees and the liabilities of smallness and newness (Aldrich & Auster, 1986; Williamson, Cable, & Aldrich, 2002). More specifically, compared to large, established firms, new ventures face organizational challenges related to their firm size and age such as limited availability of resources, low familiarity or awareness among their constituents (as well as among potential employees), and limited legitimacy (Williamson, 2000).

As a result, predictors of applicant attraction that are well-researched for large, established firms (e.g., high compensation, elaborate benefits, and extensive training) are not directly applicable to new ventures because the latter lack the required financial or organizational resources to offer such inducements (Williamson et al., 2002). In lieu of providing the costly inducements offered by large firms, previous research suggests that small firms should rely on other recruitment strategies to attract applicants (e.g., Williamson, 2000; Williamson et al., 2002). In a conceptual article, Williamson et al. (2002) propose that to attract qualified employees, new ventures should capitalize on their distinct and attractive employer attributes that large firms typically cannot offer (e.g., low hierarchies or high task variety).

Despite its importance, however, applicant attraction still remains a woefully under-researched area (Cardon & Stevens, 2004; Edelson, Haynie, & McKelvie, 2011). The overwhelming majority of the human resource management (HRM) literature has focused on investigating HR issues in the context of large firms (Becker & Huselid, 2006; Jiang, Lepak, Hu, & Baer, 2012; Theurer, Tumasjan, Welpe, & Lievens, 2016; Uggerslev et al., 2012),

whereas HRM issues in new ventures have – with a few notable exceptions (Hauswald, Hack, Kellermanns, & Patzelt, 2015; Heneman, Tansky, & Camp, 2000; Hornsby & Kuratko, 1990; Leung, Zhang, Wong, & Foo, 2006; Tumasjan, Strobel, & Welpe, 2011) – received much less research attention (Cardon, 2003; Katz et al., 2000). As a result, this thesis addresses the following three main gaps in the current state of research on applicant attraction.

First, although there is a large body of extant research on the importance of organizational processes, practices and activities for employer attractiveness in the context of large firms (Barber, 1998; Cable & Turban, 2001; Uggerslev et al., 2012), our understanding of applicant attraction in the context of new ventures is very limited (Cardon & Stevens, 2004; Greer, Carr, & Hipp, 2016). A notable example of research that advances our understanding of employer attractiveness of small firms compared to established organization is a conceptual article by Williamson et al. (2002). In this article, the authors argue that small, nascent firms should capitalize on their new-venture-specific employment offering (e.g., flat hierarchies or high task variety) to make heterogeneous identity claims that help them to ‘stand out’ among potential competitors. Other studies similarly find that new ventures require a unique set of startup-specific employer attributes to attract talented employees (Cardon & Tarique, 2008; Edelson et al., 2011; Oikarinen & Saraniemi, 2016; Tumasjan et al., 2011). Nonetheless, these studies do not provide a comprehensive theoretical framework for studying employer attractiveness in new ventures that incorporates both heterogeneous and homogeneous recruitment-related identity claims. In addition, there is little research on the question of whether heterogeneous or homogeneous identity claims are more important in potential applicants’ employer attractiveness judgements. Furthermore, extant research does not address the question of how resource-constrained new ventures can accumulate entrepreneurially-minded human capital (Hayton, 2003) that is helpful to compensate for their liabilities of newness and smallness (Aldrich & Auster, 1986).

Second, although the recruitment literature suggests that firms may use heterogeneous recruitment-related identity claims to emphasize their distinctiveness from other firms (Lievens & Highhouse, 2003; Lievens & Slaughter, 2016; Williamson et al., 2002), there is little evidence in the literature regarding the specific combinations of employer attributes that are associated with high employer attractiveness. However, understanding how different employer attributes influence each other is important in order to be able to propose an attractive employment offering. In this regard, an important difference between large firms and new ventures concerns the resources available to position a firm as attractive employer. In contrast to large firms, new ventures can often only offer a limited set of benefits to

potential employees due to scarce resources (Tumasjan et al., 2011; Williamson et al., 2002). Although new ventures could try to match large firms and offer comparable employer benefits, this is unrealistic for most new ventures given their often scant resources and young age (Aldrich & Auster, 1986; Williamson et al., 2002). New ventures may need to focus on a limited number of heterogeneous identity claims. In this regard, a theoretical puzzle surrounds the question of whether making a higher number of heterogeneous identity claims (e.g., in the form of employer benefits) will always lead to higher employer attractiveness compared to concentrating on fewer claims. In other words, it remains unknown whether, alternatively, a smaller set of well-chosen identity claims may likewise lead to high levels of employer attractiveness. Due to the high number of potential heterogeneous recruitment-related identity claims that new ventures may make, the different business models that new ventures may follow, and the different human capital needs that new ventures may face, this theoretical puzzle presents research with a conundrum of great causal complexity (Misangyi et al., 2017). For example, while one start-up may appear attractive because it specifically promotes its identity as an employer through a casual company culture in combination with an intriguing firm vision, another start-up might appear equally attractive because it positions its identity as an employer through an innovative work environment and competitive salaries. This theoretical conundrum calls for a compensatory theory that explains how combinations of different heterogeneous recruitment-related identity claims are associated with high employer attractiveness.

Third, in practice, employer communication for heterogeneous recruitment-related identity claims has extended beyond the confines of traditional channels (e.g., job ads, newspaper advertisements, corporate websites) to, for example, social media. However, very little research has studied how employer communication of heterogeneous identity claims affects potential applicants' reactions to employer communication. The literature remains scant with regard to central elements of employer communication, namely the content of identity claims (i.e., *what* do firms communicate?) and the style of those claims (i.e., *how* do firms communicate?) (McQuail & Windahl, 1993; Shannon & Weaver, 1949). For example, with regard to *content*, firms may make purely work-related identity claims (e.g., communicating pay levels, job requirements, and skills) or decide to make non-work-related identity claims (e.g., communicating their employees' leisure activities, family benefits, and general life advice) to connect to potential applicants' identities (Rousseau, 1990). With regard to *style*, this research discusses two fundamental communication principles to trigger audience engagement, namely the distinctiveness and emotionality of claims (e.g., Keller,

2009; Thompson, Rindfleisch, & Arsel, 2006). Making claims in a *distinctive*, company-specific style is essential to differentiate firms from their competitors (e.g., Holt, 2004; Rossolatos, 2013). Making claims with an *emotional* style has been widely heralded as vital for creating high audience engagement (Thompson, Rindfleisch, & Arsel, 2006). However, it remains unclear how these different styles are perceived by potential employees. Whereas these communication principles are well-established in marketing research, there is little research regarding these principles in the recruitment literature.

This thesis addresses these research gaps identified in the literature by investigating the importance of heterogeneous and homogeneous recruitment-related identity claims for firms' employer attractiveness. In this vein, this thesis focuses on the following three main research questions:

- (1) How do new ventures' heterogeneous and homogeneous recruitment-related identity claims influence potential applicants' employer attractiveness judgements, and are these judgements affected by aspects of potential applicants' entrepreneurially-minded personality?
- (2) Which combinations of new ventures' heterogeneous recruitment-related identity claims can be associated with high employer attractiveness, and do these combinations differ dependent on firms' business model focus and human capital needs?
- (3) Which types of heterogeneous recruitment-related identity claims lead to higher engagement of potential applicants in social media, and how do the engagement levels differ according to the claims' content (work-related vs. non-work-related) and style (emotional vs. distinctive)?

The present thesis addresses these research questions by building and testing a theory on the role of heterogeneous and homogeneous recruitment-related identity claims for firms' attractiveness in entrepreneurial and large firm contexts. In doing so, it contributes to the current state of the entrepreneurship and human resource management literature in the following ways.

First, this thesis contributes to the understanding of how new ventures can use heterogeneous and homogeneous identity claims to position themselves as distinct and legitimate employers (Navis & Glynn, 2011). Specifically, this thesis juxtaposes theories from human resources management research (Ryan, 2012) and legitimacy research

(Bitektine, 2011; Williamson, 2000) to conceptualize the dimensions of new ventures' employment offerings. Based on this conceptualization, it derives a ranking of the importance of these dimensions as predictors of employer attractiveness. In this regard, this thesis also draws on theories about individuals' entrepreneurial orientation (de Jong, Parker, Wennekers, & Wu, 2015) to test whether and to what extent the theory's dimensions are important for attracting entrepreneurially-minded employees. Thereby, this thesis presents one of the first studies in the context of new venture recruitment to combine research on entrepreneurial behaviors, theories from human resources management research (Ryan, 2012) and legitimacy research (e.g., Bowen, Ledford, & Nathan, 1991; Greer et al., 2016; Lee, Wong, Foo, & Leung, 2011; Tumasjan et al., 2011; Zhao & Seibert, 2006). The empirical findings of the present thesis illustrate how person-organization fit theory can help new ventures to attract entrepreneurially-minded employees (Kristof-Brown, Zimmerman, & Johnson, 2005) and thereby strengthen new ventures' strategic human capital to enhance their competitive advantage and contribute to firm success (Oh, Kim, & Van Iddekinge, 2015).

Second, to explain the relative importance of heterogeneous recruitment-related identity claims, this thesis proposes and empirically tests a compensatory theory of new venture employer attractiveness. More specifically, the instrumental-symbolic theory, which distinguishes firms' heterogeneous identity claims by their tangible, objective (i.e., instrumental) and intangible, subjective (i.e., symbolic) nature (Lievens & Highhouse, 2003) is integrated with the neo-configurational theoretical perspective (Misangyi et al., 2017). The neo-configurational theoretical perspective argues that several different combinations of heterogeneous claims may equally lead to high employer attractiveness. In line with extant research (e.g., Fiss, 2011; Garcia-Castro & Aguilera, 2014; Katz & Kahn, 1978; Meuer, 2016; Misangyi et al., 2017), this thesis assumes and tests whether the same goal (i.e., high employer attractiveness) may be reached through different pathways and using different starting points. Thus, in the compensatory theoretical model of new venture employer attractiveness, this thesis argues that new ventures may need to focus their limited resources on promoting a combination of distinct, firm-specific (i.e., distinct from competitors), tangible (i.e., instrumental), and intangible (i.e., symbolic) employer benefits (i.e., summarized as heterogeneous claims) to potential employees (Baron, 2003; Wright, Dunford, & Snell, 2001).

Third, to explain what kind of heterogeneous recruitment-related identity claims lead to the engagement of job seekers and potential applicants with an organization, this thesis develops and tests hypotheses regarding how applicants should be affected by the content and

style of identity claims. To study the effect of claims' content on engagement, this thesis draws on psychological contract theory (Rousseau, 1990; Ryan, 2012) and investigates transactional (i.e., work-related) and relational (i.e., non-work-related) content dimensions in firms' social media messages. To study the effect of claims' style on engagement, this thesis theorizes about distinctiveness (i.e., the amount of unique and novel content contained in identity claims) and emotional tone (i.e., the total sentiment of a claim). While studying content and style of messages has received a great deal of attention in the marketing literature (e.g., Dobele, Lindgreen, Beverland, Vanhamme, & van Wijk, 2007; Lievens & Slaughter, 2016), it has been virtually overlooked in the recruitment literature. As such, this thesis contributes to the HRM literature in general and to research on applicant attraction in particular (Lievens & Slaughter, 2016; McFarland & Ployhart, 2015). To study applicants' engagement with an organization based on its heterogeneous identity claims, this thesis collects and studies a large sample of social media messages. Thereby, the present work responds to recent calls in the literature to keep pace with the emerging trends in social media (Collins & Kanar, 2013; Lievens & Slaughter, 2016; McFarland & Ployhart, 2015). In addition to contributing to theory, this thesis also makes an important methodological contribution by using computational linguistics methods to identify themes in firms' social media communication. This approach makes it possible to examine which identity claims resonates with potential applicants and, as a consequence, increases their engagement with a potential employer (Collins & Kanar, 2013; Turban & Cable, 2003).

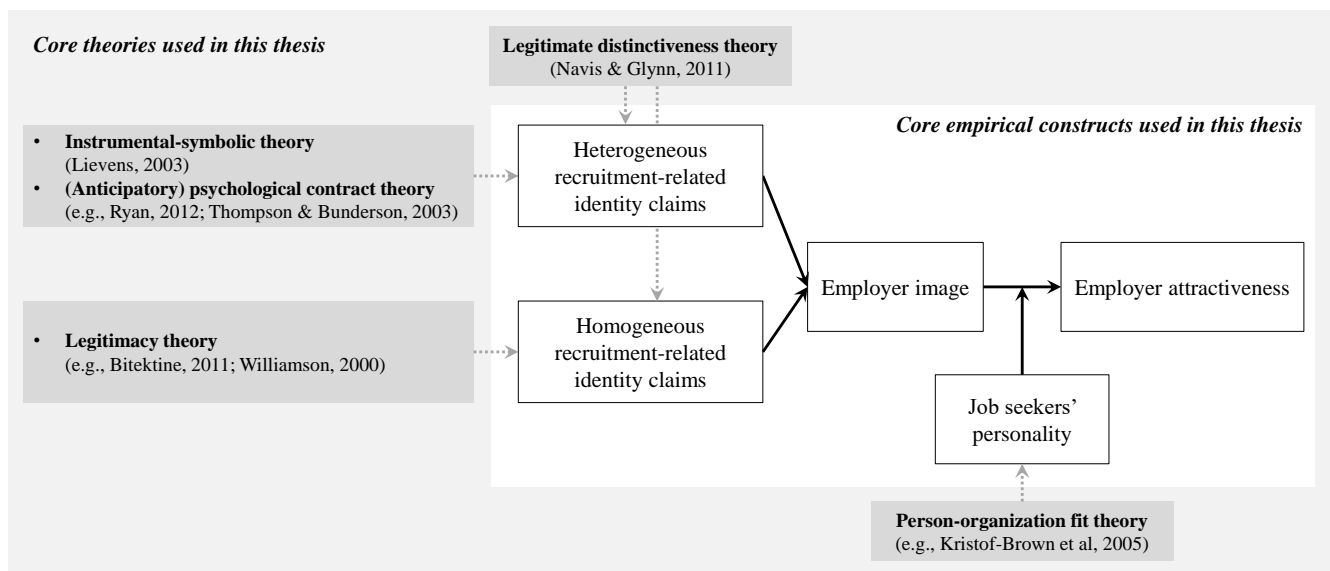
1.2 Theoretical background

There is very little doubt that individuals' behaviors are influenced by their beliefs and that individuals' knowledge plays a major part in how their beliefs are formed (Cable, Aiman-Smith, Mulvey, & Edwards, 2014). From a potential applicant attraction perspective, it is thus essential to understand that potential applicants' knowledge about a firm determines whether or not they find a firm attractive as a potential employer. As a consequence, what potential employees know or do not know becomes the "primary source of a firm's recruitment success or failure" (Cable & Turban, 2001, p. 120). In this regard, a potential applicant's familiarity with an organization plays an important role. Potential applicants that are more familiar with a potential employer (e.g., through personal connections) are likely to have more information about the firm's employment offering than potential applicants that have limited information about a potential employer (e.g., those whose source of information is a firm's job posting) (Cable et al., 2014; Lievens & Slaughter, 2016). Information about

and familiarity with a potential employer is also dependent on the employer's reputation. Reputable potential employers that are publicly known (e.g., through general news or a strong product brand) tend to enjoy higher familiarity among potential employees (Collins, 2007; Turban & Cable, 2003). Based on the information about a potential employer and its employment offering, potential applicants form a mental image about an employer. This employer image has been defined as a "set of beliefs that a job seeker holds about the attributes of an organization" (Cable & Turban, 2001, p. 125). Since beliefs influence behavior, job seekers' employer image as a basis of beliefs about and judgements of the attractiveness of an organization, also affects their attitudes and job search behaviors (Breaugh & Starke, 2000; Cable & Graham, 2000; Lievens & Slaughter, 2016).

FIGURE 1.1

Graphical representation of conceptual links between different theoretical frameworks



Note: The center of this figure (displayed with a white background) illustrates the conceptual links between the core empirical constructs investigated in this thesis. The outer area of the figure (displayed with a grey background) shows the core theories used to derive the empirical constructs.

This thesis draws on several theories that aid in understanding how potential applicants develop an employer image, which determines whether they find a potential employer attractive and serves as a basis for their decision of whether or not to apply. Figure 1.1 provides a conceptual overview of how these theories fit with employer image and employer attractiveness, which are the main subjects of analysis in this thesis.

This thesis addresses employer attractiveness from two theoretical perspectives. Namely, it addresses how firms balance both distinctiveness (i.e., "standing out"/ appearing different from established conventions) and legitimacy (i.e., "fitting in" / appearing similar to

established conventions) in their appearance in order to be perceived as attractive, trustworthy employers. Accordingly, firms have to create an employer image in the minds of potential employees that is different from that of other firms competing for the same talent pool but that, at the same time, fulfills the expectations of potential employees of a credible and trustworthy employer. In the extant literature, this balancing act has been called *legitimate distinctiveness* (Navis & Glynn, 2011). To achieve legitimate distinctiveness, firms have to make both heterogeneous (i.e., appearing distinct) and homogeneous (i.e., appearing legitimate) identity claims.

In the context of recruitment, firms make *heterogeneous* recruitment-related identity claims to differentiate themselves from other firms through their employment offering. This thesis draws on two prominent theories to study the importance of firms' heterogeneous identity claims for their employer attractiveness, namely the instrumental-symbolic theory (Lievens & Highhouse, 2003) and the (anticipatory) psychological contract theory (Rousseau, 1990; Ryan, 2012; Thompson & Bunderson, 2003). While research using the instrumental-symbolic theory tends to study specific aspects of firms' employment offering, (anticipatory) psychological contract theory provides a more holistic theoretical view on firms' employment offering.

On the one hand, the *instrumental-symbolic theory* for recruitment argues that firms' employer image consists of instrumental (i.e., factual and tangible) and symbolic (i.e., subjective and intangible) aspects (Lievens & Highhouse, 2003). Accordingly, firms may influence their employer image by making instrumental identity claims (e.g., factual claims about salary levels) or symbolic identity claims (e.g., intangible claims about the company prestige).

On the other hand, *psychological contract theory* allows researchers to study the perceived obligations that arise in the relationship between employees and an employer (Rousseau, 1990; Thompson & Bunderson, 2003). Recent research has argued that the psychological contract is already formed in the applicant attraction phase (Ryan, 2012). Accordingly, firms may influence their employer image by making heterogeneous identity claims as part of the so-called anticipatory psychological contract formation (i.e., the psychological contract that is formed during the applicant attraction phase) (Moser, Tumasjan, & Welpe, 2017b; Ryan, 2012).

From a recruitment perspective, firms make *homogeneous* recruitment-related identity claims to nurture the employer image of a credible and trustworthy employer that fulfills the roles and rules of action commonly accepted in the constituents' social system (Bitektine,

2011; Zimmerman & Zeitz, 2002). While larger, established firms usually have already built up legitimacy with their constituents, new ventures' legitimacy tends to be low due to their young age and small size, and must be developed over time (Williamson et al., 2002). Thus, new ventures in particular have to make homogeneous recruitment-related identity claims in order to create legitimacy with potential employees.

In summary, this thesis argues that firms may create an attractive employer image in the minds of potential employees if they make attractive heterogeneous and homogeneous identity claims. However, whether or not the employer image actually increases their employer attractiveness is also dependent on the personal needs and values of a potential employee. More specifically, a potential applicant's employer image of a firm will only lead to favorable employer attractiveness judgements if the potential applicant perceives a fit between his/her personal needs and values and the employing organization with its corresponding work environment (Kristof-Brown et al., 2005; Kristof, 1996). To study this matching process, this thesis draws on person-organization (PO) fit theory, which makes it possible to describe the degree to which an individual's values, attributes and characteristics match those of the recruiting organization (Cable & Judge, 1996; Kristof, 1996). If the PO fit between a potential applicant and an employer is high, then a favorable employer image is more likely to lead to increased employer attractiveness.

The following sections will briefly introduce the theories depicted in Figure 1.1 and describe the theories' core tenets as well as their applicability in research on employer attractiveness in new ventures and large firms.

1.2.1 Employer attractiveness in new ventures and large firms

Existing literature researching the attractiveness of organizations as employer and the antecedents of employer attractiveness has introduced a plethora of terms to describe what has been defined as "an attitude or expressed general positive affect toward an organization, toward viewing the [organization] as a desirable entity with which to initiate some relationship" (Aiman-Smith et al., 2001, p. 221). Based such definitions, previous research most commonly uses the terms "organizational attractiveness" or "employer attractiveness" to describe the subject of analysis in their studies of the process of applicant attraction within different organizational settings (Devendorf & Highhouse, 2008; Heneman & Berkley, 1999; Lievens & Slaughter, 2016; Moser, Tumasjan, & Welp, 2017b; Theurer et al., 2016; Tumasjan et al., 2011; Turban, Lau, Ngo, Chow, & Si, 2001).

The motivation of employer attractiveness research stems from the fact that both new ventures and large firms require talented employees to ensure the growth and success of their operations (Williamson et al., 2002). To attract talented employees, firms must offer a set of employment-related benefits that potential applicants find sufficiently attractive for them to consider employment with the firm (Lievens & Slaughter, 2016). Employer benefits may have very different forms, ranging from tangible benefits such as pay or health insurance to intangible benefits such as a feeling of belonging created by an involving organizational culture (Lievens & Slaughter, 2016; Uggerslev et al., 2012). The attractiveness of an employer is formed based on the image that potential applicants hold depending on the subjective value they assign to each benefit that a potential employer is offering. Therefore, in this thesis, employer attractiveness is defined as the *aggregated sum of all potential applicants' subjective impressions about the attractiveness of an organization's claims regarding its employment offering*.

In line with extant literature (Cable & Turban, 2001; Lievens & Slaughter, 2016), this definition implies that job seekers' employer attractiveness judgements are dependent on their knowledge about a potential employer. Thus, job seekers looking for employment in *new ventures* typically form judgements of the attractiveness of new ventures' employment offerings based on the limited factual information publicly available. Such sources may include, for example, companies' websites, their job postings (Allen, Mahto, & Otondo, 2007), or informal information retrieved from personal connections through co-workers or friends (Heneman & Berkley, 1999; Patel & Cardon, 2010). Consequently, the resulting judgements of potential employees are subjective impressions, often formed on a scarce factual basis. Job seekers looking for employment in *large established firms* (vs. new ventures) typically have more factual information available about an employer and its employment offering (Allen et al., 2007). Information about large, established firms is often available from public sources such as news because of their strong brand positioning (Cable & Turban, 2001).

However, more recently, other sources of information such as social media have become more important for potential employees to form their employer attractiveness judgements (McFarland & Ployhart, 2015; Moser, Tumasjan, Cable, & Welpe, 2017). Social media help both new ventures and large firms to address their specific target employee group using the digital information conduits prevalent in today's society.

1.2.2 Instrumental and symbolic theory

In seeking to understand what constitutes an attractive employer, extant research has put a strong emphasis on studying the antecedents of a favorable employer image (Cable & Turban, 2001; Lievens & Slaughter, 2016). This stream of research aims at understanding how and to what extent promoting “a clear view of what makes a firm different and desirable as an employer” (Lievens, Van Hove, & Anseel, 2007, p. 51) can positively influence applicants’ employer image. It therefore fits well with the definition of heterogeneous recruitment-related identity claims (see also Figure 1.1). Research following this focus takes a so-called elementalistic perspective on employer image (Lievens & Slaughter, 2016) and commonly distinguishes instrumental (i.e., factual and tangible) from symbolic (i.e., subjective, intangible) aspects of employer image (Lievens & Highhouse, 2003). Consequently, this stream of research is referred to as instrumental-symbolic theory. Whereas instrumental aspects of employer image can be described as consisting of tangible and objective attributes possessing a utilitarian value for job seekers (Lievens & Slaughter, 2016), symbolic aspects of employer image describe a firm in terms of subjective, intangible attributes and imagery (i.e., metaphorical associations with a firm) (Lievens & Slaughter, 2016; Slaughter, Zickar, Highhouse, & Mohr, 2004a).

When studying the effect of *instrumental* employer attributes on the perception of firms as employers, extant research mostly follows an inductive, individual-firm approach, since employer attributes often vary across research settings and subjects of analysis. In practice, instrumental aspects include, for example, a firm’s office environment, the offering of structured learning possibilities, or remuneration packages. The existing research on instrumental aspects of employer image has so far mainly concentrated on large, established firms (Cable & Graham, 2000; Highhouse, Lievens, & Sinar, 2003; Lievens & Slaughter, 2016). For example, Lievens and Highhouse (2003) and Lievens (2007) studied the effect of instrumental aspects of employer image on employer attractiveness in the banking industry as well as in the Belgian army. Although these studies support the importance of promoting instrumental employer attributes as a strategy to increase an employer’s attractiveness (e.g., Lievens & Highhouse, 2003), they mostly analyze the effect of instrumental employer attributes connected to large financial resources (e.g., compensation, bonuses, and training) (Berthon, Ewing, & Hah, 2005; Boswell, Roehling, Lepine, & Moynihan, 2003; Cable & Graham, 2000; Lievens & Highhouse, 2003; Uggerslev et al., 2012; Van Hove & Saks, 2011).

Symbolic aspects of employer image describe an employer based on intangible and subjective attributes (Lievens & Slaughter, 2016). Such attributes have also been called personality trait inferences about the organization (Slaughter, Zickar, Highhouse, & Mohr, 2004b). Social-identity theory posits that job seekers are attracted to organizations that promote symbolic aspects of their employer image that match job seekers' personal needs and values (Highhouse, Thornbury, & Little, 2007). For instance, job seekers might be attracted to organizations conveying a prestigious employer image because being associated with a prestigious organization can help them to maintain "self-esteem by making sure [they are] regarded favorably by significant others" (Highhouse et al., 2007, p. 137). Previous research has generally found a positive effect of symbolic employer attributes on employer attractiveness (e.g., Lievens & Slaughter, 2016; Van Hove, Bas, Cromheecke, & Lievens, 2013). The majority of these studies have been conducted in large-firm contexts, such as in the financial industry (e.g., Lievens & Highhouse, 2003; Segalla, Sauquet, & Turati, 2001), the military (e.g., Lievens, Van Hove, & Schreurs, 2005), or the nursing industry (e.g., Van Hove, 2008). In contrast, the importance of symbolic employer attributes for new venture recruitment remains woefully understudied.

The instrumental-symbolic theory has gained popularity in research about firms' employer attractiveness in part due to its theoretical relationship with (product) brand theories in the marketing literature (Lievens & Highhouse, 2003; Lievens & Slaughter, 2016). For example, the distinction between instrumental and symbolic employer attributes is in line with the distinction between functional (i.e., instrumental) and symbolic product brand attributes (Keller, 1993). Therefore, the instrumental-symbolic literature follows the argument that employer brands are conceptually comparable to product or corporate brands and thus a similar line of thinking may contribute to our understanding of firms' employer attributes and their influence on employer attractiveness (Theurer et al., 2016).

Furthermore, the instrumental-symbolic theory is well-suited to studying the influence of fine-grained, firm-specific instrumental attributes such as pay, advancement, or the firm's location as well as symbolic trait-inferences such as innovativeness, competence or prestige. However, existing studies have investigated very specific industries and organizational forms, and thus these studies include only a limited number of instrumental and symbolic employer attributes. Notable exceptions of the single-firm focus of most of these studies are meta-analytical reviews (e.g., Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Uggerslev et al., 2012). These reviews examined recruitment predictors and applicant attraction outcomes across various studies and industries from a general HRM perspective on recruitment with a

focus on job and recruiter characteristics and perceptions of the recruiting process. However, the perspective of these reviews does not include the brand marketing view on recruitment and hence falls short of explaining how companies can build up a distinct employment brand to increase their employer attractiveness.

In summary, the distinction between instrumental and symbolic employer attributes is a well-established theoretical framework that may offer guidance in studying heterogeneous recruitment-related identity claims as antecedents of employer attractiveness from a recruitment marketing perspective (see Figure 1.1). However, it does not capture the employment offering of firms in a holistic and comprehensive way, since operationalizations of the instrumental-symbolic framework in extant studies tend to rely on industry- or firm-specific employer attributes rather than on all-encompassing theoretical elements (Moser, Tumasjan, & Welppe, 2017b).

1.2.3 Anticipatory psychological contract theory

Psychological contract theory describes the relationship between (potential) employees and an employer (Thompson & Bunderson, 2003). This well-established theoretical framework allows researchers to seek an understanding of the perceived obligations in the employer-employee relationship (Rousseau, 1990). More recent studies have pointed out that this psychological contract is already formed during the recruitment stages (Ryan, 2012). This so-called anticipatory psychological contract summarizes the beliefs about the *anticipated* contractual obligations between employees and an employer. As such, the anticipatory psychological contract theory serves well to study heterogeneous recruitment-related identity claims on a more holistic level (see Figure 1.1). According to anticipatory psychological contract theory, job seekers base their job decisions primarily on three types of employment-related claims: *transactional* claims (i.e., specific and usually monetary exchanges, e.g., remuneration), *relational* claims (i.e., socioemotional exchanges, e.g., perceived team support), and *ideological* claims (i.e., commitment to a valued cause, e.g., new ventures' strategic vision; Ryan, 2012; Thompson & Bunderson, 2003).

Transactional claims include specific monetary and non-monetary aspects and are comparable to instrumental employer attributes (Edwards, 2010), which describe firms' employment offerings in terms of objective, tangible, and factual attributes (Lievens & Highhouse, 2003). From the perspective of new ventures, such transactional claims may include monetary inducements such as salary, bonus payments, or (health) insurance

(Uggerslev et al., 2012), as well as non-monetary inducements such as flexible working hours, free drinks, sports classes, and day-care support for children (HBR, 2015).

Relational claims are often described as socioemotional exchanges between potential employees and a recruiting firm. Practical examples of relational claims include, for example, the perceived company culture and innovation climate; levels of managerial or team support; and opportunities for feedback, informal learning, and creative thinking (Moser, Tumasjan, & Welpe, 2017b; Ryan, 2012). New ventures – which are often characterized by shared competencies and mutual support (Blatt, 2009; Mossholder, Richardson, & Settoon, 2011), a reduced focus on hierarchies, broader responsibilities assigned to individual employees (Cardon & Stevens, 2004), young age, informal management practices, job autonomy and task variety (Baron, 2003) – make relational claims that, for many startup employees, form attractive work environments (HBR, 2015; Moser, Tumasjan, & Welpe, 2017b). For example, studies have shown that less formal work environments and the empowerment of individual employees to contribute to the organization's success are important reasons for potential employees to prefer new ventures as employers (Cardon & Stevens, 2004). However, in practice, the presence of relational claims may differ greatly among new ventures. Whereas some new ventures purposely ensure supportive and creative work environments and implement company cultures designed to attract top talent from their inception, others realize the importance of attractive relational employer attributes either much later or never (Barringer, Jones, & Neubaum, 2005).

Ideological claims describe a firm's commitment to a valued, cause-driven vision or mission (Ryan, 2012; Thompson & Bunderson, 2003) and are important motivating factors beyond providing monetary compensation for employees to complete tasks. In practice, ideological claims may appear in the form of a company vision or mission and are often used to steer firms' organizational efforts toward joint goals (Barringer et al., 2005). New ventures' commitment to a vision and relentless pursuit of a mission are connected to their ability to create novel products or services (e.g., Baum et al., 1998; Rosenbusch, Brinckmann, & Bausch, 2011). Research has also shown that developing a strong company vision and maintaining an innovative image is beneficial for new ventures because it increases their attractiveness as employers (e.g., Slaughter et al., 2004a; Walker, Feild, Giles, Bernerth, & Short, 2011).

In summary, anticipatory psychological contract theory presents a well-established theory that is useful to study heterogeneous recruitment-related identity claims as antecedents of employer attractiveness from a more holistic theoretical viewpoint (see Figure 1.1).

1.2.4 Legitimacy theory

Institutional theory states that organizations are subject to continuous influence by institutional forces (i.e., social actors) (Bitektine, 2011; Deephouse, 1996; Suchman, 1995). As such, this thesis also incorporates aspects of institutional theory, in the form of legitimacy theory (Williamson, 2000), to study firms' homogeneous recruitment-related identity claims (see Figure 1.1). The legitimacy of every organization is judged by constituents (e.g., potential employees), who evaluate the organization according to roles and rules of action commonly accepted in the constituents' social system (Bitektine, 2011; Zimmerman & Zeitz, 2002). In the context of recruitment, job seekers – arguably the main social actors – evaluate the employer's legitimacy, defined as a “generalized perception or assumption held by job applicants that an organization is a desirable, proper, or appropriate employer given the system of norms, values, beliefs, and definitions that exist within an industry” (Williamson, 2000, p. 28).

Research has shown that new ventures are heavily influenced by institutional forces and are subject to liabilities regarding their firm size (i.e., liabilities of smallness) and firm age (i.e., liabilities of newness) (Aldrich & Auster, 1986; Stinchcombe, 1965). While the concept of legitimacy per se has been widely investigated, there is a dearth of empirical research addressing the employer legitimacy of startups. In his conceptual article on small businesses, Williamson (2000) suggests that job seekers evaluate the employer legitimacy of an organization mainly based on its recruitment procedures. Since new ventures (in contrast to small firms) often have not yet established professional recruitment procedures or HR policies (Leung, 2003; Leung et al., 2006), this thesis focuses on the analysis of two salient legitimacy signals that are particularly important for job seekers' evaluation of employer legitimacy in startups – namely, the *legitimacy of the founder(s)* and the *legitimacy of the startup* itself.

Undoubtedly, startup founders are of key importance for new venture success. Since potential employees usually have very little information about new ventures (i.e., due to liabilities of smallness; Aldrich and Auster, 1986), founders of such ventures receive special attention when potential employees form legitimacy judgments. From a cognitive legitimacy perspective, constituents (i.e., job seekers) categorize subjects (i.e., founders of a startup) based on a set of characteristics common in their social system (i.e., startup founders are judged on the basis of social norms formed by other successful startups) (Bitektine, 2011; Shepherd & Zacharakis, 2003; Überbacher, 2014). Extending Williamson's (2000) concept of employer legitimacy, *founder legitimacy* can be defined as a derivative of cognitive

legitimacy, which is gained through a (team of) qualified founder(s). Founders signal their competence through factors such as previous education (e.g., at prestigious universities) or their personal track record (e.g., work experience at renowned companies). Founder legitimacy is increased if startup founders demonstrate their ability to comply with the incumbent standards (i.e., expectations of potential employees) in their business field and at the same time convince their potential employees that they have the means to successfully innovate or change the business field in which they are active (De Clercq & Voronov, 2009; Deeds, DeCarolis, & Chaganti, 1995; Zimmerman & Zeitz, 2002). Since, the founders' capability to build up legitimacy for their startup and acquire the necessary resources ultimately determines startup survival, founder legitimacy influences the attractiveness of a startup as a potential employer (Moser, Tumasjan, & Welppe, 2017b).

Startup employees face the uncertainty of not knowing whether or not their employer will be successful in the future (Aldrich & Auster, 1986). Consequently, homogeneous claims signaling potential firm success are an important part of potential employees' decision set (Williamson, 2000). Thus, in addition to founder legitimacy, potential employees' perception of the legitimacy of a startup as an employer is formed on the basis of legitimacy signals about the firm itself. Therefore, *startup legitimacy* can be defined as the extent to which potential employees consider a startup to be a trustworthy and credible employer that is able to live up to its employment promises (Moser, Tumasjan, & Welppe, 2017b). Endorsement by trusted institutions or sources (e.g., support from government programs, venture capital or business angels financing, startup competition awards, or support from a reputable advisory board) increase startup legitimacy (Deephouse, 1996; Rao, 1994; Zimmerman & Zeitz, 2002). Institutional theory argues that endorsement increases startup legitimacy because startups benefit from the legitimacy of the endorsing institution. Endorsement serves as a positive signal for job seekers, indicating positive future development, whereas the absence of endorsement may be considered as a potentially negative signal (Flynn, 1993; Stinchcombe, 1965; Zimmerman & Zeitz, 2002).

In summary, legitimacy theory is well-established in the entrepreneurship literature and, as such, is useful to study homogeneous recruitment-related identity claims as antecedents of employer attractiveness (see Figure 1.1).

1.2.5 Person-organization fit theory

A key determinant of recruiting success is the perceived fit between a potential applicant and the employing organization with its corresponding work environment (Kristof-

Brown et al., 2005; Kristof, 1996). This so-called person-organization (PO) fit can be described as the degree to which an individual's values, attributes and characteristics match these of the recruiting organization (Cable & Judge, 1996; Kristof, 1996). PO fit theory thus helps to explain how potential applicants' perceptions of a firm's employer image form their judgements of the firm's employer attractiveness (see Figure 1.1). PO fit theory is founded on the attraction-selection-attrition (ASA) model (Kristof, 1996; Schneider, 1987). Accordingly, if job seekers perceive congruence of their values, attributes and characteristics with those of a recruiting organization, this perception of fit may lead to employer attraction and may influence future job decisions (Cable & Judge, 1996; Judge & Bretz, 1992; Schneider, 1987).

For example, proactive individuals that favor an innovative, success-driven work environment that allows them to fully express their natural proactivity (Kantner, 1988) might be attracted to startup companies, since startups are known to facilitate finding both sponsorship for new ideas and supporters to quickly implement them. Studies further show a strong link between employee proactivity and both firm innovativeness and firm success (e.g., Crant, 2000; Seibert, Kraimer, & Crant, 2001). Therefore, one would expect to observe high PO fit between a startup with an innovative vision and highly proactive job applicants, because such applicants will see an opportunity to better use their proactive disposition.

Past research developed two major PO fit perspectives, the supplementary vs. complementary perspective and the needs-supplies vs. demands-abilities perspective. First, the supplementary vs. complementary perspective describes either a situation in which an individual's personality characteristics are similar to those of other group members (supplementary perspective) or a situation in which an individual's characteristics add additional value to those of other group members (complementary perspective) (Carless, 2005; Kristof, 1996). Second, the needs-supplies vs. demands-abilities perspective measures whether a job seekers' characteristics matches the employment offering of an organization (needs-supplies perspective) or whether a job seekers' abilities match the demands of the recruiting organization (demands-abilities perspective) (Cable & Judge, 1996; Kristof-Brown et al., 2005; Kristof, 1996).

In summary, incorporating PO fit theory into research on applicant attraction helps researchers to understand how new ventures can build up human capital to ensure firm success and venture growth. Integrating entrepreneurial orientation and PO fit theory provides insights into what kind of employment aspects are particularly attractive to entrepreneurially-minded potential employees (see Figure 1.1).

1.3 Research methods and data sources

The empirical studies of this thesis (Chapters 2 – 4) apply a mix of qualitative methods (i.e., qualitative content analysis) and quantitative methods (i.e., experiments and surveys) using primary data on different samples to address the research questions.

Qualitative research methods, especially content analysis, are used in cases where prior research is scarce (Mayring, 2010, 2014b). The advantages of qualitative research methods lie in their ability to derive meaningful, novel insights from large, unstructured, and often text-based datasets. Whereas quantitative research methods focus on observing specific stimuli and related responses, quantifying and differentiating social conditions or individual behavior, and testing hypotheses related to these observations, qualitative research methods make it possible to analyze a specific context that is not immediately observable (Krippendorff, 1989). Thereby, the results of qualitative research methods such as content analysis help to build new theory (Mayring, 2014b).

Since the topic of applicant attraction in new ventures has thus far remained woefully understudied, qualitative research methods were used in this thesis to uncover new ventures' employer attributes that lead to favorable employer images in the minds of potential applicants (see Chapter 3) as well as to analyze categories of recruitment-related social media content. The disadvantages of qualitative research methods lie in their limitations to perform hypotheses tests and their limited generalizability. As such, qualitative studies should be complemented by additional empirical studies to validate further empirical manifestations of observed phenomena. More specifically, both automated and manual content analyses are subject to classification or categorization errors. To mitigate these drawbacks, the studies presented in this thesis also include reliability tests, as recommended by Krippendorff (2004).

Quantitative research methods are used in cases where prior research has established a theoretical foundation that makes it possible to develop hypotheses and to test them using suitable research methods. The advantages of quantitative research methods lie in their structured approach to data collection and analyses, which allows for replicating and comparing findings across studies (Döring & Bortz, 2016). As such, researchers can build on extant findings to contribute to further advancing the understanding of empirical phenomena. Accordingly, in this thesis, quantitative research methods are used to test hypotheses related to the importance of aspects of firms' employment offerings for potential applicants' employer attractiveness judgements (see Chapter 2), as well as their engagement with a potential employer (see Chapter 4). Furthermore, in the present thesis, quantitative research methods are used in conjunction with qualitative research methods to provide a richer

analysis of the collected datasets, such as, by uncovering several equally viable combinations of new venture employer attributes related to observing favorable employer images (see Chapter 3).

Disadvantages of quantitative research methods include potential response biases in survey methodologies (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) or ordering effects in conjoint experiments (Chrzan, 1994). The present thesis includes methodological steps to control for some of these drawbacks, such as by analyzing test-retest reliabilities or including participant attention tests (see Chapter 2). The following paragraphs describe the methodological approaches and data samples of each empirical study included in this thesis as well as the methods of analysis used to derive meaning from the data. For an overview of these, see Table 1.1.

TABLE 1.1
Overview of the methodological approaches and data samples included in this thesis.

	Chapter 2	Chapter 3	Chapter 4
Subject of analysis	Job seekers' employer attractiveness judgements and their entrepreneurial orientation	New venture employer archetypes and their relation to employer attractiveness ratings	Recruitment-related social media content and relation to candidate engagement measures
Sample	N = 9,824 judgments by 307 job seekers in four US metropolitan areas	N = 219 job postings of high-growth startups and the startups' online employer attractiveness ratings	N = 216,828 tweets from 166 US Fortune 500 firms
Data collection	Online metric conjoint experiment with a post-hoc survey	Online job postings, rating data from Glassdoor.com and kununu.de	Online data from the micro-blogging service Twitter
Methods of analysis	Hierarchical linear modeling (HLM)	Qualitative content analysis, fuzzy set qualitative comparative analysis (fsQCA)	Qualitative content analysis, text categorization using supervised machine learning, regression analysis

First, to study the relationship between new ventures' heterogeneous and homogeneous recruitment-related identity claims and new ventures' attractiveness as employers, as well as the influence of potential applicants' entrepreneurial behaviors on this relationship, this thesis collected responses from a metric conjoint experiment as well as a post-hoc survey on individual-level variables. The final sample of this study (Chapter 2) included 9,824 employer attractiveness judgements made by 307 job seekers. Participants

were recruited in June 2016 from four major metropolitan areas on the US east and west coast in cooperation with an online panel provider and were invited to complete an online questionnaire, with an average duration of 16 minutes. Results are analyzed using hierarchical linear modeling (HLM) based on recommendations by Aguinis et al. (2010, 2013). The combination of a metric conjoint experimentation and a post-hoc survey on participants' behavioral characteristics and personality, using HLM as the method of analysis, is well-established in the entrepreneurship literature (e.g., Shepherd & Patzelt, 2015; Shepherd, Patzelt, & Baron, 2013).³

Second, to advance the understanding of different employer branding strategies of new ventures to develop favorable employer images and to increase their employer attractiveness, a sample of 219 job postings of high-growth startups was collected in summer 2013. Subsequently, following well-established methodological steps (Krippendorff, 1989, 2004; Mayring, 2014b), independent coders in cooperation with the lead researcher developed a series of coding categories (i.e., employer attributes) and analyzed the entire sample of job postings for relevant text sections. The reliability of the coding was analyzed in a series of tests recommended by Krippendorff (2004). The lead researcher then collected employer attractiveness ratings for each of the companies in the sample of job descriptions. Ratings were collected from the publicly accessible online recruitment platforms Glassdoor.com and kununu.de. These efforts led to a dataset containing both the results of the content analysis of all 219 startup job postings and the employer attractiveness ratings of the startups in this sample. In Chapter 3, this dataset is analyzed using a set-theoretic method called fuzzy-set qualitative comparative analysis (fsQCA) (Fiss, 2011; Ragin, 2008). Using fsQCA, a series of equally viable combinations of new venture employer attributes all related to observing favorable employer images is identified. The research design, data sources, and methodological and analytical approaches of this study present an extension of the use of research methods and data sources beyond traditional regression analysis and survey-based datasets in the entrepreneurship literature.

Third, to investigate what kind of recruitment-related social media content is related to the social media engagement of potential applicants with a firm, a sample of 216,828 Twitter messages from the human resource management accounts of Fortune 500 companies was collected. To address this complex, novel dataset, the study presented in Chapter 4

³ An initial version of the study presented in Chapter 2 using the same methodological and analytical approach as the final study was awarded the "Best Empirical Paper" award by the entrepreneurship division at the Academy of Management Annual Meeting 2015 in Vancouver, Canada.

performs a series of methodological and analytical steps. After data collection, the primary researchers defined five content categories that served as coding guidelines for a content analysis of a training sample of 3,215 tweets. Two researchers independently assigned each tweet in the training sample to one of the five content categories. Similarly to the study presented in Chapter 3, the reliability of the coding was analyzed in a series of tests recommended by Krippendorff (2004). This coded training sample served as input for a supervised machine learning model that helped to categorize the remaining tweets in an automated manner. Following a benchmark of different machine learning models, the automated text categorization method of support vector machines (SVM) provided the highest reliabilities (Sebastiani, 2002). To assess additional content-related variables, the entire sample of tweets was analyzed using the automated text categorization software “Linguistic Inquiry and Word Count” (LIWC) (Pennebaker, Boyd, Jordan, & Blackburn, 2015; Tausczik & Pennebaker, 2010). The categorized dataset was then analyzed using negative-binomial regression models. These regression models are commonly used to analyze count-like data comparable to the engagement variables of this thesis (i.e., number of retweets and favorites) and are commonly used in social media research (e.g., Bruns & Stieglitz, 2012; Stieglitz & Dang-Xuan, 2012).

1.4 Structure of the thesis, main results and contributions of each chapter

The main part of this thesis (Chapters 2-4) consists of three empirical studies, each making theoretical contributions to advance the understanding of applicant attraction in entrepreneurial and organizational settings. A dedicated chapter, illustrating at length the specific research questions, theoretical background, data samples, methodology, empirical results, and a discussion of findings and contributions, is devoted to each of the three empirical studies.

The study described in Chapter 2 builds on the concept of legitimate distinctiveness to understand how recruitment-related entrepreneurial identity claims influence applicants’ judgements of new venture employer attractiveness. New ventures achieve legitimate distinctiveness through entrepreneurial identity claims that are either heterogeneous (i.e., claims emphasizing to what extent the firm is different from other competing ventures) or homogeneous (i.e. claims indicating to what extent the firm fits norms and expectations existing within its immediate institutional environment) in nature (Navis & Glynn, 2011). From an employer attractiveness perspective, new ventures have an interest in convincing potential applicants that their employment offering is distinct and thus (potentially) more

attractive compared to other competing startups (i.e., heterogeneous) yet, at the same time, that it meets existing standards and expectations within a given employment context (i.e., homogeneous).

The study described in Chapter 2 takes an applicant perspective and investigates the relative importance of heterogeneous and homogeneous elements of new ventures' employment offerings for new ventures' employer attractiveness. On a theoretical level, the study juxtaposes anticipatory psychological contract theory, describing the ex-ante expected contractual obligations of the employee-employer relationship (Rousseau, 1990; Ryan, 2012; Thompson & Bunderson, 2003), with legitimacy research (Bitektine, 2011; Williamson et al., 2002) to provide novel insights into how new ventures can attract talented employees (Moser, Tumasjan, & Welp, 2017b). On an empirical level, the study finds that heterogeneous elements of new ventures' employment offerings, especially transactional elements such as remuneration, play a more important role in applicants' judgements of new ventures' employer attractiveness than do homogeneous elements such as the legitimacy of the founders. To understand not only how potential employees perceive the attractiveness of new ventures' employment offerings but also why applicants prefer certain aspects of such offerings over others, the study also takes a PO fit perspective (de Jong et al., 2015; Kristof-Brown et al., 2005). From this perspective, the study investigates how applicants' entrepreneurial orientation influences their judgements of the importance of heterogeneous and homogeneous elements of new ventures' employment offerings for employer attractiveness (Moser, Tumasjan, & Welp, 2017b). The study finds cross-level interaction effects of applicants' innovative behavior and, thereby, offers novel insights into which elements of new ventures' employment offerings specifically attract entrepreneurially-minded potential employees.

The study described in Chapter 3 builds on the instrumental-symbolic theory to introduce a compensatory theory of new ventures' employer attractiveness. This compensatory theory contributes to an understanding of how new ventures can offer specific, synergetic combinations of employer benefits (i.e., heterogeneous claims) to increase their employer attractiveness. Since new ventures are typically constrained in their resources (Aldrich & Auster, 1986; Williamson et al., 2002), they may need to focus on a limited number of employer benefits instead of trying to offer as many benefits as possible. Given the countless potential benefits that firms may offer their employees, practitioners and researchers alike face a conundrum of causal complexity that calls for a configurational approach (Misangyi et al., 2017). A configurational perspective argues that several equally

viable configurations of employer benefits may co-exist, all of which can be equally associated with high employer attractiveness.

Based on a review of the relevant HRM and entrepreneurship literature, the compensatory theory outlined in Chapter 3 identifies overarching employer benefit archetypes that describe the potential solution space for possible configurations of employer benefits. Using content analysis (Mayring, 2014a) and set-theoretic methods (Fiss, 2007, 2011), the study empirically identifies seven configurations of new ventures' employer benefit archetypes. The two dominant configurations (one focusing on remuneration and employees' work attitude and the other focusing on employee development and a strong company culture) are conceptually in line with two archetypal HR systems prominently described in the HRM literature (Lepak & Snell, 1999; Mossholder et al., 2011) – namely, “collaborative HR systems” and “commitment HR systems”. While in line with extant HRM literature, the empirical findings outlined in Chapter 3 add a new venture perspective to this literature (Busenitz et al., 2003). In line with recent calls in the literature (Meuer, 2017), the study's findings show that employer attractiveness research can be conceptually and empirically advanced when employer attribute archetypes are studied as synergetic combinations rather than analyzed individually.

The study outlined in Chapter 4 builds on psychological contract theory as a guiding framework to investigate how job seekers' engagement with a potential employer changes according to the firm's social media recruitment messages' content and communication style. Since employer communication has extended beyond the confines of traditional recruitment channels (e.g., job ads, newspaper advertisements, and corporate websites), firms have started to actively use social media to engage with their target audiences (McFarland & Ployhart, 2015; Zhang, Jansen, & Chowdhury, 2011). Therefore, this study aims to understand how firms' recruitment communication affects candidates' reactions to employer communication. Chapter 4 outlines how both message content (i.e., *what* firms communicate) and message style (i.e., *how* firms communicate) influence candidates' engagement (McQuail & Windahl, 1993; Shannon & Weaver, 1949).

With regard to message content, the study develops an understanding of applicants' reactions to transactional, work-related recruitment content versus relational, non-work-related content. In contrast to the positive effects of a transactional recruiting focus traditionally proposed in the HRM literature (Lievens, 2007; Turban & Cable, 2003), the results of the study indicate that communicating about transactional, work-related recruitment

content may have a negative effect on recruitment-related candidate engagement, whereas communicating about relational, non-work-related content increases candidate engagement.

With regard to message style, the study juxtaposes theory about distinctiveness (i.e., communicating unique and novel content) and emotional tone (i.e., the content sentiment) to advance the understanding of antecedents of candidate engagement. The findings indicate a negative effect of emotional tone on potential job candidates' engagement but illustrate that distinctive recruitment messages are well-received by firms' social media audience.

Contributing a recruitment view to the literature on viral marketing, these findings indicate that the sharing and liking behavior of users works differently for *recruitment-related* social media messages compared to other social media contexts where messages with a high emotional tone traditionally create higher engagement (Dobele et al., 2007; Kaplan & Haenlein, 2011). By investigating applicant attraction in the social media context, the study also takes up recent calls in the literature to keep pace with the changing practices of employee recruitment (Collins & Kanar, 2013; Lievens & Slaughter, 2016; McFarland & Ployhart, 2015). The use of computational linguistics methods to identify content themes in firms' social media communication also makes a methodological contribution to the literature by illustrating how such methods can be used to derive meaning from large datasets that would be difficult to analyze with traditional content analysis methods (Joachims, 1998; Mayring, 2014a; Sebastiani, 2002).

1.5 References

- Aguinis, H., & Gottfredson, R. K. (2010). Best-practice recommendations for estimating interaction effects using moderated multiple regression. *Journal of Organizational Behavior, 31*(6), 776–786. <http://doi.org/10.1002/job.686>
- Aguinis, H., Gottfredson, R. K., & Culpepper, S. A. (2013). Best-practice recommendations for estimating cross-level interaction effects using multilevel modeling. *Journal of Management, 39*(6), 1490–1528. <http://doi.org/10.1177/0149206313478188>
- Aiman-Smith, L., Bauer, T. N., & Cable, D. M. (2001). Are you attracted? Do you intend to pursue? A recruiting policy-capturing study. *Journal of Business and Psychology, 16*(2), 219–237. <http://doi.org/10.1023/A:1011157116322>
- Aldrich, H. E., & Auster, E. (1986). Even dwarfs started small: Liabilities of age and size and their strategic implications. *Research in Organizational Behavior, 8*, 165–198.
- Allen, D. G., Mahto, R. V., & Otondo, R. F. (2007). Web-based recruitment: effects of information, organizational brand, and attitudes toward a Web site on applicant attraction. *Journal of Applied Psychology, 92*(6), 1696–1708. <http://doi.org/10.1037/0021-9010.92.6.1696>
- Barber, A. E. (1998). *Recruiting employees: Individual and organizational perspectives*. Thousand Oaks, CA (USA): Sage Publications.
- Baron, R. A. (2003). Human resource management and entrepreneurship: some reciprocal benefits of closer links. *Human Resource Management Review, 13*(2), 253–256. [http://doi.org/10.1016/S1053-4822\(03\)00016-0](http://doi.org/10.1016/S1053-4822(03)00016-0)
- Barringer, B. R., Jones, F. F., & Neubaum, D. O. (2005). A quantitative content analysis of the characteristics of rapid-growth firms and their founders. *Journal of Business Venturing, 20*(5), 663–687. <http://doi.org/10.1016/j.jbusvent.2004.03.004>
- Baum, J. R., Locke, E. A., Kirkpatrick, S. A., Dutterer, I. C., Locke, E. A., Kkkpatrick, S. A., & Kirkpatrick, S. A. (1998). A longitudinal study of the relation of vision and vision communication to venture growth in entrepreneurial firms. *Journal of Applied Psychology, 83*(1), 43–54. <http://doi.org/10.1037/0021-9010.83.1.43>
- Becker, B. E., & Huselid, M. A. (2006). Strategic human resources management: Where do we go from here? *Journal of Management, 32*(6), 898–925. <http://doi.org/10.1177/0149206306293668>
- Berthon, P., Ewing, M., & Hah, L. (2005). Captivating company: Dimensions of attractiveness in employer branding. *International Journal of Advertising, 24*(2), 151–172.
- Bitektine, A. (2011). Toward a theory of social judgments of organizations: The case of legitimacy, reputation, and status. *Academy of Management Review, 36*(1), 151–179.
- Blatt, R. (2009). Tough love: How communal schemas and contracting practices build relational capital in entrepreneurial teams. *Academy of Management Review, 34*(3), 533–551.
- Boswell, W. R., Roehling, M. V., Lepine, M. a., & Moynihan, L. M. (2003). Individual job-choice decisions and the impact of job attributes and recruitment practices: A longitudinal field study. *Human Resource Management, 42*(1), 23–37. <http://doi.org/10.1002/hrm.10062>
- Bowen, D. E., Ledford, G. E., & Nathan, B. R. (1991). Hiring for the organization, not the job. *Academy of Management Perspectives, 5*(4), 35–51. <http://doi.org/10.5465/AME.1991.4274747>
- Breaugh, J. A., & Starke, M. (2000). Research on employee recruitment: so many studies, so many remaining questions. *Journal of Management, 26*(3), 405–434. <http://doi.org/10.1177/014920630002600303>
- Bruns, A., & Stieglitz, S. (2012). Quantitative approaches to comparing communication patterns on Twitter. *Journal of Technology in Human Services, 30*(3–4), 160–185. <http://doi.org/10.1080/15228835.2012.744249>
- Busenitz, L. W., West, G. P., Shepherd, D., Nelson, T., Chandler, G. N., & Zacharakis, A. (2003). Entrepreneurship Research in Emergence: Past Trends and Future Directions. *Journal of Management, 29*(3), 285–308. http://doi.org/10.1016/S0149-2063_03_00013-8

- Cable, D. M., Aiman-Smith, L., Mulvey, P. W., & Edwards, J. R. (2014). The Sources and Accuracy of Job Applicants' Beliefs about Organizational Culture. *Academy of Management Journal*, 43(6), 1076–1085.
- Cable, D. M., & Graham, M. E. (2000). The determinants of job seekers' reputation perceptions. *Journal of Organizational Behavior*, 21(8), 929–947. [http://doi.org/10.1002/1099-1379\(200012\)21:8<929::AID-JOB63>3.0.CO;2-O](http://doi.org/10.1002/1099-1379(200012)21:8<929::AID-JOB63>3.0.CO;2-O)
- Cable, D. M., & Judge, T. A. (1996). Person–Organization Fit, Job Choice Decisions, and Organizational Entry. *Organizational Behavior and Human Decision Processes*, 67(3), 294–311. <http://doi.org/http://dx.doi.org/10.1006/obhd.1996.0081>
- Cable, D. M., & Turban, D. B. (2001). Establishing the dimensions, sources and value of job seekers' employer knowledge during recruitment. In G. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 20, pp. 115–163). New York, NY (USA): Elsevier Science.
- Cardon, M. S. (2003). Contingent labor as an enabler of entrepreneurial growth. *Human Resource Management*, 42(4), 357–373. <http://doi.org/10.1002/hrm.10095>
- Cardon, M. S., & Stevens, C. E. (2004). Managing human resources in small organizations: What do we know? *Human Resource Management Review*, 14(3), 295–323. <http://doi.org/10.1016/j.hrmr.2004.06.001>
- Cardon, M. S., & Tarique, I. (2008). Organizational attractiveness of small businesses. In R. Barrett & S. Mayson (Eds.), *International handbooks of entrepreneurship and HRM* (pp. 345–360). Cheltenham, U.K.: Edward Elgar.
- Carless, S. A. (2005). Person-job fit versus person-organization fit as predictors of organizational attraction and job acceptance intentions: a longitudinal study. *Journal of Occupational & Organizational Psychology*, 78(3), 411–429. <http://doi.org/10.1348/096317905X25995>
- Chapman, D. S., Uggerslev, K. L., Carroll, S. a, Piasentin, K. a, & Jones, D. a. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, 90(5), 928–44. <http://doi.org/10.1037/0021-9010.90.5.928>
- Chrzan, K. (1994). Three kinds of order effects in choice-based conjoint analysis. *Marketing Letters*, 5(2), 165–172. <http://doi.org/10.1007/BF00994106>
- Collins, C. J. (2007). The interactive effects of recruitment practices and product awareness on job seekers' employer knowledge and application behaviors. *Journal of Applied Psychology*, 92(1), 180–90. <http://doi.org/10.1037/0021-9010.92.1.180>
- Collins, C. J., & Kanar, A. M. (2013). Employer brand equity and recruitment research. In K. Y. T. Yu & D. M. Cable (Eds.), *The Oxford Handbook of Recruitment* (pp. 284–297). New York: Oxford University Press.
- Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management*, 26(3), 435–462.
- De Clercq, D., & Voronov, M. (2009). The Role of Cultural and Symbolic Capital in Entrepreneurs' Ability to Meet Expectations about Conformity and Innovation. *Journal of Small Business Management*, 47(3), 398–420. <http://doi.org/10.1111/j.1540-627X.2009.00276.x>
- de Jong, J. P. J., Parker, S. K., Wennekers, S., & Wu, C.-H. (2015). Entrepreneurial Behavior in Organizations: Does Job Design Matter? *Entrepreneurship Theory and Practice*, 39(4), 981–995. <http://doi.org/10.1111/etap.12084>
- Deeds, D., DeCarolis, D., & Chaganti, R. (1995). Predictors of capital structure in small ventures. *Entrepreneurship Theory and Practice*, 20(2), 7–18.
- Deephouse, D. (1996). Does isomorphism legitimate? *Academy of Management Journal*, 39(4), 1024–1039. <http://doi.org/10.2307/256722>
- Deephouse, D. (1999). To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal*, 20(2), 147–166. [http://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2<147::AID-SMJ11>3.0.CO;2-Q](http://doi.org/10.1002/(SICI)1097-0266(199902)20:2<147::AID-SMJ11>3.0.CO;2-Q)
- Devendorf, S. A., & Highhouse, S. (2008). Applicant-employee similarity and attraction to an employer. *Journal of Occupational and Organizational Psychology*, 81(4), 607–617. <http://doi.org/10.1348/096317907X248842>

- Dobele, A., Lindgreen, A., Beverland, M., Vanhamme, J., & van Wijk, R. (2007). Why pass on viral messages? Because they connect emotionally. *Business Horizons*, 50(4), 291–304. <http://doi.org/10.1016/j.bushor.2007.01.004>
- Döring, N., & Bortz, J. (2016). *Forschungsmethoden und Evaluation in den Sozialwissenschaften*. Berlin, Heidelberg: Springer-Verlag. <http://doi.org/10.1007/978-3-642-41089-5>
- Edelson, S. A., Haynie, J. M., & McKelvie, A. (2011). Working for a start-up? Investigating the role of “venture personality” in the recruitment of human capital. In A. Zacharakis, S. Alvarez, M. S. Cardon, J. O. De Castro, & F. Delmar (Eds.), *Frontiers of Entrepreneurship Research: Vol. 31: Iss. 9* (pp. 322–337). Babson Park, MA: The Arthur M. Blank Center for Entrepreneurship.
- Edwards, M. R. (2010). An integrative review of employer branding and OB theory. *Personnel Review*, 39(1), 5–23. <http://doi.org/10.1108/00483481011012809>
- Fiss, P. C. (2007). A set-theoretic approach to organizational configurations. *Academy of Management Review*, 32(4), 1180–1198. <http://doi.org/10.5465/AMR.2007.26586092>
- Fiss, P. C. (2011). Building Better Causal Theories: A Fuzzy Set Approach to Typologies in Organization Research. *Academy of Management Journal*, 54(2), 393–420. <http://doi.org/10.5465/AMJ.2011.60263120>
- Flynn, D. M. (1993). Sponsorship and the survival of new organizations. *Journal of Small Business Management*, 31(1), 51–63.
- Garcia-Castro, R., & Aguilera, R. V. (2014). Family involvement in business and financial performance: A set-theoretic cross-national inquiry. *Journal of Family Business Strategy*, 5(1), 85–96. <http://doi.org/10.1016/j.jfbs.2014.01.006>
- Greer, C. R., Carr, J. C., & Hipp, L. (2016). Strategic Staffing and Small-Firm Performance. *Human Resource Management*, 55(4), 741–764. <http://doi.org/10.1002/hrm.21693>
- Hauswald, H., Hack, A., Kellermanns, F. W., & Patzelt, H. (2016). Attracting New Talent to Family Firms: Who Is Attracted and Under What Conditions? *Entrepreneurship Theory and Practice*, 40(5), 963–989. <http://doi.org/10.1111/etap.12153>
- Hayton, J. C. (2003). Strategic human capital management in SMEs: An empirical study of entrepreneurial performance. *Human Resource Management*, 42(4), 375–391. <http://doi.org/10.1002/hrm.10096>
- HBR (2015). What makes a start-up an employer of choice? *Harvard Business Review*, 12, 26–27.
- Heneman, H. G., & Berkley, R. A. (1999). Applicant attraction practices and outcomes among small businesses. *Journal of Small Business Management*, 37(1), 53–74.
- Heneman, R. L., Tansky, J. W., & Camp, S. M. (2000). Human resource management practices in small and medium-sized enterprises: Unanswered questions and future research perspectives. *Entrepreneurship Theory and Practice*, 25(1), 11–26.
- Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational and Psychological Measurement*, 63(6), 986–1001. <http://doi.org/10.1177/0013164403258403>
- Highhouse, S., Thornbury, E. E., & Little, I. S. (2007). Social-identity functions of attraction to organizations. *Organizational Behavior and Human Decision Processes*, 103(1), 134–146. <http://doi.org/10.1016/j.obhdp.2006.01.001>
- Holt, D. B. (2004). *How Brands Become Icons: The Principles of Cultural Branding*. Boston, MA (USA): Harvard Business Press.
- Hornsby, J. S., & Kuratko, D. F. (1990). Human resource management in small business: Critical issues for the 1990's. *Journal of Small Business Management*, 28(3), 9–18.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How Does Human Resource Management Influence Organizational Outcomes? A Meta-analytic Investigation of Mediating Mechanisms. *Academy of Management Journal*, 55(6), 1264–1294. <http://doi.org/10.5465/amj.2011.0088>

- Joachims, T. (1998). Text categorization with Support Vector Machines: Learning with many relevant features. In C. Nédellec & C. Rouveirol (Eds.), *Proceedings of the 10th European Conference on Machine Learning on April 21–23, 1998* (pp. 137–142). Chemnitz, Germany: Springer. <http://doi.org/10.1007/BFb0026683>
- Judge, T. A., & Bretz, R. D. (1992). Effects of work values on job choice decisions. *Journal of Applied Psychology, 77*(3), 261–271. <http://doi.org/10.1037//0021-9010.77.3.261>
- Kantner, R. M. (1988). When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in Organizational Behavior* (pp. 169–211). Greenwich, CT: JAI Press.
- Kaplan, A. M., & Haenlein, M. (2011). Two hearts in three-quarter time: How to waltz the social media/viral marketing dance. *Business Horizons, 54*(3), 253–263. <http://doi.org/10.1016/j.bushor.2011.01.006>
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations*. New York: Wiley.
- Katz, J. A., Aldrich, H. E., Welbourne, T. M., & Williams, P. M. (2000). Guest editor's comments special issue on human resource management and the sme: Toward a new synthesis. *Entrepreneurship Theory and Practice, 25*(1), 7–10.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing, 57*(1), 1–22. <http://doi.org/10.2307/1252054>
- Keller, K. L. (2009). Building strong brands in a modern marketing communications environment. *Journal of Marketing Communications, 15*(2–3), 139–155. <http://doi.org/10.1080/13527260902757530>
- Krippendorff, K. (1989). Content analysis. In E. Barnouw, G. Gerbner, W. Schramm, T. L. Worth, & L. Gross (Eds.), *International encyclopedia of communication* (pp. 403–407). New York, NY: Oxford University Press.
- Krippendorff, K. (2004). Reliability in content analysis. *Human Communication Research, 30*(3), 411–433. <http://doi.org/10.1111/j.1468-2958.2004.tb00738.x>
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology, 58*(2), 281–342. <http://doi.org/10.1111/j.1744-6570.2005.00672.x>
- Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology, 49*(1), 1–49. <http://doi.org/10.1111/j.1744-6570.1996.tb01790.x>
- Lee, L., Wong, P. K., Foo, M. Der, & Leung, A. (2011). Entrepreneurial intentions: The influence of organizational and individual factors. *Journal of Business Venturing, 26*(1), 124–136. <http://doi.org/10.1016/j.jbusvent.2009.04.003>
- Lepak, D. P., & Snell, S. A. (1999). The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development. *Academy of Management Review, 24*(1), 31–48. <http://doi.org/10.5465/AMR.1999.1580439>
- Leung, A. (2003). Different ties for different needs: Recruitment practices of entrepreneurial firms at different developmental phases. *Human Resource Management, 42*(4), 303–320. <http://doi.org/10.1002/hrm.10092>
- Leung, A., Zhang, J., Wong, P. K., & Foo, M. Der. (2006). The use of networks in human resource acquisition for entrepreneurial firms: Multiple “fit” considerations. *Journal of Business Venturing, 21*(5), 664–686. <http://doi.org/10.1016/j.jbusvent.2005.04.010>
- Lievens, F. (2007). Employer branding in the Belgian Army: The importance of instrumental and symbolic beliefs for potential applicants, actual applicants, and military employees. *Human Resource Management, 46*(1), 51–69. <http://doi.org/10.1002/hrm.20145>
- Lievens, F., & Highhouse, S. (2003). The relation of instrumental and symbolic attributes to a company's attractiveness as an employer. *Personnel Psychology, 56*(1), 75–102. <http://doi.org/10.1111/j.1744-6570.2003.tb00144.x>
- Lievens, F., & Slaughter, J. E. (2016). Employer Image and Employer Branding: What We Know and What We Need to Know. *Annual Review of Organizational Psychology and Organizational Behavior, 3*(1), 407–440. <http://doi.org/10.1146/annurev-orgpsych-041015-062501>

- Lievens, F., Van Hoye, G., & Anseel, F. (2007). Organizational identity and employer image: towards a unifying framework. *British Journal of Management*, 18(s1), 45–59. <http://doi.org/10.1111/j.1467-8551.2007.00525.x>
- Lievens, F., Van Hoye, G., & Schreurs, B. (2005). Examining the relationship between employer knowledge dimensions and organizational attractiveness: An application in a military context. *Journal of Occupational and Organizational Psychology*, 78(4), 553–572. <http://doi.org/10.1348/09631790X26688>
- Mayring, P. (2010). Qualitative Inhaltsanalyse. In G. Mey & K. Mruck (Eds.), *Handbuch Qualitative Forschung in der Psychologie* (pp. 601–613). Wiesbaden: VS Verlag für Sozialwissenschaften.
- Mayring, P. (2014a). Qualitative content analysis. Theoretical foundation, basic procedures and software solution. Retrieved November 20, 2015, from <http://nbn-resolving.de/urn:nbn:de:0168-ssoar-395173>
- Mayring, P. (2014b). *Qualitative Inhaltsanalyse*. Weinheim: Beltz.
- McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. *Journal of Applied Psychology*, 100(6), 1653–1677. <http://doi.org/10.1037/a0039244>
- McQuail, D., & Windahl, S. (1993). *Communication Models for the Study of Mass Communications*. New York, NY: Routledge.
- Meuer, J. (2017). Exploring the Complementarities Within High-Performance Work Systems: A Set-Theoretic Analysis of UK Firms. *Human Resource Management*, 56(4), 651–672. <http://doi.org/10.1002/hrm.21793>
- Misangyi, V. F., Greckhamer, T., Furnari, S., Fiss, P. C., Crilly, D., & Aguilera, R. (2017). Embracing Causal Complexity. *Journal of Management*, 43(1), 255–282. <http://doi.org/10.1177/0149206316679252>
- Moser, K. J., Tumasjan, A., Cable, D. M., & Welpe, I. M. (2017). *Don't be so emotional: Employer image communication on social media* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2017a). *Learning from the best: A set-theoretic analysis of new ventures' employment offering* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2017b). Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors. *Journal of Business Venturing*, 32(5), 588–610. <http://doi.org/10.1016/j.jbusvent.2017.05.001>
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human Resource Systems and Helping in Organizations: A Relational Perspective. *Academy of Management Review*, 36(1), 33–52. <http://doi.org/10.5465/amr.2009.0402>
- Navis, C., & Glynn, M. A. (2011). Legitimate distinctiveness and the entrepreneurial identity: Influence on investor judgments of new venture plausibility. *Academy of Management Review*, 36(3), 479–499.
- Oh, I.-S., Kim, S., & Van Iddekinge, C. H. (2015). Taking it to another level: Do personality-based human capital resources matter to firm performance? *Journal of Applied Psychology*, 100(3), 935–947. <http://doi.org/10.1037/a0039052>
- Oikarinen, E.-L., & Saraniemi, S. (2016). Categorizing Humorous Employer Brand Message in a Small Company's Online Job Ads. *Corporate Reputation Review*, 13(3), 198–218. <http://doi.org/10.1057/s41299-016-0003-2>
- Patel, P. C., & Cardon, M. S. (2010). Adopting HRM practices and their effectiveness in small firms facing product-market competition. *Human Resource Management*, 49(2), 265–290. <http://doi.org/10.1002/hrm.20346>
- Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *The Journal of Applied Psychology*, 88(5), 879–903. <http://doi.org/10.1037/0021-9010.88.5.879>

- Ragin, C. C. (2008). *Redesigning Social Inquiry: Fuzzy Sets and Beyond*. Chicago, IL, USA: University of Chicago Press.
- Rao, H. (1994). The social construction of reputation: certification contests, legitimation, and the survival of organizations in the American automobile industry: 1895–1912. *Strategic Management Journal*, *15*(S1), 29–44. <http://doi.org/10.1002/smj.4250150904>
- Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, *26*(4), 441–457. <http://doi.org/10.1016/j.jbusvent.2009.12.002>
- Rossolatos, G. (2013). An Anatomy of the Verbo-Visual Rhetorical Landscape of the World's Most Valuable Brands. *International Journal of Marketing Semiotics*, *1*, 73–125. <http://doi.org/10.2139/ssrn.2251819>
- Rousseau, D. M. (1990). New hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior*, *11*(5), 389–400. <http://doi.org/10.1002/job.4030110506>
- Ryan, A. M. (2012). Applicant-organization relationship and employee-organization relationship: What is the connection? In L. M. Shore, J. A.-M. Coyle-Shapiro, & L. E. Tetrick (Eds.), *The employee-organization relationship* (pp. 363–389). New York, NY (USA): Routledge.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, *40*(3), 437–453. <http://doi.org/10.1111/j.1744-6570.1987.tb00609.x>
- Sebastiani, F. (2002). Machine learning in automated text categorization. *ACM Computing Surveys*, *34*(1), 1–47. <http://doi.org/10.1145/505282.505283>
- Segalla, M., Sauquet, A., & Turati, C. (2001). Symbolic vs functional recruitment: *European Management Journal*, *19*(1), 32–43. [http://doi.org/10.1016/S0263-2373\(00\)00069-4](http://doi.org/10.1016/S0263-2373(00)00069-4)
- Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, *54*(4), 854–874.
- Shannon, C. E., & Weaver, W. (1949). *The mathematical theory of communication*. Urbana, Illinois: University of Illinois Press.
- Shepherd, D. A., & Patzelt, H. (2015). Harsh evaluations of entrepreneurs who fail: The role of sexual orientation, use of environmentally friendly technologies, and observers' perspective taking. *Journal of Management Studies*, *52*(2), 253–284. <http://doi.org/10.1111/joms.12103>
- Shepherd, D. A., Patzelt, H., & Baron, R. A. (2013). "I Care about Nature, but ...": Disengaging Values in Assessing Opportunities that Cause Harm. *Academy of Management Journal*, *56*(5), 1251–1273. <http://doi.org/10.5465/amj.2011.0776>
- Shepherd, D. A., & Zacharakis, A. (2003). A new venture's cognitive legitimacy: An assessment by customers. *Journal of Small Business Management*, *41*(2), 148–167. <http://doi.org/10.1111/1540-627X.00073>
- Slaughter, J. E., Zickar, M. J., Highhouse, S., & Mohr, D. C. (2004a). Personality trait inferences about organizations: development of a measure and assessment of construct validity. *The Journal of Applied Psychology*, *89*(1), 85–103. <http://doi.org/10.1037/0021-9010.89.1.85>
- Slaughter, J. E., Zickar, M. J., Highhouse, S., & Mohr, D. C. (2004b). Personality trait inferences about organizations: development of a measure and assessment of construct validity. *Journal of Applied Psychology*, *89*(1), 85–103. <http://doi.org/10.1037/0021-9010.89.1.85>
- Snowden, S. (2017). *20th CEO Survey*. Retrieved October 3, 2017, from <https://www.pwc.com/gx/en/ceo-survey/2017/pwc-ceo-20th-survey-report-2017.pdf>
- Stieglitz, S., & Dang-Xuan, L. (2012). Political Communication and Influence through Microblogging - An Empirical Analysis of Sentiment in Twitter Messages and Retweet Behavior. In *2012 45th Hawaii International Conference on System Sciences* (pp. 3500–3509). IEEE. <http://doi.org/10.1109/HICSS.2012.476>
- Stinchcombe, A. L. (1965). Social structure and organizations. In J. G. March (Ed.), *Handbook of organizations* (pp. 142–193). Chicago, IL, USA: Rand McNally College Publishing Company.

- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610. <http://doi.org/10.2307/258788>
- SVB (2013). *Startup Outlook report 2013*. Santa Clara (CA), USA. Retrieved October 1, 2016, from <http://www.svb.com/pdf/startup-outlook-2013-full-report/>
- SVB (2017). *Startup Outlook report 2017*. Santa Clara (CA), USA. Retrieved October 3, 2017, from https://www.svb.com/uploadedFiles/Content/Trends_and_Insights/Reports/Startup_Outlook_Report/US Startup Outlook Report 2017.pdf
- Tausczik, Y. R., & Pennebaker, J. W. (2010). The Psychological Meaning of Words: LIWC and Computerized Text Analysis Methods. *Journal of Language and Social Psychology*, 29(1), 24–54. <http://doi.org/10.1177/0261927X09351676>
- Theurer, C. P., Tumasjan, A., Welpe, I. M., & Lievens, F. (2016). Employer Branding: A Brand Equity-based Literature Review and Research Agenda. *International Journal of Management Reviews*, accepted article. <http://doi.org/10.1111/ijmr.12121>
- Thompson, C. J., Rindfleisch, A., & Arsel, Z. (2006). Emotional Branding and the Strategic Value of the Doppelgänger Brand Image. *Journal of Marketing*, 70(1), 50–64. <http://doi.org/10.1509/jmkg.2006.70.1.50>
- Thompson, J. A., & Bunderson, J. S. (2003). Violations of principle: ideological currency in the psychological contract. *Academy of Management Review*, 28(4), 571–586. <http://doi.org/10.5465/AMR.2003.10899381>
- Tumasjan, A., Strobel, M., & Welpe, I. M. (2011). Employer brand building for start-ups: which job attributes do employees value most? *Zeitschrift Für Betriebswirtschaft*, 81(S6), 111–136. <http://doi.org/10.1007/s11573-011-0507-2>
- Turban, D. B., & Cable, D. M. (2003). Firm reputation and applicant pool characteristics. *Journal of Organizational Behavior*, 24(6), 733–751. <http://doi.org/10.1002/job.215>
- Turban, D. B., Lau, C.-M., Ngo, H.-Y., Chow, I. H. S., & Si, S. X. (2001). Organizational attractiveness of firms in the People's Republic of China: A person-organization fit perspective. *Journal of Applied Psychology*, 86(2), 194–206. <http://doi.org/10.1037//0021-9010.86.2.194>
- Überbacher, F. (2014). Legitimation of new ventures: A review and research programme. *Journal of Management Studies*, 51(4), 667–698. <http://doi.org/10.1111/joms.12077>
- Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology*, 65(3), 597–660. <http://doi.org/10.1111/j.1744-6570.2012.01254.x>
- Van Hove, G. (2008). Nursing recruitment: relationship between perceived employer image and nursing employees' recommendations. *Journal of Advanced Nursing*, 63(4), 366–75. <http://doi.org/10.1111/j.1365-2648.2008.04710.x>
- Van Hove, G., Bas, T., Cromheecke, S., & Lievens, F. (2013). The instrumental and symbolic dimensions of organisations' image as an employer: A large-scale field study on employer branding in turkey. *Applied Psychology*, 62(4), 543–557. <http://doi.org/10.1111/j.1464-0597.2012.00495.x>
- Van Hove, G., & Saks, A. M. (2011). The instrumental-symbolic framework: Organisational image and attractiveness of potential applicants and their companions at a job fair. *Applied Psychology*, 60(2), 311–335. <http://doi.org/10.1111/j.1464-0597.2010.00437.x>
- Walker, H. J., Feild, H. S., Giles, W. F., Bernerth, J. B., & Short, J. C. (2011). So what do you think of the organization? A contextual priming explanation for recruitment Web site characteristics as antecedents of job seekers' organizational image perceptions. *Organizational Behavior and Human Decision Processes*, 114(2), 165–178. <http://doi.org/10.1016/j.obhdp.2010.11.004>
- Williamson, I. O. (2000). Employer legitimacy and recruitment success in small businesses. *Entrepreneurship Theory and Practice*, 25(1), 27–43.

- Williamson, I. O., Cable, D. M., & Aldrich, H. E. (2002). Smaller but not necessarily weaker: How small businesses can overcome barriers to recruitment. In J. A. Katz & T. M. Welbourne (Eds.), *Managing People in Entrepreneurial Organizations (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 5)* (pp. 83–106). Emerald Group Publishing Limited. [http://doi.org/10.1016/S1074-7540\(02\)05005-5](http://doi.org/10.1016/S1074-7540(02)05005-5)
- Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management*, 27(6), 701–721. <http://doi.org/10.1177/014920630102700607>
- Zhang, M., Jansen, B. J., & Chowdhury, A. (2011). Business engagement on Twitter: a path analysis. *Electronic Markets*, 21(3), 161–175. <http://doi.org/10.1007/s12525-011-0065-z>
- Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: a meta-analytical review. *Journal of Applied Psychology*, 91(2), 259–71. <http://doi.org/10.1037/0021-9010.91.2.259>
- Zimmerman, M. A., & Zeitz, G. J. (2002). Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, 27(3), 414–431. <http://doi.org/10.2307/4134387>

2 **Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors**

Abstract

Operating under high levels of uncertainty and limited public recognition, one of the most significant challenges for new ventures is attracting qualified employees. Building on the concept of legitimate distinctiveness, our study investigates how heterogeneous and homogeneous recruitment-related entrepreneurial identity claims influence applicants' judgments of new ventures' employer attractiveness. We combine anticipatory psychological contract theory and legitimacy theory to build theory about the way applicants evaluate new venture employer attractiveness. Using a metric conjoint experiment, we study 9,824 employer attractiveness judgments made by 307 job seekers. Our multi-level approach also yields cross-level interaction effects of job applicants' innovative behavior, which offer novel insights into which new venture employment dimensions specifically attract entrepreneurially-minded potential employees. We derive implications for new venture recruitment theory and offer practical implications for startup staffing.

Publication: Accepted journal publication

Cite as: Moser, K., Tumasjan, A. & Welpe, I. M. (2017). Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors. *Journal of Business Venturing* 32 (5): 588–610.

Presented at: Academy Management Annual Meeting 2015 in Vancouver, Canada
77. Wissenschaftliche Jahrestagung des VHB 2015 in Vienna, Austria

Awards: *Best Empirical Paper Award* (Entrepreneurship Division) at the Academy of Management Annual Meeting 2015 in Vancouver, Canada
Best Paper Proceedings of the Academy Management Annual Meeting 2015 in Vancouver, Canada



3 What is the right mix? Toward a compensatory theory of new ventures' employer attractiveness

Abstract

Despite highly uncertain future prospects and limited financial resources, new ventures are still able to attract talented employees that could likewise pursue alternative employment. Theoretically and practically, an intriguing puzzle remains around what constitutes the “DNA” of highly attractive startup employers. We integrate the theory of instrumental-symbolic employer benefits with a neo-configurational perspective to propose and test a compensatory theory of new venture employer attractiveness. Using set-theoretic methods, we analyze 219 new venture job postings and match them with ratings of their employer attractiveness. Across all job postings in our sample, we find two configurations constituting attractive employment offerings of new ventures: one focusing on remuneration and employees' work attitude, and the other focusing on employee development and a strong company culture. Addressing recent calls, we also show that context – i.e., new ventures' business focus and human capital needs – matters in shaping the nature of configurations that are associated with higher employer attractiveness. When taking new ventures' context into account, five additional configurations constituting attractive employment offerings emerge. Our study advances theory in the emerging literature on new venture employer attractiveness and talent recruitment.

Publication: Dissertation Working Paper

Cite as: Moser, K., Tumasjan, A., & Welpe, I. M. (2017). *What is the right mix? Toward a compensatory theory of new ventures' employer attractiveness* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.

Presented at: Academy Management Annual Meeting 2016 in Anaheim, USA
78. Wissenschaftliche Jahrestagung des VHB 2015 in Munich, Germany
Academy Management Annual Meeting 2017 in Atlanta, USA

3.1 Introduction

Attracting talent is vital for new ventures' success (Katz, Aldrich, Welbourne, & Williams, 2000). However, in consecutive studies on the U.S. start-up ecosystem, over 90% of the executives in question agreed that finding talent is challenging if not extremely challenging (SVB, 2013, 2017). In a start-up environment, which is traditionally known for innovation and growth, "executives say the lack of skilled workers inhibits product development and makes it difficult to scale operations" (SVB, 2017, p. 11). These hiring difficulties not only stem from the current state of the labor markets but also are inherent to the organizational nature of new ventures and related to their liabilities of smallness and newness (Aldrich & Auster, 1986). In this vein, there has recently been increased interest in investigating the talent recruitment and employer attractiveness of start-ups (e.g., Greer, Carr, & Hipp, 2016; Moser, Tumasjan, & Welpel, 2017a). Researchers have long noted the particularities of attracting talent in start-ups. For example, Williamson et al. (2000; 2002) have repeatedly argued that new ventures suffer from lower levels of organizational awareness among potential applicants compared to large firms. Small firms cannot rely on an established reputation but must develop their image as a trustworthy employer in the minds of job seekers. Furthermore, compared to large firms, new ventures are often more constrained in their resources (Cardon & Stevens, 2004; Greer et al., 2016). Last, many potential employees perceive employment with new ventures as inherently risky given uncertainty about the future success of the firm (Edelson, Haynie, & McKelvie, 2011). An individual employee is, for example, often required to perform multiple roles, is assigned a variety of different tasks, and often finds herself embedded in a rapidly changing organizational structure (Edelson et al., 2011; Williamson, 2000). As a result, potential applicants may be concerned about their role within a start-up and about the long-term viability of the firm.

However, despite the evident recruiting challenges that new ventures face and although attracting talented employees is of crucial importance for new venture success (Edelson et al., 2011; Katz et al., 2000), entrepreneurship research has mostly neglected this topic (for notable exceptions, see, e.g., Cardon & Tarique, 2008; Edelson et al., 2011; Moser et al., 2017a; Oikarinen & Saraniemi, 2016; Tumasjan, Strobel, & Welpel, 2011). Although the process of increasing firm attractiveness as an employer to recruit talent has been studied for years (Lievens & Slaughter, 2016; Theurer, Tumasjan, Welpel, & Lievens, 2016), the overwhelming majority of research has been conducted in the context of established or large firms (Becker & Huselid, 2006; Boxall, 1998; Dineen & Allen, 2016; Jiang, Lepak, Hu, &

Baer, 2012a; Theurer et al., 2016). In this vein, studies have mainly examined single large firms in specific industries, such as the financial industry, fast food, or the military sector (Lievens, 2007; Lievens & Highhouse, 2003). However, it is evident that the findings from studies on established large firms do not necessarily hold true for all types of firms, and entrepreneurship scholars have repeatedly called for research specifically investigating how new ventures increase their employer attractiveness (Edelson et al., 2011; Moser et al., 2017; Williamson et al., 2002).

Therefore, in light of new ventures' hiring challenges and in line with calls for research on new venture recruitment (Moser, Tumasjan, & Welpe, 2015; Williamson, 2000), this study contributes to uncovering the "DNA" of highly attractive start-up employers by investigating which employer benefits increase new ventures' attractiveness from the potential employees' perspective. This question is particularly relevant to new ventures since they tend to start their operations from scratch and, in this early phase of venturing, usually have limited resources (Aldrich & Auster, 1986; Williamson et al., 2002). With limited resources, new ventures can only offer a limited set of benefits to potential employees. Therefore, due to their resource constraints and because they start their operations from square one, new ventures may need to focus on a limited number of employer benefits to offer to potential employees. Of course, new ventures could try to match more established players and offer a maximum number of benefits, but this is unrealistic for most new ventures given their often scant resources and young age (Aldrich & Auster, 1986; Williamson et al., 2002).

A theoretical puzzle in this regard is the question of whether offering more benefits will always lead to higher employer attractiveness than offering fewer benefits – or, alternatively, whether offering a smaller set of well-chosen benefits (i.e., certain *configurations* of benefits) may likewise lead to a similar level of employer attractiveness. This theoretical puzzle presents practitioners and researchers alike with a conundrum of causal complexity calling for a configurational approach (Misangyi et al., 2017). From a configurational perspective, several equally viable configurations of employer benefits may exist that could all equally increase employer attractiveness. For example, while one start-up may appear attractive because it specifically promotes a casual company culture in combination with an intriguing firm vision, another start-up might appear equally attractive because it promotes an innovative work environment and a competitive salary. This theoretical perspective has recently been referred to as the "neo-configurational perspective"

and has been increasingly adopted in the field of management (Fiss, 2011; Garcia-Castro & Francoeur, 2016; for a recent review, see Misangyi et al., 2017).

Building on the neo-configurational perspective (Misangyi et al., 2017), we develop a compensatory theory of new venture employer attractiveness to understand which synergistic combinations of employer benefits (i.e., configurations) new ventures should offer to potential employees to increase their employer attractiveness and, hence, recruitment outcomes. Specifically, we address three main research questions. First, we identify the employer benefits that new ventures could offer to attract potential employees based on a comprehensive literature analysis. Second, we investigate synergistic configurations of benefits and how these configurations are associated with employer attractiveness. In this vein, we also examine whether the *absence* of certain employer benefits (e.g., costly benefits such as paid health insurance) in specific configurations can be compensated for by the *presence* of other employer benefits (e.g., pursuing an innovative or visionary mission) – which is often referred to as “equifinality” in the configurational perspective (Fiss, 2011). Third, to further contextualize our research, as increasingly called for in entrepreneurship research (Welter, 2011; Zahra & Wright, 2011), we analyze whether the existence of specific configurations of benefits is dependent on new ventures' employment context (i.e., their business focus as well as their human capital focus).

As an overarching theoretical framework to study these research questions, we rely on the well-established instrumental-symbolic framework, which is the dominant framework used to study employer benefits and their influence on employer attractiveness (Lievens, 2007; Lievens & Highhouse, 2003; Lievens & Slaughter, 2016). In short, the instrumental-symbolic framework posits that there are two types of benefits that influence employer attractiveness: so-called “instrumental benefits”, i.e., tangible, objective employer benefits (e.g., monetary compensation, availability of training, or a firm's office location) and so-called “symbolic benefits”, i.e., intangible, subjective employer benefits (e.g., a prestigious, competent, or innovative employer image; Lievens & Highhouse, 2003; Slaughter, Zickar, Highhouse, & Mohr, 2004). We use this distinction to guide our investigation of employer benefits in the context of new ventures.

Overall, our study makes three main theoretical contributions to the literature. First, integrating instrumental-symbolic theory (Lievens & Highhouse, 2003) with the neo-configurational theoretical perspective (Misangyi et al., 2017), we develop a compensatory theory of new venture employer attractiveness. We thereby join a series of studies in the entrepreneurship literature (Garcia-Castro & Aguilera, 2014; Garcia-Castro & Francoeur,

2016; Kuckertz, Berger, & Mpeqa, 2016; Muñoz & Dimov, 2015) that draw on the neo-configurational perspective (Misangyi et al., 2017). In line with extant research (Baron, 2003; Wright, Dunford, & Snell, 2001), we argue that new ventures may need to focus their limited resources on promoting a combination of distinct, firm-specific (i.e., distinct from competitors), tangible (i.e., instrumental), and intangible (i.e., symbolic) employer benefits to potential employees. Specifically, from a neo-configurational perspective, we argue and empirically test whether several different configurations of firm-specific employer benefits can equally increase new ventures' employer attractiveness. Thus, instead of offering *more* benefits to increase employer attractiveness (as assumed in the "universalistic perspective", Meuer, 2017), based on a neo-configurational perspective, we argue that new ventures may focus on well-chosen, firm-specific configurations of employer benefits. Thus, in our compensatory theoretical model of new venture employer attractiveness, we assume and test whether the same goal (i.e., high employer attractiveness) may be reached through different pathways and using different starting points ("equifinality", e.g., Fiss, 2011; Garcia-Castro & Aguilera, 2014; Katz & Kahn, 1978; Meuer, 2017; Misangyi et al., 2017). Thus, complementing extant research that has focused on the influence of individual employer attributes on employer attractiveness (e.g., Moser et al., 2017), we holistically examine the influence of combinations of benefits and account for how benefits compensate for each other in explaining employer attractiveness.

Second, there have been numerous calls in the entrepreneurship literature to contextualize entrepreneurial research (e.g., Welter, 2011; Zahra & Wright, 2011). Addressing these calls, we contextualize our research regarding two dimensions, namely, new ventures' overall *business focus* (i.e., customer relationships with a business-to-business [B2B] vs. a business-to-consumer [B2C] focus) and their specific *human capital focus* for a job position that they aim to fill (i.e., recruitment of employees for a position requiring a business background vs. a technical background). Accordingly, we argue that since the value of human capital to a firm is very context sensitive, the specific configurations of instrumental and symbolic employer attributes that relate to a favorable employer image should also be sensitive to context. In this regard, our thinking is in line with a recent study that found differences in the preferences of potential applicants for new ventures' employer attributes based on their work experience (Moser et al., 2017). Following Welter's (2011) conceptualization, we advance current understanding of how new ventures' employment context influences the importance of different configurations for employer attractiveness.

Third, we empirically advance the nascent research stream on new venture recruitment (Cardon & Stevens, 2004; Edelson et al., 2011; Moser et al., 2017; Tumasjan, Strobel, & Welpe, 2011) by responding to recent calls in the entrepreneurship literature for a fine-grained empirical study of the importance of concrete employer benefits to new ventures' employer attractiveness (Moser et al., 2017). Specifically, whereas the instrumental-symbolic framework has been operationalized to understand the importance of a limited number of (instrumental and symbolic) employer benefits of large established firms (Lievens, 2007; Theurer et al., 2016; Uggerslev, Fassina, & Kraichy, 2012), it remains unclear which instrumental and symbolic employer benefits new ventures actually use to increase their employer attractiveness. Addressing this lacuna in the literature, we identify a set of fine-grained instrumental and symbolic employer benefits based on a comprehensive content analysis of new ventures' job postings.

We approach our study as follows. Taking the instrumental-symbolic framework as our overarching framework, we discuss the applications of the neo-configurational perspective to new venture recruitment research and introduce the elements of our compensatory theory. Given the nascent stage of the field of new venture recruitment, we follow Muñoz and Dimov's (2015) approach by formulating research questions rather than hypotheses and by introducing and empirically investigating the causal conditions of our model.

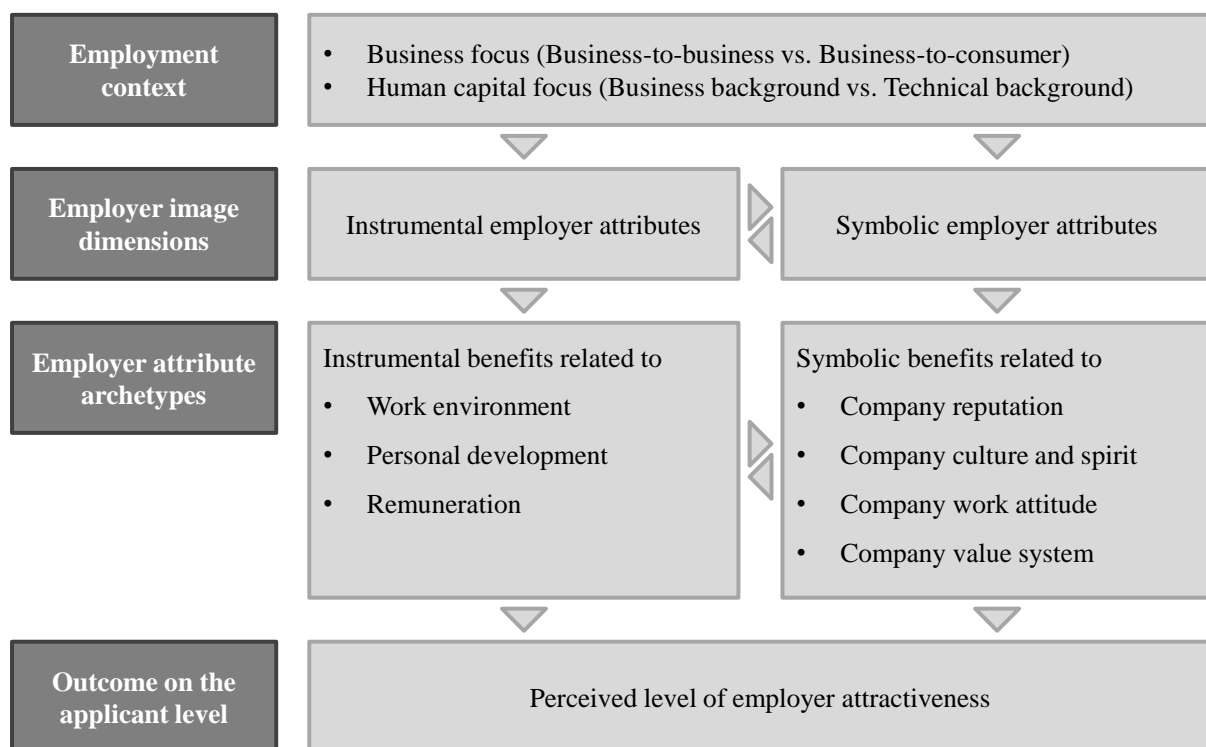
3.2 Theoretical background

New ventures require talented employees to ensure the growth and success of their operations (Williamson et al., 2002). Therefore, they must offer a set of employer benefits that potential applicants will find sufficiently attractive to consider employment (Lievens & Slaughter, 2016). In other words, the attractiveness of an employer is formed based on the image held by potential applicants, which is based on the subjective value they assign to the employer benefits. In the case of new ventures, applicants form their employer attractiveness judgments based on the limited factual information publicly available. In this regard, typical sources may include companies' web pages or job postings (Allen, Mahto, & Otondo, 2007). As a result, in the applicant attraction phase of recruitment, applicants' perceptions of new ventures as an employer are thus subjective impressions often formed using scarce facts. Therefore, we define new ventures' employer attractiveness as the *aggregated sum of all potential applicants' subjective impressions of the attractiveness of a new venture's employment offering*. From a neo-configurational perspective (Fiss, 2011; Misangyi et al.,

2017; Ragin, 2008), multiple combinations may equally lead to observing high employer attractiveness. Therefore, we propose a compensatory theory that describes the potential causal conditions and synergistic interrelationships between different employer benefits to understand how they lead to favorable, subjective impressions about a new venture in the minds of applicants and to high employer attractiveness. Figure 3.1 depicts our compensatory theory for new venture recruitment and describes its causal conditions.

FIGURE 3.1

Causal conditions within the compensatory theory of new venture employer attractiveness



The guiding theoretical framework for this study is the well-established distinction between instrumental and symbolic employer benefits (Lievens & Highhouse, 2003). Whereas instrumental benefits such as monetary compensation, the availability of training, or a firm's office location have a tangible and objective nature, symbolic benefits are defined as intangible and subjective images of an employer as being, for example, prestigious, competent, or innovative (Lievens & Highhouse, 2003; Slaughter et al., 2004). In other words, symbolic benefits try to capture the image of a firm as an employer to help potential applicants link the firm's image to their own perceptions of themselves as individuals (Slaughter et al., 2004). In their job search, potential applicants develop a subjective

impression of an employer based on information about its publicly accessible instrumental and symbolic employer attributes. In the case of new ventures, this information is often limited to what these young firms post on their web pages, in job postings, on social media, or on recruitment portals (e.g., Glassdoor.com in the U.S.). For example, due to their small size and constrained resources, new ventures may not be able to conduct traditional recruitment activities such as campus visits or career fairs to educate potential applicants (Collins & Stevens, 2002). Therefore, digital media such as websites, social media, or recruitment portals often present an alternative that is more suitable given new ventures' scant resources.

Within our study, we group the concrete operationalizations of instrumental and symbolic benefits into larger sets of so-called benefit archetypes (cf., Muñoz & Dimov, 2015). These benefit archetypes represent prototypical categories of benefits used in the academic literature as well as in new venture job postings (compare Tables 3.1 and 3.2). Our procedure for identifying these archetypes comprises two steps (similar to Muñoz & Dimov, 2015). First, we examine the relevant literature on employer attributes and their relation to employer attractiveness (see Tables 3.1 and 3.2). Second, we substantiate these archetypes by conducting a qualitative content analysis of new venture job postings (for details, see the methods and results sections).

Furthermore, we theorize that the use of the benefit archetypes and the relationship between benefit archetypes is context dependent. Accordingly, archetypes might relate to high employer attractiveness in one context but not in others. For this reason, our model also includes whether the new venture's business focus is on business-to-business or business-to-consumer customer relationships and whether its human capital focus is on employees with a business or a technical background.

3.2.1 A neo-configurational perspective on new venture employer attractiveness

At the core of the neo-configurational perspective is the insight that "a system can reach the same final state from different initial conditions and by a variety of different paths" (Katz & Kahn, 1978, p. 30). Accordingly, different synergistic configurations of instrumental and symbolic benefit archetypes can equally attract potential applicants. To illustrate, new venture A, which focuses on promoting its company culture and work attitude in its job postings, can be attractive to potential applicants as a start-up employer. The neo-configurational perspective would argue that new venture B, which focuses its job posting only on remuneration aspects without stressing its work environment or its personal

development opportunities, can be equally attractive compared to new venture A. This idea is fundamental to managing start-ups' employer attractiveness, as different configurations that achieve equivalent results may carry different financial costs for a start-up. For instance, promoting an innovation-driven work culture or visionary company founders may be less costly than providing above-average compensation. At the same time, companies that are unable to create and communicate a visionary or innovative work culture may be able to compensate for this lack of symbolic employer benefits by offering instrumental employer benefits such as a great office or extensive career development opportunities (Moser et al., 2015). Therefore, research following a neo-configurational perspective aims to identify synergistic configurations of attributes that are associated with an expected outcome (high employer attractiveness, in our case). This configurational thinking also allows addressing questions such as whether the presence or absence of a specific archetype is necessary (i.e., presents a necessary condition) and whether the presence or absence of a specific archetype by itself is sufficient (i.e., presents a sufficient condition) to observe an expected outcome.⁴ Thus, configurational analysis makes it possible to examine whether, for example, in all cases new ventures must promote aspects of remuneration to create a favorable employer image (i.e., a necessary condition) or whether creating an innovative image alone is enough to be perceived as attractive by potential candidates (i.e., a sufficient condition).

In our research, we build on a recent theoretical extension of the neo-configurational perspective known as a fuzzy set approach (Fiss, 2011). Fuzzy set theory acknowledges the complex relationships between archetypes when modeling different configurations. While traditional set-theoretic thinking only considers the presence or absence of an archetype within a configuration, fuzzy set-theory also considers whether archetypes represent core or peripheral archetypes within a configuration. In this regard, core archetypes can be understood as being essential, whereas peripheral archetypes are less important if not exchangeable for observing an expected outcome (Fiss, 2011). Accordingly, fuzzy set-theoretic approaches might, for example, find that promoting a great company culture is a *core* archetype and thus central to observing high employer attractiveness, whereas promoting a start-up's work environment or its development opportunities might be *peripheral* and thus only marginally important and potentially substitutable to observing high employer attractiveness.

⁴ Note: A necessary condition is present if an outcome can only be observed when an employer archetype is present. A sufficient condition is present if an outcome will always be obtained if an employer archetype is present (for a detailed account, see Fiss, 2007).

3.2.2 Review of instrumental and symbolic employer benefit archetypes

The human resource management (HRM) research argues that to attract new talent, firms should promote employer benefits that are attractive to their target group, distinct from competitors and enduring (Dineen & Allen, 2016; Gardner, Erhardt, & Martin-Rios, 2011; Van Hove, Bas, Cromheecke, & Lievens, 2013). The HRM literature contains numerous studies that describe different kinds of employer benefits and their relation to employer attractiveness (for a summary of central studies, please refer to Table 3.A1 in the Appendix). Several meta-analytical reviews and literature reviews have identified recurring themes across these studies (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Theurer et al., 2016; Uggerslev et al., 2012). We map these recurring themes to seven employer benefit archetypes that unite the existing body of HRM literature according to the instrumental-symbolic framework (Lievens & Highhouse, 2003; Lievens & Slaughter, 2016). We describe these archetypes in more detail in Tables 3.1 and 3.2.

When studying the effects of *instrumental benefits* on employer attractiveness, researchers have often followed an inductive, individual-firm approach, limiting the theoretical integration across these studies (Lievens & Slaughter, 2016; Theurer et al., 2016). Accordingly, existing studies investigating a specific industry and organizational form include a relatively limited set of instrumental benefits that is common across the literature. Summarizing the available studies, meta-analyses by Chapman et al. (2005) and Uggerslev et al. (2012) have examined predictors of recruitment success and applicant attraction outcomes across various industries, such as the financial sector, the hospitality industry, and the military sector.⁵ Across these studies, we identified three main instrumental benefit archetypes: benefits related to a firm's work environment, employee development, and remuneration (see Table 3.1).

⁵ To complement these meta-analyses, we reviewed two recent comprehensive literature reviews (Lievens & Slaughter, 2016; Theurer et al., 2016), as well as all studies on employer attractiveness published after these reviews.

TABLE 3.1
Definitions and examples of instrumental benefit archetypes and their implications for new ventures

Instrumental archetype	Description of instrumental archetype
Work environment	<ul style="list-style-type: none"> • Defined as instrumental benefits relating to tangible, non-financial aspects of work that contribute to pleasant and enjoyable surroundings at work. • Examples include the location of an employer, non-financial fringe benefits (e.g., free coffee or exercise classes), or flexible work hours (e.g., Chapman et al., 2005; Lievens, 2007; Lievens & Highhouse, 2003; Moser et al., 2015, 2017; Tumasjan, Strobel, et al., 2011; Uggerslev et al., 2012; Van Hoye, 2008; Van Hoye et al., 2013) • New ventures may be able to provide an appealing work environment by providing benefits that may be less costly than elaborate remuneration packages (e.g., Moser et al., 2015).
Development	<ul style="list-style-type: none"> • Defined as instrumental benefits relating to advancement and training as well as learning opportunities. • Examples include structured forms of learning (e.g., training programs) and advancement (e.g., professional development plans) as well as informal learning opportunities (e.g., learning by doing through being assigned broad responsibilities due to resource constraints) (e.g., Chapman et al., 2005; Tumasjan, Strobel, et al., 2011; Uggerslev et al., 2012). • New ventures often may only provide informal learning opportunities since structured forms of learning and advancement may be too costly for small and nascent firms to implement.
Remuneration	<ul style="list-style-type: none"> • Defined as instrumental benefits relating to any form of financial compensation. • Examples include salary, payments, or any other form of additional remuneration (e.g., health insurance) (e.g., Chapman et al., 2005; Uggerslev et al., 2012). • Especially in their nascent stages, new ventures may be able to provide comparably less remuneration due to limited financial resources.

TABLE 3.2
Definitions and examples of symbolic benefit archetypes and their implications for new ventures

Symbolic archetype	Description of Symbolic archetype
Company reputation	<ul style="list-style-type: none"> • Defined as a symbolic archetype that describes potential applicants' image of a company as a reputable, prestigious employer. • Examples of other associations include being known as a robust, masculine, or strong company (Lievens & Highhouse, 2003). • Since reputation is per definition based on the perception of past actions (Rindova, Pollock, & Hayward, 2006), from a new venture perspective, reputation is often missing among young, nascent firms. However, in some cases, new ventures may be associated with reputable investors, which helps these firms to increase their own reputation through endorsement effects (Williamson et al., 2002).
Company culture	<ul style="list-style-type: none"> • Defined as a symbolic archetype that describes potential applicants' perceptions of the relational elements of an employer (i.e., perceptions of employee-employee and employee-supervisor relationships). • Examples of other associations include studies about team spirit. • Very little research has been conducted studying the company culture of new ventures (see exceptions Moser et al., 2015, 2017; Tumasjan, Strobel, et al., 2011), but studies conducted in large firms have addressed the importance of having a good corporate culture for employer attractiveness (e.g., Collins & Stevens, 2002; Uggerlev et al., 2012; Van Hoye & Saks, 2011).
Work attitude	<ul style="list-style-type: none"> • Defined as a symbolic archetype that describes potential applicants' perceptions of the way employees at a company approach their daily tasks and summarizes a company's "way of doing" things. • Examples of other associations include the perceptions of a company as being competent or innovative (Lievens & Highhouse, 2003; Lievens et al., 2007). • Such intangible associations with an employer have been shown to increase firms' attractiveness as an employer (Lievens & Slaughter, 2016).
Value system	<ul style="list-style-type: none"> • Defined as a symbolic archetype that describes potential applicants' perceptions of a company's principles and standards of behavior. • Examples include potential applicants' perceptions of a company's sincerity and their influence on firms' employer attractiveness (Lievens & Highhouse, 2003; Lievens et al., 2007; Van Hoye & Saks, 2011). • For new ventures, promoting their value system to create a sincere or social image may be beneficial to increase their employer attractiveness.

When studying the effects of *symbolic benefits* on employer attractiveness, research shows that job seekers are attracted to organizations that promote symbolic benefits matching the job seekers' personal needs and values (Highhouse, Thornbury, & Little, 2007). For instance, job seekers might be attracted to organizations with a prestigious image because being associated with a prestigious organization might help them to maintain "self-esteem by making sure [they are] regarded favorably by significant others" (Highhouse et al., 2007, p. 137). To date, the literature investigating the importance of symbolic benefits for employer attractiveness remains scant (notable exceptions include Lievens & Highhouse, 2003; Lievens, Van Hove, & Anseel, 2007; Schreurs, Druart, Proost, & De Witte, 2009; Van Hove & Saks, 2011). Although the definition of symbolic benefits as being intangible and subjective leaves room for a large variety of possible inferred images about an organization as an employer (Lievens & Slaughter, 2016), the extant literature has settled on a limited set of symbolic employer benefits. Thus, from the existing literature, we identified four symbolic archetypes that unite the different existing studies, namely, company reputation, company culture, the employees' work attitude, and the value system of the company (see Table 3.2).

3.2.3 Instrumental and symbolic benefits as causal conditions for employer attractiveness

Recruitment research argues that communicating a firm's employer benefits provides potential applicants with a realistic job preview and a better understanding of the firm as an employer (Breaugh, 2008). From this perspective, we argue that new ventures have an inherent interest in promoting attractive, instrumental and symbolic benefits to increase their employer attractiveness. If the promoted instrumental and symbolic benefits paint a realistic picture of new ventures as an employer, they should be associated with higher employer attractiveness (Lievens, 2007; Lievens & Highhouse, 2003; Lievens & Slaughter, 2016). However, for new ventures, the question remains which employer benefit archetypes they should offer to be perceived as attractive employers.

Instrumental and symbolic benefit archetypes do not compete in their importance for employer attractiveness. Whereas instrumental benefits are on a tangible, factual level, symbolic benefits have an intangible nature and portray imagery about an employer (Lievens & Slaughter, 2016). Promoting instrumental benefits requires different resources than promoting symbolic benefits. Instrumental benefits are tied to measurable, tangible transactions (e.g., of a monetary nature in the case of remuneration). Symbolic benefits are fueled by the image that a company is portraying to potential employees. Given the resource

constraints in new ventures, it is therefore especially important to understand whether symbolic benefits can compensate for certain instrumental benefits that may require more resources to implement than a firm has in its nascent stages and what combinations of benefit archetypes relate to employer attractiveness.

From a neo-configurational perspective (Fiss, 2011; Katz & Kahn, 1978), we expect to observe multiple, equally attractive combinations of instrumental and symbolic benefit archetypes that are related to high employer attractiveness. Thus, the fact that a company is indeed explicitly communicating instrumental and symbolic benefits is more important than the quantity of benefits being promoted. Accordingly, we argue that promoting instrumental and symbolic benefits is a sufficient condition for observing high employer attractiveness (i.e., a single benefit archetype will lead to high employer attractiveness, but there may be other benefit archetypes that equally lead to high employer attractiveness). In this regard, our compensatory model of new venture employer attractiveness outlines the causal conditions and possible combinations of employer benefit archetypes. The model therefore provides the theoretical basis for an empirical investigation into the research question of which specific combinations of instrumental and symbolic employer benefit archetypes can be related to high observed employer attractiveness.

3.2.4 Employment context and the formation of attractiveness perceptions

Research has shown that the effectiveness of firms' employer benefits for employer attractiveness is context dependent (Baron, 2003; Phillips & Gully, 2015). Accordingly, the specific combinations of instrumental and symbolic benefit archetypes may also have to be adapted to the firm-specific employment context. The neo-configurational perspective (Fiss, 2007; Misangyi et al., 2017) can show how different combinations of benefit archetypes form as a result of the different employment contexts at new ventures. Therefore, in addition to new ventures' employment offerings (as described by their instrumental and symbolic benefit archetypes), the employment context of new ventures is another important part of our compensatory model of causal conditions for employer attractiveness. Hence, in line with Welter's (2011) call for contextualizing entrepreneurship research, we investigate the research question of whether combinations of benefit archetypes that relate to high employer attractiveness differ according to new ventures' business focus and human capital focus.

Business focus. New ventures' *business focus* is the first important context for investigating the effect of instrumental and symbolic benefit archetypes on new ventures' employer image and attractiveness. New ventures in general can be distinguished by whether

they focus on business relationships with either other businesses (business-to-business [B2B]) or with consumers (business-to-consumer [B2C]) (Parasuraman & Zinkhan, 2002).⁶ Although firms' business focus is often not directly visible without knowledge of their business processes, it does influence how they conduct their business activities (Teece, 2010). For example, new ventures with a B2B business focus usually market products or services that require more domain-specific knowledge and therefore focus their marketing efforts on a few, specific potential customers. In contrast, new ventures with a B2C business focus usually market a commodity product or service in B2C channels and exert marketing efforts that aim at achieving high visibility among a large group of individual consumers (Eastlick, Lotz, & Warrington, 2006; Parasuraman & Zinkhan, 2002). These difference are important because in industries with high interaction between employees and consumers (Bowers, Martin, & Luker, 1990) and in settings with consumer involvement in the form of, for example, co-production (Bendapudi & Leone, 2003), spill-over effects between consumer-oriented marketing and employee recruitment may occur. For example, potential applicants to a new venture may also be consumers of the new ventures' products and services. Thus, individuals' experience with a product or service may also influence their image of the company as an employer. Accordingly, familiarity with a consumer brand is essential in both the purchase decisions of consumers and the job choice decision of potential employees (Cable & Turban, 2001; Keller, 1993).

We argue that new ventures with a B2C business focus targeting a large group of consumers have an advantage in creating employer familiarity (i.e., the familiarity of a potential employee with the employment offering of the firm) compared to new ventures following a B2B business focus because potential employees of a B2C new venture will experience increased exposure to marketing efforts in their role as consumers. At the same time, consumer-facing new ventures competing for the same labor pool (e.g., business graduates in start-up hotspots) will have a greater need to distinguish themselves from competitors. Therefore, we expect that in this "war for talent" (Trank, Rynes, & Bretz, 2002), new ventures with a B2C business focus will try to appear more attractive to potential employees by promoting a wider range of benefit archetypes. By incorporating the context of new ventures' business focus in our compensatory model for new venture employer attractiveness, we provide a theoretical frame to address the research question of whether the

⁶ We acknowledge that a number of other, intermediary hybrids and variations exist, such as B2B2C business models.

specific combinations of benefit archetypes that relate to employer attractiveness differ according to new ventures' business focus.

Human capital focus. New ventures' *human capital focus* is the second important context for investigating the effect of instrumental and symbolic benefit archetypes on new ventures' employer attractiveness. Depending on the specific task, firms require employees with different skill sets (Morgeson & Humphrey, 2006). For engineering or programming tasks, new ventures require employees with a technical background; for marketing, sales or finance tasks, they require employees with a business background. Extant research in the context of new venture recruitment has shown that potential employees with a business background have different expectations from a job than potential employees with a technical background (Tumasjan, Strobel, et al., 2011). For example, while employees with a business background expect high responsibility in their job, employees with a technical background put a higher focus on team climate (Tumasjan, Strobel, et al., 2011). In settings where firms compete for skilled labor, qualified applicants possess a higher degree of job choice (Lievens, Decaestecker, Coetsier, & Geirnaert, 2001). As a response to increased labor market competition, it makes sense for employers to tailor their promoted attributes to match the expectations of job seekers dependent on the firm's human capital focus (business vs. technical). We expect that new ventures with high employer attractiveness act according to this strategy and promote different benefit archetypes to potential employees with a business background than they do to potential employees with a technical background. Thus, by including new ventures' human capital focus in our compensatory model, we provide the theoretical frame to address the research question of whether specific benefit archetype combinations that relate to employer attractiveness are influenced by new ventures' human capital focus.

3.3 Data and method

3.3.1 Sample

In accordance with previous research (Hmieleski & Baron, 2009; Shrader, Oviatt, & Phillips McDougall, 2000), we defined high growth new ventures as companies operating for fewer than six years and exhibiting high year-over-year growth rates. Companies in this stage have been found to feature ad hoc HRM processes, where they look for new employees mainly through job postings on their website and recruiting portals (Barrett & Mayson, 2007). As our data source, we used new ventures' job postings because they are the primary

source of information about new ventures, which feature limited publicly available information. Further, job postings feature comparable amounts of information (i.e., average text length) about employer benefits across new ventures. In addition, in our sample, the information about the company contained in the job posting was (in the majority of cases) identical to the information the new ventures posted on their websites and on job portals. Our sample consisted of 219 new venture job postings (see Table 3.A2 in the appendix for more information).

With our research questions focusing on new ventures, we collected job postings from start-ups funded by top venture capital firms in line with Metrick & Yasuda (2010). Approximately 70% of these venture capital firms manage funds from one billion USD upwards. We specifically focused on venture capital financed start-ups to ensure a certain maturity level of the firms. Especially in the early stages, new ventures tend to recruit entirely through their personal networks and thus sometimes do not rely on job postings (Leung, Zhang, Wong, & Foo, 2006). In addition, we collected a balanced sample of job postings requiring different backgrounds (either business or technical) and of firms with different business focuses (B2B or B2C) in line with our research questions.

To assess the employer attractiveness of the firms in our sample, we followed the approach of Bidwell, Won, Barbulescu, & Mollick (2015) and relied on the external employer ratings provided on the online recruitment platforms Glassdoor.com and kununu.com. On these platforms, current and former employees rate their experience with a specific company as an employer (see also Bidwell et al., 2015). These platforms have seen widespread adoption among employees and applicants (Dineen & Allen, 2016; Schatsky & Schwartz, 2015). For example, at the time of our data collection, Glassdoor.com featured over 11 million employee reviews for half a million companies and was visited by 30 million unique visitors every month (Adams, 2016). Prior research has also used such platforms, especially Glassdoor.com, as a data source for employer attractiveness ratings (Chandra, 2012; Dabirian, Kietzmann, & Diba, 2017; Morrell, 2011). Online recruitment platforms, especially Glassdoor.com, provide an ideal data set to capture employees' perceptions of firms' employer attractiveness (Dineen & Allen, 2016) and are therefore well-suited for the study of our research questions. Users first have to create an account to mitigate fraud, such as double posting, as well as to ensure that they are real applicants or employees of the

company that they are reviewing.⁷ They can then rate their overall perception of a company as an employer from 1 (lowest score) to 5 (best score). Figure 3.A1 in the appendix displays an example screenshot of reviews on the platform Glassdoor.com. For each new venture in our sample, we recorded the average over all ratings (see appendix Figure 3.A1) provided for each company. Since not all new ventures in our initial sample were listed on online recruitment platforms, employer ratings are only available for a reduced sample of N = 185 job postings, which we used for our set-theoretic analysis.

3.3.2 Method

We used two methods to answer our research questions. First, we used content analysis (Barringer, Jones, & Neubaum, 2005; Krippendorff, 2004; Mayring, 2014a) to identify the instrumental and symbolic benefit archetypes mentioned in the job postings. Second, we used set-theoretic methods (Mas-Verdú, Ribeiro-Soriano, & Roig-Tierno, 2015; Ragin, 2008) to analyze the conditions (i.e., combinations of benefit archetypes) under which new ventures are rated as attractive employers.

3.3.2.1 Content analysis

Content analysis has been used to address a variety of research questions, such as identifying the common themes in definitions of entrepreneurship (Gartner, 1990), analyzing the influence of CEOs' regulatory focus on firm acquisition (Gamache, McNamara, Mannor, & Johnson, 2015), studying the organizational identities of social ventures (Moss, Short, Payne, & Lumpkin, 2011), or examining the characteristics of rapid-growth firms and their founders (Barringer et al., 2005). For coding, we used the software QCAmap (Mayring, 2014a). We followed two steps in our content analysis. First, as recommended (Mayring, 2014b), we used a set of existing employer benefits, each fitting one benefit archetype, as a basis for coding the job postings; this coding strategy is called "deductive coding". All job postings were coded by two independent raters. Before coding, the raters received instructions on the coding process. After having coded approximately 10% of the new venture job postings, the coding results were compared against the coding guidelines. As recommended (Mayring, 2014b), we introduced new codes to fully capture the employment offering described in our sample job postings. We report this extended list of codes in the appendix. Second, the previously coded passages were updated and the coding of the

⁷ Glassdoor.com has several measures in place to detect fraudulent reviews such as, for example, only allowing its users to contribute one review per company and year or disallowing member companies from offering employees incentives for reviews (Glassdoor.com, 2016).

remaining material was finalized. After coding, the coding quality was assessed using Scott's π and Cohen's κ as interrater reliability measures (Krippendorff, 2004).

3.3.2.2 Set-theoretic methods and set calibration

Set-theoretic methods are used to test the research questions based on the neo-configurational perspective (Misangyi et al., 2017). These methods rely on Boolean algebra instead of using linear methods such as regression analyses, interaction effects, or clustering algorithms (Kennedy & Fiss, 2009; Ragin, 2000, 2008). Set-theoretic methods allow researchers to find combinations of so-called sets (the equivalent of variables) that are characteristic for a specific outcome in question. Set-theoretic methods have been used in a variety of research settings in entrepreneurship (Garcia-Castro & Aguilera, 2014; Garcia-Castro & Francoeur, 2016; Muñoz & Dimov, 2015). Their advantages compared to other techniques of analysis in research settings with great causal complexity have been discussed at length by, for example, Fiss (2007) and Ragin (2000, 2008).

We used the results of the content analysis as input for our qualitative comparative analysis (QCA) (i.e., set-theoretic analysis) of configurations that characterized new ventures with high employer ratings. QCA requires crisp sets (i.e., binary data) or fuzzy sets (i.e., continuous data calibrated to range between 0 and 1) as an input. We calculated crisp sets (i.e., dichotomized group scores) for all instrumental and symbolic benefit archetypes. For each job posting, an archetype (i.e., set) was assigned "1" (indicating membership) if at least one of the underlying codes (i.e., operationalized benefit archetype) was mentioned. Consequently, if none of the codes underlying an archetype was mentioned, the archetype was assigned "0" (indicating non-membership). Importantly, in the sample of job postings used for the set-theoretic analysis, the symbolic archetype "value system" was not present and was therefore excluded from subsequent analysis.

Similar to other studies using set-theoretic methods (Fiss, 2011; Garcia-Castro & Aguilera, 2014; Garcia-Castro & Francoeur, 2016), we used fuzzy set logic to define the membership status of a company in the set of new ventures with high employer attractiveness ratings. In fuzzy sets, membership is defined as a continuous degree of membership and calibrated using a lower boundary (full non-membership) and upper boundary (full membership) as well as a crossover point (point of maximum ambiguity) (Fiss, 2007; Ragin, 2000, 2008). Thus, employer attractiveness ratings for new ventures were transformed from a continuous variable (ranging from 1 to 5) to a fuzzy set. In line with Ragin (2008, p. 89), we used a direct calibration method using a lower and upper boundary to determine full

membership/non-membership as well as a crossover point, meaning “the point of maximum ambiguity (i.e., fuzziness) in the assessment of whether a case is more in or out of a set” (Ragin, 2008, p. 30). The advantage of defining these points compared to standard regression methods is that sets are calibrated according to qualitative anchors (i.e., anchors that are not given by the method itself but defined based on a qualitative understanding of the dataset in line with other extant research).

Following recommendations by Ragin (2000, 2008), we used the 20th percentile as a lower boundary, the 50th percentile as crossover point, and the 80th percentile as an upper boundary. These qualitative anchors ensure a more robust definition of new ventures with high employer ratings compared to Likert-based scales, which tend to converge around the mean. Since we also ran separate set-theoretic analyses for subsets according to the employment context – business focus (B2B vs. B2C) and human capital focus (business vs. technical) – we recalibrated the outcome variable for each analysis (i.e., for an analysis of the overall sample as well as for each employment context). Table 3.3 provides an overview of the anchors used to calibrate the set of new ventures with high employer ratings in each set of cases.

TABLE 3.3
Overview of the lower boundary, upper boundary, and crossover point for each set of analyses

	New ventures with high employer ratings		
	Lower bound	Crossover	Upper bound
Overall	3.17	3.90	4.30
Business model – B2B	3.50	3.95	4.48
Business model – B2C	3.10	3.72	4.20
Background – Business	3.17	3.90	4.40
Background – Technical	3.17	3.89	4.30

3.4 Analysis and results

We report our results in two consecutive steps. First, we report the findings for the content analysis of the job postings. Second, we use this information to analyze the conditions under which we observe high employer attractiveness in our sample based on set-theoretic methods.

3.4.1 Content analysis

We conducted the content analysis in two steps. First, we used deductive coding, which starts with a pre-defined set of possible coding attributes (Mayring, 2014b). The archetypes introduced in the literature review section of this paper served as initial coding categories. As recommended (Mayring, 2014b), we built up a list of employer attributes (i.e., codes) when coding the first 10% of the material to define a final coding set. For each instrumental and symbolic employer attribute (i.e., code), we present the coding definition (based on the text passages identified by coding the job postings) in the appendix in Table 3.A3 and Table 3.A4, respectively. The results of the coding are presented in the appendix in Tables 3.A5 and 3.A6.

In a second step, to ensure coding quality, we report interrater reliability metrics. In addition to reporting overall percentage agreement, we computed Scott's π , and Cohen's κ , because these metrics express the "likelihood that conclusions drawn from imperfect data are valid beyond chance" (Krippendorff, 2004, p. 428). As recommended by Krippendorff (2004), we rely on Scott's π to evaluate the interrater reliability of our data. Across all instrumental employer attributes, raters showed 97.68% (Scott's $\pi = .91$, Cohen's $\kappa = .91$) agreement on the employer attributes identified in each job posting. The overall agreement for symbolic employer attributes reached 98.89% (Scott's $\pi = .94$, Cohen's $\kappa = .94$). Thus, the overall interrater reliability indicates excellent coding quality (Krippendorff, 2004). Last, we also checked whether the two independent raters agreed on the assignment of each employer attribute (i.e., code) to its corresponding archetype. The two independent raters agreed in 90% of the cases (Scott's $\pi = .85$, Cohen's $\kappa = .85$) for instrumental attributes and in 75% of the cases (Scott's $\pi = .66$, Cohen's $\kappa = .66$) for symbolic attributes.

3.4.2 Set-theoretic analysis and fuzzy sets

Given that our compensatory theory proposes synergistic combinations of employer benefit archetypes, we turned to analyzing configurations in our sample job postings. In contrast to the variable-focused approach, (fuzzy) QCA identifies configurations (i.e., patterns or combinations of different attributes) that are characteristic for the outcome in question (Ragin, 2000, 2008). To identify the configurations associated with high employer attractiveness ratings, we first analyzed configurations across all job postings and subsequently ran separate analyses for their respective context subgroups (i.e., business focus and human capital focus). We present the results of our set-theoretic analyses in Table 3.4. Specific configurations can be considered to be characteristic for an outcome if they reach a

certain consistency level (i.e., the percentage of job postings matching one specific configuration associated with an expected outcome). The extant literature requires consistency levels between .75 and .80 as a minimum for configurations to be considered characteristic for an expected outcome (Fiss, 2011; Ragin, 2008). The high average solution consistency of .82 indicates that the set configurations described in Table 3.4 are robust and well supported by the data. On average, the set configurations in Table 3.4 feature raw coverage of approximately 9.50%, which is comparable to or above the findings of other studies using set-theoretic analysis (Garcia-Castro & Aguilera, 2014; Garcia-Castro & Francoeur, 2016; Muñoz & Dimov, 2015).

We test for necessary and sufficient conditions and identify core conditions following the procedures described by Fiss (2011) and adopted in extant literature (e.g., Garcia-Castro & Francoeur, 2016; Vergne & Depeyre, 2016)⁸. Our analysis did not yield any necessary conditions with acceptable consistency scores above the .90 threshold (i.e., consistency scores ranged between .03 - .78). However, across all analyses depicted in Table 4.4, we find five sufficient conditions that are associated with high employer attractiveness.⁹ Following Fiss (2007), we distinguish between core conditions and peripheral conditions, whereby core conditions play a more central role in describing the outcome than do peripheral conditions. Differentiating core and peripheral conditions introduces a two-level “hierarchy” in the importance of employer attribute archetypes and thus helps to understand the “weight” of an archetype within a configuration. In Table 3.4, configurations A and B each have two sub-configurations with different core/ peripheral conditions.

Configuration A. In the first configuration, the combination of employer attribute archetypes comprising remuneration, company culture, and work attitude is associated with high employer attractiveness across all cases (consistency = .89, coverage = .02) as well as for the subgroups of new ventures with a B2C business focus (consistency = .95, coverage = .03) and those with a business-related human capital focus (consistency = .86, coverage = .04).

Configuration B. In the second configuration, the combination of employer attribute archetypes comprising work environment, development, and company culture is associated with high employer attractiveness across all cases (consistency = .77, coverage = .06) as well as for the subgroups of new ventures with a B2C business focus (consistency = .84, coverage

⁸ Note: In line with existing literature (Fiss, 2011), configurations with a consistency level of .90 or more with only one employer archetype are called “necessary” conditions.

⁹ Note: A configuration presents a sufficient condition if an outcome is always obtained when a specific employer archetype combination is present (for more information, see Fiss, 2007).

= .10), those with a business-related human capital focus (consistency = .82, coverage = .04) and those with a technical-related human capital focus (consistency = .74, coverage = .09). However, the solution consistency for cases with a technical-related human capital focus is below the .75 threshold and therefore does not meet the consistency level required for a configuration to be considered characteristic for an expected outcome.

Configurations C and D. These two configurations are only present in job postings of new ventures with a B2B focus. While both configurations describe synergistic combinations of the archetypes related to work environment and work attitude, the synergistic mix of configuration C also contains the company culture archetypes (C: consistency = .90, coverage = .11, D: consistency = .92, coverage = .09).

Configurations E, F, and G. In these three configurations, high employer attractiveness can only be observed if specific archetypes are explicitly absent. We observe these configurations in our sample of job postings of new ventures with a B2B business focus. However, only configuration E (consistency = .78, coverage = .22) reached the required consistency level. Upon closer investigation of the underlying job postings, we find that they merely communicate job tasks and job requirements but do not mention benefit archetypes.

Notably, company reputation and company value system presented irrelevant archetypes across all configurations (marked as “blanks” in Table 3.4). Archetypes are considered irrelevant within a configuration if the expected outcome can be observed independent of whether the archetype is present or not (Fiss, 2011).

TABLE 3.4
Set-theoretic analysis of instrumental and symbolic benefit archetypes associated with high employer attractiveness

	Overall							Business focus							Human capital focus			
	B2B		B2C		Business			B2B		B2C		Business			Technical			
Solution configurations:	A(1)	B(1)	B(2)	C	D	E	F	G	A(1)	B(1)	B(2)	A(1)	A(2)	B(1)	B(1)	B(2)		
Instrumental archetypes																		
Work environment	⊗	•	•	•	•		⊗		⊗	•	•	⊗	⊗	•	•	•		
Development	⊗	•	•	•	⊗		⊗	⊗	⊗	•	•	⊗	⊗	•	•	•		
Remuneration	•	•	⊗	⊗	⊗	⊗	⊗	⊗	•	•	⊗	•	•	•	⊗	⊗		
Symbolic archetypes																		
Company reputation		•	•	•	•		⊗	⊗	•	•	•	•	•	•	•	•		
Company culture		•	•	•	•		⊗	⊗	•	•	•	•	•	•	•	•		
Company work attitude	•	•	•	•	•	⊗			•	•	•	•	•	•	•	•		
Company value system	•	•	•	•	•	⊗			•	•	•	•	•	•	•	•		
Raw coverage	0.02	0.06	0.06	0.11	0.09	0.22	0.22	0.22	0.03	0.10	0.10	0.04	0.04	0.04	0.09	0.09		
Consistency	0.89	0.77	0.77	0.90	0.92	0.78	0.70	0.70	0.95	0.84	0.84	0.86	0.86	0.82	0.74	0.74		
Solution coverage		0.08				0.33			0.13			0.07			0.09			
Solution consistency		0.80				0.76			0.86			0.84			0.74			

Note:

Black circles ● indicate the presence of a condition, and circles with ⊗ indicate its absence.

Large circles indicate core conditions; small circles indicate peripheral conditions. Empty spaces indicate irrelevant archetypes (Fiss, 2011).

The seven solution configurations (A, B, C, D, E, F, and G) may feature up to two sub-configurations with different peripheral/ core conditions.

Reading example: For job postings following pattern A (identified with the color blue), the archetypes remuneration, company culture and work attitude are associated with high employer attractiveness. In sub-configuration A(1), remuneration and work attitude emerged as core conditions, whereas in sub-configuration A(2), remuneration and company culture (and not work attitude) emerged as core conditions.

For job postings of new ventures with a B2B focus, configurations F and G are below the required .75 consistency threshold. For job postings requiring a technical background, configurations B1 and B2 are below the required .75 consistency threshold.

Importantly, in our sample of job postings used for the set-theoretic analysis, the symbolic archetypes “Company reputation” and “Company value system” were rarely communicated in job postings. As a result, these two archetypes are irrelevant conditions to observe high employer attractiveness (Fiss, 2011).

3.4.3 Validity checks

According to Fiss (2011), if a single employer attribute archetype is associated with high employer attractiveness but other employer attribute archetypes may likewise relate to high employer attractiveness, the single employer attribute archetype alone presents a condition that is sufficient to observe high employer attractiveness. In our theory section, we argued that a reduced but firm-specific set of instrumental and symbolic archetypes is a sufficient condition for high employer attractiveness. Our empirical observations confirm this theoretical argument: overall and across all subsets (i.e., business focus and human capital focus), our set-theoretic analysis (see Table 3.4) found at least one sufficient condition (i.e., configurations A, B, C, and D) where at least one instrumental or symbolic benefit archetype was present. More specifically, configurations A – D all indicate that high employer attractiveness can be observed even if firms promote only a subset of the available archetypes or none at all (configuration E).

We further argued that new ventures with high employer attractiveness promote more archetypes if they follow a B2C business focus rather than a B2B business focus. As depicted in Table 3.4, configurations A, B and D each promote three archetypes. However, some new ventures with a B2B focus did promote fewer (configuration C) or no (configuration E) archetypes. In line with our theoretical argumentation, a comparison of configurations A and B (representing firms with a B2C focus) with configurations C, D and E suggests that, overall, firms with a B2C focus indeed promote more archetypes.

Last, we argued that new ventures with high employer attractiveness will promote different archetypes depending on their human capital focus (business vs. technical). Table 3.4 indicates two distinct configurations (i.e., configuration A and B) for cases with a business-related human capital focus. For cases with a technical-related human capital focus, configuration B did not reach the required consistency level. Thus, in line with our theoretical argumentation, we did find differences according to the new ventures' human capital focus.

3.5 Discussion

We set out to analyze the employer benefits offered by new ventures to attract talent and how the presence of benefit archetypes is associated with employer attractiveness ratings. Through inductive coding in our content analysis and based on the instrumental-symbolic framework (Lievens & Highhouse, 2003), we identified an extensive set of employer attributes that match seven employer attribute archetypes. Contextualizing our research by

taking into account new ventures' business focus and human capital focus, we identified the configurations of employer attribute archetypes that are associated with high employer attractiveness. In line with the neo-configurational perspective (Misangyi et al., 2017), our study finds multiple, equally plausible configurations of employer benefit archetypes that can be associated with high employer attractiveness. Specifically, we identified two dominant configurations describing the benefit offering of new ventures with high employer attractiveness overall. These configurations focus on remuneration and employees' work attitude (Configuration A) as well as on employee development and a strong company culture (Configuration B).

3.5.1 Contributions to theory

Our study advances extant research in the following ways. First, by integrating the instrumental-symbolic framework (Lievens & Highhouse, 2003) and the neo-configurational perspective (Misangyi et al., 2017), we propose and empirically test a compensatory theory of new venture employer attractiveness and thereby contribute to the scant but recently emerging research on talent recruitment strategies in new ventures (Edelson et al., 2011; Moser et al., 2017; Tumasjan et al., 2011). This compensatory theory proposes that multiple configurations of employer attribute archetypes can equally be associated with high employer attractiveness for new ventures. In contrast to previous research, which has virtually exclusively investigated simple linear relationships between employer attribute archetypes and employer attractiveness (for a review, see Uggerslev et al., 2012), our study identifies multiple employer benefit archetype configurations associated with high employer attractiveness. Thus, in contrast to the literature examining "best practices" in recruitment (Heneman & Berkley, 1999; Wyatt, Pathak, & Zibarras, 2010), our study suggests that there may not be a universal "best practice" strategy for employer benefits in the context of new ventures, confirming the need for a compensatory theory of new venture employer attractiveness. Rather, new ventures seem to select few but firm-specific benefits. In our sample, new ventures followed two dominant patterns (Configurations A and B). Configuration A reflects a focus on remuneration and employees' work attitude, thereby concentrating on individuals' performance and their contribution to the overall organization. In contrast, configuration B reflects a focus on employee development and a strong company culture, thereby concentrating on shared social values and affective, emotional bonds.

Connecting to prior research in the field of HRM, we find that our configurations conceptually align with findings in the HRM literature with regards to HR systems (Lepak &

Snell, 1999; Mossholder, Richardson, & Settoon, 2011). To develop and foster employees' knowledge, skills, and abilities (KSAs) as well as their motivation and opportunities to contribute to firm success, firms offer a variety of HRM practices (e.g., in the form of benefits, compensation, or training) that – taken together – are defined as HR systems (Jiang, Lepak, Hu, & Baer, 2012b; Kaifeng Jiang, Hu, Liu, & Lepak, 2017). The two dominant configurations in our study (configurations A and B) conceptually align with two archetypal HR systems that are well established in the HRM literature (Boxall & Macky, 2009; Lepak & Snell, 1999; Lepak, Taylor, Tekleab, Marrone, & Cohen, 2007; Mossholder, Richardson, & Settoon, 2011), namely, “collaborative HR systems” (akin to configuration A) and “commitment HR systems” (akin to configuration B). On the one hand, collaborative HR systems resemble partnerships between employees and the organization that are neither fully control-focused nor entirely based on the proactive commitment of the individual employee (Lepak & Snell, 1999; Mossholder et al., 2011). Monetary incentives play a central role, along with the alignment of individuals' work attitude with the goals of the company (Mossholder et al., 2011). Since employees' acceptance of and contribution to company goals is unlikely to be achieved through rules and tight control (Mossholder et al., 2011), company culture also plays an important role. In line with the conceptual reasoning of collaborative HR systems (Lepak & Snell, 1999), in our study, configuration A describes new ventures whose focus on remuneration and employees' attitudes toward reaching company goals represent core conditions for observing high employer attractiveness. On the other hand, commitment HR systems place value on the well-being and development of employees and foster a focus on a strong company culture that supports intrinsically motivated employees to perform at the best of their capabilities (Lepak & Snell, 2002; Mossholder et al., 2011). The company culture in commitment HR systems is characterized by a strong bond between the organization and its employees as well as an orientation toward advancing the organization as a collective whole (Mossholder et al., 2011). In line with the conceptual research on commitment HR systems, in configuration B, employee development and a strong company culture represent two core conditions for observing high employer attractiveness.

Interestingly, we did not find configurations reflecting the third typical HR system described in the literature: a “compliance HR system” (Mossholder et al., 2011). Compliance HR systems assume that employees are entirely extrinsically motivated and therefore require tight control to reach company goals. The fact that we did not observe a configuration that is associated with high employer attractiveness and that simultaneously focuses on compliance may reflect the fact that such an HR system may not be conducive to innovation or the

management of knowledge workers (Monks et al., 2013), which are both crucial in new ventures. This observation is in line with extant research that has linked compliance HR systems to transactional-oriented employment relationships rather than to fostering the employee-employer relationship or to an alignment of employees with the vision of the company (Mossholder et al., 2011; Ryan, 2012). Since transactional employment relationships are characterized as purely economic, with little emphasis on providing attractive employer benefits beyond remuneration (Mossholder et al., 2011; Ryan, 2012; Thompson & Bunderson, 2003), it is plausible that compliance HR systems (or configurations representing such HR systems) are not associated with high employer attractiveness in our analysis. Thus, our compensatory theory of new venture employer attractiveness is in line with the extant HRM literature and complements this literature by adding a new venture perspective (Busenitz et al., 2003). By embracing the causal relationship between instrumental and symbolic employer attribute archetypes from a neo-configurational perspective, we open the door to studying employer attribute archetypes as synergistic combinations rather than analyzing their individual, isolated effect on employer attractiveness, as called for in recent research (Meuer, 2017). Accordingly, we encourage future research to use and further elaborate on set-theoretic approaches to study employer attractiveness.

Second, we advance the literature by showing that the employer benefit configurations associated with high employer attractiveness are context dependent. Attractive start-up employers offer different employer attribute archetype combinations depending on their business focus and on their human capital needs. New ventures, typically having limited resources (Williamson, 2000), need to wisely allocate their limited resources to attract talent that fits with their overall strategic business goals (Jiang et al., 2012b; Lepak et al., 2007). For example, new ventures with a B2B focus looking for a skilled engineer must provide a different type of employment offering than a B2C firm looking for a talented salesperson. In this regard, our results indicate that, on the one hand, new ventures with a B2B business focus offer benefit archetype combinations akin to a commitment HR system (focus on work environment, company culture, and employees' work attitude as described by configuration B and – to a lesser extent – configurations C and D). On the other hand, some B2B-focused ventures do not actively promote benefit archetypes (configuration E). However, new ventures with a B2C business focus promote benefit archetype combinations akin to collaborative HR systems (configuration A) and commitment HR systems (configuration B) (Mossholder et al., 2011).

Job postings with a business-related human capital focus also followed the two dominant patterns, which are akin to collaborative HR systems (configuration A) and commitment HR systems (configuration B) (Mossholder et al., 2011). Thus, similar to the theoretical discussion of achieving vertical fit between internal HR practices and a firm's overall business objective (Jiang et al., 2012a), we pave the way for further research on the fit between firms' business and human capital focus, on the one hand, and strategies for increasing employer attractiveness on the other. However, we did not find a consistent archetype configuration for job postings focusing on technology talent.

Third, by identifying new ventures' employer benefits from a large sample of new venture job postings and grouping them in archetypes based on instrumental-symbolic theory, we empirically advance the nascent research stream on new venture recruitment (Cardon & Stevens, 2004; Edelson et al., 2011; Moser et al., 2017; Tumasjan, Strobel, et al., 2011), as has been called for in the entrepreneurship literature (Moser et al., 2017). Employer benefit archetypes have been developed in the recruitment literature through a number of studies of specific employer benefits. However, the specific employer benefits underlying the archetypes have been almost exclusively analyzed in large firm settings (Lievens & Slaughter, 2016; Theurer et al., 2016; Uggerslev et al., 2012) and therefore do not necessarily match the employer benefits empirically found in new ventures (compare, for example, Tumasjan et al. 2011 with Uggerslev, Fassina, and Kraichy 2012). Thus, responding to calls to advance research on new venture recruitment (Cardon & Stevens, 2004; Edelson et al., 2011; Moser et al., 2017), new venture-specific employer benefits matching the employer benefit archetypes must be identified first.

As a response, our study makes this important empirical contribution and thereby provides a starting point for future research to study the effect of new venture-specific employer benefits on employer attractiveness. Most importantly, we find that new ventures with high employer attractiveness focus on benefit archetypes that describe their company culture and work attitudes (compare configurations A and D). With these archetypes, aspects of the firm vision were the most frequently mentioned in new venture job postings (compare Appendix A6). Conceptually, this finding is important because expressions of firm culture including aspects of the firm's vision are highly firm-specific and influenced by the firm's self-image. Prominently positioning these aspects will help attract applicants who exhibit a high cultural fit, as demonstrated in prior research (Carless, 2005; Moser et al., 2017). The idea of working for a new venture with an unrealized but tantalizing vision, an uncertain outcome but daily exposure to key decision makers may – at least for a certain target group

(e.g., highly qualified and proactive individuals) – have a strong impact on applicant attraction and employee engagement (Moser et al., 2017). For example, entrepreneurially oriented job seekers may find it more attractive to work for a new venture with a bold vision, high uncertainty but huge potential impact (e.g., developing revolutionary technology) than to work for a large firm with an incremental vision and a complex organizational structure (Tumasjan et al., 2011). Since research on applicant attraction in new ventures is still in its nascent stages, the present findings advance the field by providing fruitful ground for future studies investigating start-up-specific employer benefits from a cultural fit perspective. Doing so is important to advance theory building on new venture employer attractiveness, a topic that has been overlooked by most prior research, which assumes that findings on employer attractiveness in large, established firms also generalize to new ventures (Moser et al., 2017).

3.5.2 Implications for practice

Our findings have several implications for start-ups, entrepreneurs, and HRM professionals. First, our results indicate that new ventures may achieve high employer attractiveness by offering a reduced but firm-specific combination of different employer benefits. In our study, the new ventures' company culture and spirit, especially when perceived as visionary, played a central role in high employer attractiveness. Further, if new ventures choose not to clearly promote aspects of remuneration (e.g., salary), they need to compensate for this by at least offering other instrumental employer attribute archetypes such as opportunities for development and training. This finding also shows that new ventures can achieve high employer attractiveness via multiple paths, and thus, they can allocate their scarce resources in different ways to be attractive to employees.

Second, our qualitative analysis of new venture job postings revealed several novel symbolic employer benefits underlying the benefit archetypes that are not yet integrated into extant research in HRM due to the field's neglect of the new venture context (Moser et al., 2017). Research on the effect of symbolic benefits on applicant attraction has shown that job seekers use symbolic attributes as cues to better understand the "personality" of potential employers. Thus, symbolic benefits in turn may serve as a basis for judging the person-organization fit (Cable & Turban, 2001; Cuddy, Glick, & Beninger, 2011; Slaughter et al., 2004). Hence, new ventures may be well advised to promote employer attribute archetypes that clearly describe their company culture, spirit, and work attitude to potential employees to increase the chance of achieving a sustained fit between job seekers and the new venture's identity.

3.5.3 Limitations and future research

Our study also has limitations. First, in using content analysis to identify the employer attributes matching the employer attribute archetypes, our study follows an inductive approach (Thomas, 2006). However – given the lack of research on new ventures' employment offerings from a recruitment marketing perspective – an inductive approach is appropriate (Krippendorff, 1989; Thomas, 2006). Therefore, future deductive research is needed to empirically support our findings. Second, our sample consisted of the job postings of venture capital-backed start-ups. While we believe that this sampling strategy is appropriate for answering the research questions of this study, we are aware that organizational requirements and processes change over the course of entrepreneurial stages (e.g., Cardon & Stevens, 2004; Cardon & Tarique, 2008). Smaller firms without an institutional investor (such as a VC firm) might have even more restricted financial resources and – as a consequence – more limitations on the type of employer benefits they are able to offer. Therefore, we call for further studies to analyze the effect of the venture stage on applicant attraction in new ventures. With regard to new ventures' employment context, there are many questions left to answer, such as whether offering different employer attribute archetypes to applicants with a business vs. a technical background increases a firm's hiring success, as conceptually suggested in prior research (e.g., Tumasjan, Strobel, et al., 2011).

3.6 Conclusion

New ventures depend on human capital to ensure sustained growth and company survival. Despite liabilities of newness and smallness (Aldrich & Auster, 1986; Stinchcombe, 1965), some new ventures succeed in attracting employees, whereas many experience difficulties. Studies show that 95% of 929 US-based start-up executives consider finding qualified employees to be 'challenging' (SVB, 2016). Since our understanding of applicant attraction in new ventures is very limited, our study set out to address this important gap in the literature. Our findings suggest that there are indeed configurations describing the "DNA" of highly attractive start-up employers. Our results show that new ventures are not necessarily required to promote financial benefits to be perceived as attractive employers. An attractive work environment, development opportunities and a strong company culture are – in combination – also associated with high employer attractiveness. We hope that our study will stimulate research further investigating employer attraction in the context of new ventures.

References

- Adams, S. (2016). How Companies Are Coping With The Rise Of Employee-Review Site Glassdoor. Retrieved July 18, 2017, from <https://www.forbes.com/sites/susanadams/2016/02/24/how-companies-are-coping-with-the-rise-of-employee-review-site-glassdoor/>
- Aldrich, H. E., & Auster, E. (1986). Even dwarfs started small: Liabilities of age and size and their strategic implications. *Research in Organizational Behavior*, 8, 165–198.
- Allen, D. G., Mahto, R. V., & Otondo, R. F. (2007). Web-based recruitment: effects of information, organizational brand, and attitudes toward a Web site on applicant attraction. *Journal of Applied Psychology*, 92(6), 1696–1708. <http://doi.org/10.1037/0021-9010.92.6.1696>
- Baron, R. A. (2003). Human resource management and entrepreneurship: some reciprocal benefits of closer links. *Human Resource Management Review*, 13(2), 253–256. [http://doi.org/10.1016/S1053-4822\(03\)00016-0](http://doi.org/10.1016/S1053-4822(03)00016-0)
- Barrett, R., & Mayson, S. (2007). Human resource management in growing small firms. *Journal of Small Business and Enterprise Development*, 14(2), 307–320. <http://doi.org/10.1108/14626000710746727>
- Barringer, B. R., Jones, F. F., & Neubaum, D. O. (2005). A quantitative content analysis of the characteristics of rapid-growth firms and their founders. *Journal of Business Venturing*, 20(5), 663–687. <http://doi.org/10.1016/j.jbusvent.2004.03.004>
- Becker, B. E., & Huselid, M. A. (2006). Strategic human resources management: Where do we go from here? *Journal of Management*, 32(6), 898–925. <http://doi.org/10.1177/0149206306293668>
- Bendapudi, N., & Leone, R. P. (2003). Psychological Implications of Customer Participation in Co-Production. *Journal of Marketing*, 67(1), 14–28. <http://doi.org/10.1509/jmkg.67.1.14.18592>
- Bidwell, M., Won, S., Barbulescu, R., & Mollick, E. (2015). I used to work at Goldman Sachs! How firms benefit from organizational status in the market for human capital. *Strategic Management Journal*, 36(8), 1164–1173. <http://doi.org/10.1002/smj.2272>
- Bowers, M. R., Martin, C. L., & Luker, A. (1990). Trading Places: Employees as Customers, Customers as Employees. *Journal of Services Marketing*, 4(2), 55–69. <http://doi.org/10.1108/EUM00000000002512>
- Boxall, P. (1998). Achieving competitive advantage through human resource strategy: Towards a theory of industry dynamics. *Human Resource Management Review*, 8(3), 265–288. [http://doi.org/10.1016/S1053-4822\(98\)90005-5](http://doi.org/10.1016/S1053-4822(98)90005-5)
- Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: progressing the high-involvement stream. *Human Resource Management Journal*, 19(1), 3–23. <http://doi.org/10.1111/j.1748-8583.2008.00082.x>
- Breaugh, J. a. (2008). Employee recruitment: Current knowledge and important areas for future research. *Human Resource Management Review*, 18(3), 103–118. <http://doi.org/10.1016/j.hrmr.2008.07.003>
- Busenitz, L. W., West, G. P., Shepherd, D., Nelson, T., Chandler, G. N., & Zacharakis, A. (2003). Entrepreneurship Research in Emergence: Past Trends and Future Directions. *Journal of Management*, 29(3), 285–308. http://doi.org/10.1016/S0149-2063_03_00013-8
- Cable, D. M., & Turban, D. B. (2001). Establishing the dimensions, sources and value of job seekers' employer knowledge during recruitment. In G. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 20, pp. 115–163). New York, NY (USA): Elsevier Science.
- Cardon, M. S., & Stevens, C. E. (2004). Managing human resources in small organizations: What do we know? *Human Resource Management Review*, 14(3), 295–323. <http://doi.org/10.1016/j.hrmr.2004.06.001>
- Cardon, M. S., & Tarique, I. (2008). Organizational attractiveness of small businesses. In R. Barrett & S. Mayson (Eds.), *International handbooks of entrepreneurship and HRM* (pp. 345–360). Cheltenham, U.K.: Edward Elgar.
- Carless, S. a. (2005). Person-job fit versus person-organization fit as predictors of organizational attraction and job acceptance intentions: a longitudinal study. *Journal of Occupational & Organizational Psychology*, 78(3), 411–429. <http://doi.org/10.1348/096317905X25995>

- Chandra, V. (2012). Work–life balance: eastern and western perspectives. *The International Journal of Human Resource Management*, 23(5), 1040–1056. <http://doi.org/10.1080/09585192.2012.651339>
- Chapman, D. S., Uggerslev, K. L., Carroll, S. a, Piasentin, K. a, & Jones, D. a. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, 90(5), 928–44. <http://doi.org/10.1037/0021-9010.90.5.928>
- Collins, C. J., & Stevens, C. K. (2002). The relationship between early recruitment-related activities and the application decisions of new labor-market entrants: A brand equity approach to recruitment. *Journal of Applied Psychology*, 87(6), 1121–1133. <http://doi.org/10.1037/0021-9010.87.6.1121>
- Cuddy, A. J. C., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior*, 31, 73–98. <http://doi.org/10.1016/j.riob.2011.10.004>
- Dabirian, A., Kietzmann, J., & Diba, H. (2017). A great place to work!? Understanding crowdsourced employer branding. *Business Horizons*, 60(2), 197–205. <http://doi.org/10.1016/j.bushor.2016.11.005>
- Dineen, B. R., & Allen, D. G. (2016). Third party employment branding: Human capital inflows and outflows following “Best Places to Work” certifications. *Academy of Management Journal*, 59(1), 90–112. <http://doi.org/10.5465/amj.2013.1091>
- Eastlick, M. A., Lotz, S. L., & Warrington, P. (2006). Understanding online B-to-C relationships: An integrated model of privacy concerns, trust, and commitment. *Journal of Business Research*, 59(8), 877–886. <http://doi.org/10.1016/j.jbusres.2006.02.006>
- Edelson, S. A., Haynie, J. M., & McKelvie, A. (2011). Working for a start-up? Investigating the role of “venture personality” in the recruitment of human capital. In A. Zacharakis, S. Alvarez, M. S. Cardon, J. O. De Castro, & F. Delmar (Eds.), *Frontiers of Entrepreneurship Research: Vol. 31: Iss. 9* (pp. 322–337). Babson Park, MA: The Arthur M. Blank Center for Entrepreneurship.
- Fiss, P. C. (2007). A set-theoretic approach to organizational configurations. *Academy of Management Review*, 32(4), 1180–1198. <http://doi.org/10.5465/AMR.2007.26586092>
- Fiss, P. C. (2011). Building Better Causal Theories: A Fuzzy Set Approach to Typologies in Organization Research. *Academy of Management Journal*, 54(2), 393–420. <http://doi.org/10.5465/AMJ.2011.60263120>
- Gamache, D. L., McNamara, G., Mannor, M. J., & Johnson, R. E. (2015). Motivated to Acquire? The Impact of CEO Regulatory Focus on Firm Acquisitions. *Academy of Management Journal*, 58(4), 1261–1282. <http://doi.org/10.5465/amj.2013.0377>
- Garcia-Castro, R., & Aguilera, R. V. (2014). Family involvement in business and financial performance: A set-theoretic cross-national inquiry. *Journal of Family Business Strategy*, 5(1), 85–96. <http://doi.org/10.1016/j.jfbs.2014.01.006>
- Garcia-Castro, R., & Francoeur, C. (2016). When more is not better: Complementarities, costs and contingencies in stakeholder management. *Strategic Management Journal*, 37(2), 406–424. <http://doi.org/10.1002/smj.2341>
- Gardner, T. M., Erhardt, N. L., & Martin-Rios, C. (2011). Rebranding Employment Branding: Establishing a New Research Agenda to Explore the Attributes, Antecedents, and Consequences of Workers' Employment Brand Knowledge. In A. Joshi, H. Liao, & J. J. Martocchio (Eds.), *Research in Personnel and Human Resources Management* (Volume 30, Vol. 30, pp. 253–304). Bingley: Emerald Group Publishing. [http://doi.org/10.1108/S0742-7301\(2011\)0000030008](http://doi.org/10.1108/S0742-7301(2011)0000030008)
- Gartner, W. B. (1990). What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing*, 5(1), 15–28. [http://doi.org/10.1016/0883-9026\(90\)90023-M](http://doi.org/10.1016/0883-9026(90)90023-M)
- Glassdoor.com. (2016). Fraudulent reviews. Retrieved July 18, 2017, from http://help.glassdoor.com/article/Fraudulent-reviews/en_US
- Greer, C. R., Carr, J. C., & Hipp, L. (2016). Strategic Staffing and Small-Firm Performance. *Human Resource Management*, 55(4), 741–764. <http://doi.org/10.1002/hrm.21693>

- Heneman, H. G., & Berkley, R. A. (1999). Applicant attraction practices and outcomes among small businesses. *Journal of Small Business Management*, 37(1), 53–74.
- Highhouse, S., Thornbury, E. E., & Little, I. S. (2007). Social-identity functions of attraction to organizations. *Organizational Behavior and Human Decision Processes*, 103(1), 134–146. <http://doi.org/10.1016/j.obhdp.2006.01.001>
- Hmieleski, K. M., & Baron, R. A. (2009). Entrepreneurs' Optimism And New Venture Performance: A Social Cognitive Perspective. *Academy of Management Journal*, 52(3), 473–488. <http://doi.org/10.5465/AMJ.2009.41330755>
- Jiang, K., Hu, J., Liu, S., & Lepak, D. P. (2017). Understanding Employees' Perceptions of Human Resource Practices: Effects of Demographic Dissimilarity to Managers and Coworkers. *Human Resource Management*, 56(1), 69–91. <http://doi.org/10.1002/hrm.21771>
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012a). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55(6), 1264–1294. <http://doi.org/10.5465/amj.2011.0088>
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012b). How Does Human Resource Management Influence Organizational Outcomes? A Meta-analytic Investigation of Mediating Mechanisms. *Academy of Management Journal*, 55(6), 1264–1294. <http://doi.org/10.5465/amj.2011.0088>
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations*. New York: Wiley.
- Katz, J. A., Aldrich, H. E., Welbourne, T. M., & Williams, P. M. (2000). Guest editor's comments special issue on human resource management and the sme: Toward a new synthesis. *Entrepreneurship Theory and Practice*, 25(1), 7–10.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1–22. <http://doi.org/10.2307/1252054>
- Kennedy, M. T., & Fiss, P. C. (2009). Institutionalization, Framing, and Diffusion: The Logic of TQM Adoption and Implementation Decisions among U.S. Hospitals. *Academy of Management Journal*, 52(5), 897–918. <http://doi.org/10.5465/AMJ.2009.44633062>
- Krippendorff, K. (1989). Content analysis. In E. Barnouw, G. Gerbner, W. Schramm, T. L. Worth, & L. Gross (Eds.), *International encyclopedia of communication* (pp. 403–407). New York, NY: Oxford University Press.
- Krippendorff, K. (2004). Reliability in content analysis. *Human Communication Research*, 30(3), 411–433. <http://doi.org/10.1111/j.1468-2958.2004.tb00738.x>
- Kuckertz, A., Berger, E. S. C., & Mpeqa, A. (2016). The more the merrier? Economic freedom and entrepreneurial activity. *Journal of Business Research*, 69(4), 1288–1293. <http://doi.org/10.1016/j.jbusres.2015.10.094>
- Lepak, D. P., & Snell, S. A. (1999). The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development. *Academy of Management Review*, 24(1), 31–48. <http://doi.org/10.5465/AMR.1999.1580439>
- Lepak, D. P., & Snell, S. A. (2002). Examining the Human Resource Architecture: The Relationships Among Human Capital, Employment, and Human Resource Configurations. *Journal of Management*, 28(4), 517–543. <http://doi.org/10.1177/014920630202800403>
- Lepak, D. P., Taylor, M. S., Tekleab, A. G., Marrone, J. A., & Cohen, D. J. (2007). An examination of the use of high-investment human resource systems for core and support employees. *Human Resource Management*, 46(2), 223–246. <http://doi.org/10.1002/hrm.20158>
- Leung, A., Zhang, J., Wong, P. K., & Foo, M. Der. (2006). The use of networks in human resource acquisition for entrepreneurial firms: Multiple “fit” considerations. *Journal of Business Venturing*, 21(5), 664–686. <http://doi.org/10.1016/j.jbusvent.2005.04.010>

- Lievens, F. (2007). Employer branding in the Belgian Army: The importance of instrumental and symbolic beliefs for potential applicants, actual applicants, and military employees. *Human Resource Management*, 46(1), 51–69. <http://doi.org/10.1002/hrm.20145>
- Lievens, F., Decaestecker, C., Coetsier, P., & Geirnaert, J. (2001). Organizational attractiveness for prospective applicants: a person-organisation fit perspective. *Applied Psychology*, 50(1), 30–51. <http://doi.org/10.1111/1464-0597.00047>
- Lievens, F., & Highhouse, S. (2003). The relation of instrumental and symbolic attributes to a company's attractiveness as an employer. *Personnel Psychology*, 56(1), 75–102. <http://doi.org/10.1111/j.1744-6570.2003.tb00144.x>
- Lievens, F., & Slaughter, J. E. (2016). Employer Image and Employer Branding: What We Know and What We Need to Know. *Annual Review of Organizational Psychology and Organizational Behavior*, 3(1), 407–440. <http://doi.org/10.1146/annurev-orgpsych-041015-062501>
- Lievens, F., Van Hoye, G., & Anseel, F. (2007). Organizational identity and employer image: towards a unifying framework. *British Journal of Management*, 18(s1), 45–59. <http://doi.org/10.1111/j.1467-8551.2007.00525.x>
- Mas-Verdú, F., Ribeiro-Soriano, D., & Roig-Tierno, N. (2015). Firm survival: The role of incubators and business characteristics. *Journal of Business Research*, 68(4), 793–796. <http://doi.org/10.1016/j.jbusres.2014.11.030>
- Mayring, P. (2014a). Qualitative content analysis. Theoretical foundation, basic procedures and software solution. Retrieved November 20, 2015, from <http://nbn-resolving.de/urn:nbn:de:0168-ssoar-395173>
- Mayring, P. (2014b). *Qualitative Inhaltsanalyse*. Weinheim: Beltz.
- Metrick, A., & Yasuda, A. (2010). *Venture capital & the finance of innovation* (2nd ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Meuer, J. (2017). Exploring the Complementarities Within High-Performance Work Systems: A Set-Theoretic Analysis of UK Firms. *Human Resource Management*, 56(4), 651–672. <http://doi.org/10.1002/hrm.21793>
- Misangyi, V. F., Greckhamer, T., Furnari, S., Fiss, P. C., Crilly, D., & Aguilera, R. (2017). Embracing Causal Complexity. *Journal of Management*, 43(1), 255–282. <http://doi.org/10.1177/0149206316679252>
- Monks, K., Kelly, G., Conway, E., Flood, P., Truss, K., & Hannon, E. (2013). Understanding how HR systems work: the role of HR philosophy and HR processes. *Human Resource Management Journal*, 23(4), 379–395. <http://doi.org/10.1111/j.1748-8583.2012.00207.x>
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *The Journal of Applied Psychology*, 91(6), 1321–39. <http://doi.org/10.1037/0021-9010.91.6.1321>
- Morrell, D. L. (2011). Employee Perceptions and the Motivation of Nonmonetary Incentives. *Compensation & Benefits Review*, 43(5), 318–323. <http://doi.org/10.1177/0886368711407998>
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2015). “Small, but attractive: the effect of employer branding and legitimacy on startup attractiveness.” *Academy of Management Proceedings*, 2015(1), 10528–10528. <http://doi.org/10.5465/AMBPP.2015.105>
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2017). Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors. *Journal of Business Venturing*, 32(5), 588–610. <http://doi.org/10.1016/j.jbusvent.2017.05.001>
- Moss, T. W., Short, J. C., Payne, G. T., & Lumpkin, G. T. (2011). Dual Identities in Social Ventures: An Exploratory Study. *Entrepreneurship Theory and Practice*, 35(4), 805–830. <http://doi.org/10.1111/j.1540-6520.2010.00372.x>
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human Resource Systems and Helping in Organizations: A Relational Perspective. *Academy of Management Review*, 36(1), 33–52. <http://doi.org/10.5465/amr.2009.0402>

- Muñoz, P., & Dimov, D. (2015). The call of the whole in understanding the development of sustainable ventures. *Journal of Business Venturing*, 30(4), 632–654. <http://doi.org/10.1016/j.jbusvent.2014.07.012>
- Oikarinen, E.-L., & Saraniemi, S. (2016). Categorizing Humorous Employer Brand Message in a Small Company's Online Job Ads. *Corporate Reputation Review*, 13(3), 198–218. <http://doi.org/10.1057/s41299-016-0003-2>
- Parasuraman, A., & Zinkhan, G. M. (2002). Marketing to and Serving Customers through the Internet: An Overview and Research Agenda. *Journal of the Academy of Marketing Science*, 30(4), 286–295. <http://doi.org/10.1177/009207002236906>
- Phillips, J. M., & Gully, S. M. (2015). Multilevel and Strategic Recruiting. *Journal of Management*, 41(5), 1416–1445. <http://doi.org/10.1177/0149206315582248>
- Ragin, C. C. (2000). *Fuzzy-Set Social Science*. Chicago, IL, USA: University of Chicago Press.
- Ragin, C. C. (2008). *Redesigning Social Inquiry: Fuzzy Sets and Beyond*. Chicago, IL, USA: University of Chicago Press.
- Rindova, V. P., Pollock, T. G., & Hayward, M. L. A. (2006). Celebrating firms: The social construction of market popularity. *Academy of Management Review*, 31(1), 50–71. <http://doi.org/10.5465/AMR.2006.19379624>
- Ryan, A. M. (2012). Applicant-organization relationship and employee-organization relationship: What is the connection? In L. M. Shore, J. A.-M. Coyle-Shapiro, & L. E. Tetrick (Eds.), *The employee-organization relationship* (pp. 363–389). New York, NY (USA): Routledge.
- Schatsky, D., & Schwartz, J. (2015). *Global Human Capital Trends 2015 - Leading in the new world of work*. Deloitte University Press.
- Schreurs, B., Druart, C., Proost, K., & De Witte, K. (2009). Symbolic Attributes and Organizational Attractiveness: The moderating effects of applicant personality. *International Journal of Selection and Assessment*, 17(1), 35–46. <http://doi.org/10.1111/j.1468-2389.2009.00449.x>
- Shrader, R. C., Oviatt, B. M., & Phillips McDougall, P. (2000). How new ventures exploit trade-offs among international risk factors: Lessons for the accelerated internationalization of the 21st century. *Academy of Management Journal*, 43(6), 1227–1247. <http://doi.org/10.2307/1556347>
- Slaughter, J. E., Zickar, M. J., Highhouse, S., & Mohr, D. C. (2004). Personality trait inferences about organizations: development of a measure and assessment of construct validity. *Journal of Applied Psychology*, 89(1), 85–103. <http://doi.org/10.1037/0021-9010.89.1.85>
- Stinchcombe, A. L. (1965). Social structure and organizations. In J. G. March (Ed.), *Handbook of organizations* (pp. 142–193). Chicago, IL, USA: Rand McNally College Publishing Company.
- SVB (2013). *Startup Outlook report 2013*. Santa Clara (CA), USA. Retrieved October 1, 2016, from <http://www.svb.com/pdf/startup-outlook-2013-full-report/>
- SVB (2016). U.S. Startup Outlook 2016 - New reality prompts U.S. startups to focus on fundamentals. Retrieved October 1, 2016, from https://www.svb.com/uploadedFiles/Content/Trends_and_Insights/Reports/Innovation_Economy/2016/US/svb_US-Startup-Outlook-2016.pdf
- SVB (2017). *Startup Outlook report 2017*. Santa Clara (CA), USA. Retrieved October 3, 2017, from https://www.svb.com/uploadedFiles/Content/Trends_and_Insights/Reports/Startup_Outlook_Report/US Startup Outlook Report 2017.pdf
- Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2–3), 172–194. <http://doi.org/10.1016/j.lrp.2009.07.003>
- Theurer, C. P., Tumasjan, A., Welp, I. M., & Lievens, F. (2016). Employer Branding: A Brand Equity-based Literature Review and Research Agenda. *International Journal of Management Reviews*, accepted article. <http://doi.org/10.1111/ijmr.12121>
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246. <http://doi.org/10.1177/1098214005283748>

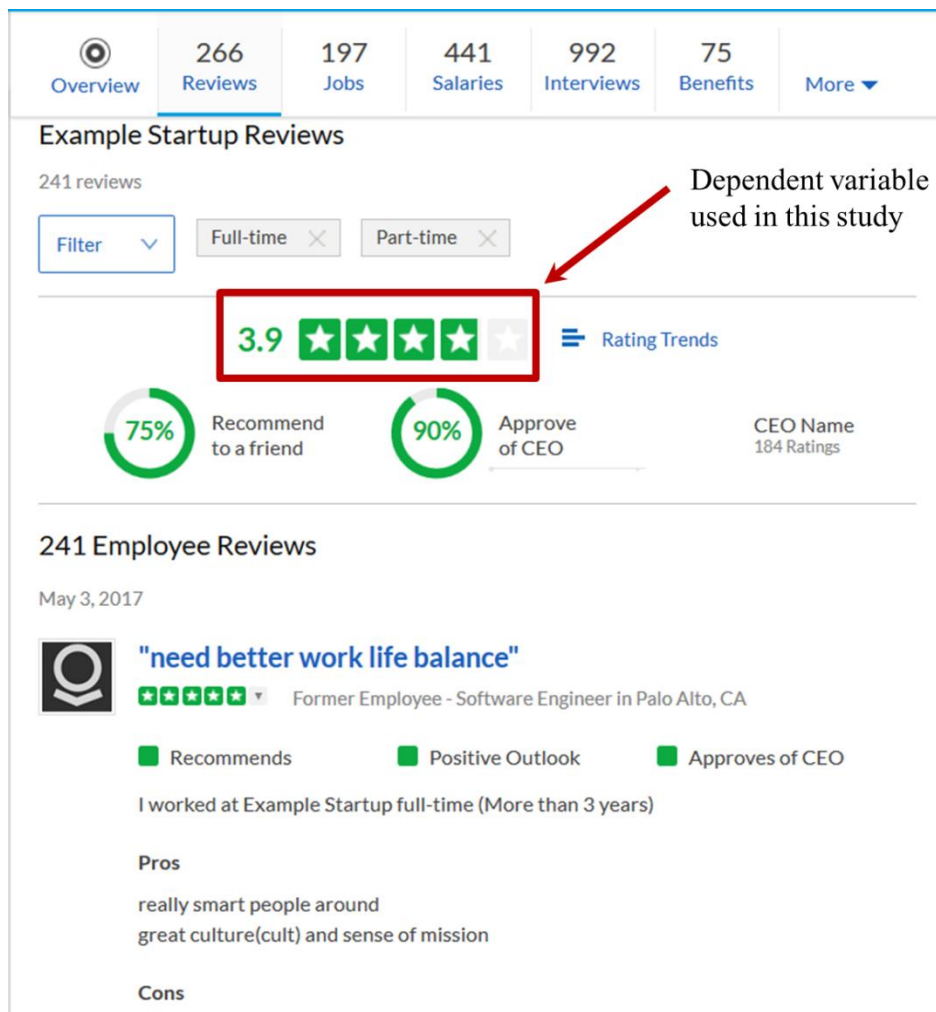
- Thompson, J. A., & Bunderson, J. S. (2003). Violations of principle: Ideological currency in the psychological contract. *Academy of Management Review*, 28(4), 571–586. <http://doi.org/10.5465/AMR.2003.10899381>
- Trank, C. Q., Rynes, S. L., & Bretz, R. D. J. (2002). Attracting Applicants in the War for Talent: Differences in Work Preferences Among High Achievers. *Journal of Business and Psychology*, 16(3), 331–345. <http://doi.org/10.1023/A:1012887605708>
- Tumasjan, A., Sprenger, T. O., Sandner, P. G., & Welpel, I. M. (2011). Election forecasts with Twitter: How 140 characters reflect the political landscape. *Social Science Computer Review*, 29(4), 402–418. <http://doi.org/10.1177/0894439310386557>
- Tumasjan, A., Strobel, M., & Welpel, I. M. (2011). Employer brand building for start-ups: which job attributes do employees value most? *Zeitschrift Für Betriebswirtschaft*, 81(S6), 111–136. <http://doi.org/10.1007/s11573-011-0507-2>
- Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology*, 65(3), 597–660. <http://doi.org/10.1111/j.1744-6570.2012.01254.x>
- Van Hoye, G. (2008). Nursing recruitment: relationship between perceived employer image and nursing employees' recommendations. *Journal of Advanced Nursing*, 63(4), 366–75. <http://doi.org/10.1111/j.1365-2648.2008.04710.x>
- Van Hoye, G., Bas, T., Cromheecke, S., & Lievens, F. (2013). The instrumental and symbolic dimensions of organisations' image as an employer: A large-scale field study on employer branding in turkey. *Applied Psychology*, 62(4), 543–557. <http://doi.org/10.1111/j.1464-0597.2012.00495.x>
- Van Hoye, G., & Saks, A. M. (2011). The instrumental-symbolic framework: Organisational image and attractiveness of potential applicants and their companions at a job fair. *Applied Psychology*, 60(2), 311–335. <http://doi.org/10.1111/j.1464-0597.2010.00437.x>
- Vergne, J.-P., & Depeyre, C. (2016). How do Firms Adapt? A Fuzzy-Set Analysis of the Role of Cognition and Capabilities in U.S. Defense Firms Responses to 9/11. *Academy of Management Journal*, 59(5), 1653–1680. <http://doi.org/10.5465/amj.2013.1222>
- Welter, F. (2011). Contextualizing Entrepreneurship-Conceptual Challenges and Ways Forward. *Entrepreneurship Theory and Practice*, 35(1), 165–184. <http://doi.org/10.1111/j.1540-6520.2010.00427.x>
- Williamson, I. O. (2000). Employer legitimacy and recruitment success in small businesses. *Entrepreneurship Theory and Practice*, 25(1), 27–43.
- Williamson, I. O., Cable, D. M., & Aldrich, H. E. (2002). Smaller but not necessarily weaker: How small businesses can overcome barriers to recruitment. In J. A. Katz & T. M. Welbourne (Eds.), *Managing People in Entrepreneurial Organizations (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 5)* (pp. 83–106). Emerald Group Publishing Limited. [http://doi.org/10.1016/S1074-7540\(02\)05005-5](http://doi.org/10.1016/S1074-7540(02)05005-5)
- Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management*, 27(6), 701–721. <http://doi.org/10.1177/014920630102700607>
- Wyatt, M. R. R., Pathak, S. B., & Zibarras, L. D. (2010). Advancing selection in an SME: Is best practice methodology applicable? *International Small Business Journal*, 28(3), 258–273. <http://doi.org/10.1177/0266242609350815>
- Zahra, S. A., & Wright, M. (2011). Entrepreneurship's Next Act. *Academy of Management Perspectives*, 25(4), 67–83. <http://doi.org/10.5465/amp.2010.0149>

Appendix 3.A

Figure 3.A1 illustrates how reviews are presented to potential applicants to the employment platform Glassdoor.com. To avoid fraudulent reviews, users are required to register before being able to review an employer. The dependent variable used in our study (highlighted with a red box) is prominently displayed on the top of the summary page of all reviews existing for a company on Glassdoor.com.

FIGURE 3.A1

Example screenshot of reviews on the platform Glassdoor.com



Note: The screenshot contains real reviews, but the name of the company has been changed to "Example Startup".

TABLE 3.A1: Selected literature overview of employer instrumental and symbolic benefit archetypes

Paper	Purpose	Findings	Work environment	Development	Remuneration	Company reputation	Company culture	Work attitude	Value system
Collins & Stevens (2002)	Understanding the influence of early recruitment-related activities on application decisions.	Perceived job attributes and general attitudes towards a company (i.e., its reputation) influence the effect of early recruitment activities on employer attractiveness	✓	✓	✓	✓	✓		
Chapman et al. (2005)	Conducting a meta-analysis of predictors of various recruitment outcomes (e.g., employer attractiveness)	Work environment was found to have the highest influence on attraction of job applicants to organizations.	✓	✓	✓				
Lievens & Highhouse (2003)	Extending the study of initial impressions of employees of their employer to include symbolic employer attributes.	In their study among bank employees, symbolic attributes added incremental value above a instrumental employer attributes in explaining employer attractiveness.	✓	✓	✓	✓	✓	✓	✓
Lievens (2007)	Applying the instrumental-symbolic framework in the context of the Belgian army.	Symbolic employer attributes explain variance above and beyond instrumental employer attributes.	✓	✓	✓	✓	✓	✓	✓
Moser et al. (2017)	Comparing new ventures' recruitment-related heterogeneous and homogeneous identity claims and the influence of entrepreneurial behavior on employer attractiveness.	Heterogeneous identity claims (i.e., instrumental and symbolic employer attributes) have a higher importance than homogeneous identity claims (i.e., legitimacy).	✓	✓	✓		✓	✓	✓
Rindova et al. (2006)	Understanding how the performance and quality of individual employees affects a firm's image.	Company reputation is influenced by the reputation and quality of the individual employee.				✓			
Tumasjan et al. (2011)	Ranking the importance of instrumental and symbolic employer attributes for potential startup employees.	Overall, elements of startups' work environment were more important than aspects of remuneration.	✓	✓	✓		✓	✓	
Uggerslev et al. (2012)	Meta-analytical review of different predictors of recruitment outcomes along recruitment stages	Employer attributes related to company reputation as well as company culture (i.e., employee relations) had the highest influence on applicant attraction.	✓	✓	✓	✓	✓	✓	
Van Hove & Saks (2011)	Using the instrumental-symbolic framework to understand differences in employer attractiveness evaluations between actual and potential employees.	Potential applicants have a more positive view of an organization (in their case, the Belgian army) than actual employees.	✓	✓	✓	✓	✓	✓	✓

TABLE 3.A2
Sample overview of new venture job postings

		Number of job postings
B2C	Business background	73
	Technical background	62
	Total	135
B2B	Business background	43
	Technical background	41
	Total	84
Total	Business background	116
	Technical background	103
	Total	219

TABLE 3.A3
Instrumental employer attributes and coding definitions for the new venture context

Archetype	Employer attribute	Coding definition for new venture context
Work environment	Flexible working hours *	The start-up advertises the fact that employees can manage their working hours freely.
	Location	The start-up promotes the location of its offices and highlights the attractiveness of its work environment.
	Fringe benefits/ Perks *	The start-up highlights its offering of non-financial perks.
	Job security	The start-up references aspects related to employment duration and job security.
Development	Advancement possibilities	The start-up promotes possibilities for career development and personal growth.
	Learning opportunities	The start-up references examples for informal personal and professional skill development.
	Training opportunities	The start-up promotes possibilities for formal personal and professional skill development.
Remuneration	Insurance benefits *	The start-up promotes financial support related to life, health and retirement.
	Bonus	The start-up promotes offering additional contingent remuneration.
	Salary	The start-up references aspects of fixed remuneration.

Note: Attributes marked with * have been newly identified based on content analysis results, the remaining attributes already appeared in studies presented in our literature review (see Table A1).

TABLE 3.A4
Symbolic employer attributes and coding definitions for the new venture context

Archetype	Employer attribute	Image associations	Coding definition for new venture context
Attributes related to company reputation	Prestigious	leading, popular, hot	The company promotes an image alluding to its prominence and reputation.
	Robust ^a	masculine, strong, robust	Attribute not found in new venture context, therefore no new venture definition provided.
Attributes related to company culture and spirit	Young *	dynamic, young	The start-up highlights aspects producing an image of being young and dynamic.
	Balanced *	balanced, healthy	The start-up promotes an image related to personal well-being and work-life balance.
	Entertaining *	fun, enjoyable	The start-up promotes an image suggesting a pleasant, lively and enjoyable work culture and atmosphere.
	Motivated *	motivated, dynamic	The start-up promotes an image of drive, encouragement and passion among employees.
	Unconventional *	open, individual, peculiar, weird	The start-up promotes an image suggesting a peculiar, individual, and distinct company culture.
Attributes related to work attitude	Visionary *	inventive, forward-looking, visionary	The start-up promotes an image of being forward-looking and driven by a mission.
	Innovative	creative, innovative, revolutionary	The start-up promotes an image of being creative, innovatory and revolutionary.
	Competent	secure, intelligent, reliable	The start-up promotes an image of its employees being capable and skilled.
Attributes related to value system	Product-driven *	inspiring, committed	The start-up suggests an image of admiration of and commitment to the company's products.
	Rewarding *	rewarding, worthwhile, satisfying	The start-up promotes an image alluding to the importance of its employees for the success of the company.
	Social *	caring, sustainable	The start-up promotes a caring and responsible image.
	Sincere ^a	honest, sincere	Attribute not mentioned in new venture job descriptions.

Note: Attributes marked with * have been newly identified based on content analysis results, the remaining attributes already appeared in studies presented in our literature review (see Table A1). a) While named in existing literature, robustness and sincerity were not found in our new venture job posting sample.

TABLE 3.A5
Percentages of job postings containing instrumental employer attributes

	Total	Business background			Technical background		
		B2C	B2B	Total	B2C	B2B	Total
Number of job postings	219	73	43	116	62	41	103
Location	40%	51%	23%	41%	48%	24%	39%
Salary	33%	32%	33%	32%	34%	34%	34%
Fringe benefits/ Perks*	32%	26%	33%	28%	39%	34%	37%
Learning opportunities	22%	32%	14%	25%	23%	12%	18%
Advancement possibilities	14%	21%	12%	17%	18%	0%	11%
Insurance benefits*	13%	7%	21%	12%	11%	17%	14%
Flexible working hours*	11%	14%	5%	10%	15%	5%	11%
Bonus	11%	5%	19%	10%	6%	17%	11%
Training opportunities	5%	5%	5%	5%	6%	2%	5%
Job security	5%	7%	5%	6%	3%	2%	3%

Note: B2C: Business to customer, B2B: Business to business. Attributes marked with * have been newly identified based on content analysis results, the remaining attributes formed the initial coding set.

TABLE 3.A6
Percentages of job postings containing symbolic employer attributes

	Total	Business background			Technical background		
		B2C	B2B	Total	B2C	B2B	Total
Number of job postings	219	73	43	116	62	41	103
Visionary *	58%	58%	63%	59%	52%	66%	57%
Motivated *	25%	34%	12%	26%	32%	10%	23%
Innovative	21%	25%	21%	23%	21%	17%	19%
Rewarding *	19%	23%	16%	21%	19%	15%	17%
Entertaining *	16%	10%	19%	13%	16%	22%	18%
Competent	15%	16%	16%	16%	15%	12%	14%
Young *	11%	14%	7%	11%	16%	5%	12%
Product-driven *	10%	14%	2%	9%	10%	12%	11%
Unconventional *	9%	11%	5%	9%	11%	5%	9%
Balanced *	4%	4%	0%	3%	8%	2%	6%
Prestigious	2%	3%	5%	3%	0%	0%	0%
Social *	1%	1%	2%	2%	0%	2%	1%
Robust	0%	0%	0%	0%	0%	0%	0%
Sincere	0%	0%	0%	0%	0%	0%	0%

Note: B2C: Business to customer, B2B: Business to business. Attributes marked with * have been newly identified based on content analysis results, the remaining attributes formed the initial coding set.





4 Don't be so emotional: Employer image communication on social media

Abstract

We investigate how candidates' engagement with a potential employer changes according to the firms' social media recruitment messages' content and communication style. In our research, we employ methods from computational linguistics combined with regression analyses to analyze N=216,828 Twitter messages collected from the human resource (HR) accounts of Fortune 500 companies. Using psychological contract theory as a guiding framework, we show that employer image content related to transactional-oriented work topics is less effective in creating candidate engagement with an employer than highlighting relational aspects of employment. We further show that distinctive (vs. generic) social media content affects candidate engagement positively, whereas emotional social media content affects candidate engagement negatively. Last, we show that these effects are specific for employer image content. In contrast to prior research, our results suggest that to increase candidate engagement, employers should be less emotional in their communication, but rather focus on distinctive, relational, and company-specific communication. Overall, we contribute to understanding of social media as a mainstream recruitment tool and intend to stimulate further research on online employer image management.

Publication: Dissertation Working Paper

Cite as: Moser, K., Tumasjan, A., Cable, D., & Welp, I. M. (2017). *Don't be so emotional: Employer image communication on social media* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.

Presented at: Academy Management Annual Meeting 2016 in Anaheim, USA
1st International Conference on Advanced Research Methods and Analytics 2016 in Valencia, Spain

Awards: *Best Paper Proceedings* of the Academy Management Annual Meeting 2016 in Anaheim, USA

4.1 Introduction

The creation and management of a favorable employer image has received increased attention in the human resource management (HRM) literature (Gardner, Erhardt, & Martin-Rios, 2011; Lievens & Slaughter, 2016). The goal of influencing applicants' employer image is to promote 'a clear view of what makes a firm different and desirable as an employer' (Lievens, Van Hove, & Anseel, 2007, p. 51). Research shows that employer image is important because it affects applicant attitudes and job search behaviors (Breugh & Starke, 2000; Cable & Graham, 2000; Lievens & Slaughter, 2016).

In the last decade, employer communication has extended beyond the confines of traditional recruitment channels (e.g., job ads, newspaper advertisements, corporate websites) providing firms with new ways to position themselves as employers. Since social media communication on platforms like Twitter or Facebook play a major role in peoples' daily life (McFarland & Ployhart, 2015; Zhang, Jansen, & Chowdhury, 2011), firms actively use social media to engage with their target audiences (Zhang et al., 2011). By using social media for recruitment, firms hope to reach out to a large number of candidates at lower costs, and to position themselves as attractive employers in their target groups (Chui et al., 2012). And, some firms simply use Twitter to post links to their traditional job ads (i.e., making their job ads available electronically). However, the recent literature and practice suggests that many firms are interested in going beyond job ads and improving their employer image (Landers & Schmidt, 2016; Lievens & Slaughter, 2016).

In this article, we focus on how firms use Twitter to go beyond mere job ads and shape their employer image in the minds of potential job applicants. Specifically, to understand how recruitment communication affects candidates' reactions to employer communication, we must consider both message content (i.e., *what* do firms communicate?) and message style (i.e., *how* do firms communicate?) (McQuail & Windahl, 1993; Shannon & Weaver, 1949). In terms of message *content*, firms may communicate purely work-related information (e.g., pay, job requirements, and skills) to provide potential applicants with in-depth information on the firm's employment conditions. On the other hand, firms also may choose to communicate non-work-related content (e.g., leisure activities, family benefits, and general life advice) to connect to potential applicants' identities and build relational and social currency (Rousseau, 1990).

If firms focus on work-related content, such as job requirements and salary, they provide valuable job-related information which may be beneficial to potential applicants (e.g., "realistic job preview"). However, by focusing on work-related content, firms will mainly

emphasize the *transactional* promises of their employment offering (Mai, Ellis, Christian, & Porter, 2016; Rousseau, 1990). Consequently, applicants may view the employer-employee relationship as contractual and mainly “economic” in nature (Ryan, 2012). Conceptually, a transactional approach may negatively influence firms’ employer images and reduce candidate engagement (Kahn, 1990; Mossholder, Richardson, & Settoon, 2011). If firms communicate non-work-related content, such as general life advice and employee stories about leisure topics, they may be perceived as caring about individuals’ personal needs and being interested in establishing a more relational connection with potential employees. This could improve an employer’s attractiveness. Conversely, applicants could see such *relational* content as irrelevant to job-related information they seek, resulting in lower engagement.

Second, in terms of message *style*, research from the field of marketing reveals that firms mainly follow two fundamental principles in marketing communication to trigger audience engagement: distinctiveness and emotionality (e.g., Keller, 2009; Thompson, Rindfleisch, & Arsel, 2006). Communicating in a *distinctive*, company-specific language has a long tradition in the marketing literature, and is essential in differentiating firms from their competitors (e.g., Holt, 2004; Rossolatos, 2013). Similarly, *emotional* branding has been widely heralded as vital for creating close firm-consumer bonds, and, ultimately, establishing firms’ competitive advantage in the market place (Thompson, Rindfleisch, & Arsel, 2006).

Whereas the communication principles of distinctiveness and emotionality are well-established in marketing research, there is little research regarding these principles in recruitment communication. Thus, we currently do not know whether, and to what extent, communicating distinctive information and posting in a company-specific style will help engage candidates. *Distinctive* messaging may provide firms with opportunities to differentiate themselves from their competitors (Keller, Sternthal, & Tybout, 2002), but may backfire if potential candidates see such communication as illegitimate. Likewise, *emotionality* may increase candidates’ engagement with a firm’s employment offering, but could endanger a firm’s professionalism.

In this article, we draw on psychological contract theory (Rousseau, 1990) to develop hypotheses regarding how applicants should be affected by transactional, work-related recruitment content versus relational, non-work-related content. We also develop theory about distinctiveness (i.e., the amount of unique and novel content contained in a message) and emotional tone (i.e., the total sentiment of a message) as antecedents of candidate engagement. This topic, while important in marketing, has been virtually overlooked in the

recruitment literature. As such, we contribute to the HRM literature in general and to research on employer image in particular (Lievens & Slaughter, 2016; McFarland & Ployhart, 2015).

Finally, by investigating employer image in the social media context, we respond to recent calls in the literature to keep pace with these emerging trends (Collins & Kanar, 2013; Lievens & Slaughter, 2016; McFarland & Ployhart, 2015). In addition to adding to theory, we make a methodological contribution by using computational linguistics methods to identify themes in firms' social media communication. This approach allows us to examine which content resonates with potential applicants and increases their engagement with a potential employer (Collins & Kanar, 2013; Turban & Cable, 2003).

4.2 Theory and hypotheses

General models of communication (McQuail & Windahl, 1993; Shannon & Weaver, 1949) suggest that *what* firms communicate (i.e., the content of their recruitment communication) and *how* firms communicate (i.e., the communication style and process of their recruitment communication) are essential to understanding audience' *engagement*. In the context of recruitment, we define candidate engagement as a psychological state of varying intensity comprising cognitive, emotional, and behavioral dimensions (Brodie, Ilic, Juric, & Hollebeek, 2013; Kahn, 1990). For example, potential applicants might develop their cognitive image of a potential employer by following the content on its social media profile, and interact with it by reading, sharing, or commenting on the firms' social media posts.

4.2.1 Employer image content and candidate engagement

Firms engage in recruitment activities to position themselves as employers with an attractive employer image (Cable & Turban, 2001; Lievens & Slaughter, 2016). The dimensions of firms' employer image have been studied from a psychological contract perspective (e.g., Backhaus & Tikoo, 2004; Edwards, 2010), referring to an employee's set of beliefs about the unwritten promises and obligations implicit in his or her relationship with an employing organization (Argyris, 1960; Simon, 1951; Thompson & Bunderson, 2003). According to this perspective, employers and their employees enter into a contractual agreement that can have transactional (i.e., specific and usually monetizable exchanges) and relational (i.e., social exchanges) obligations (Montes & Zweig, 2009; Ryan, 2012; Thompson & Bunderson, 2003). Transactional contracts focus on instrumental outcomes of an exchange whereas relational contracts center on self-expression and incorporate emotions (Lievens & Highhouse, 2003).

Research shows that psychological contractual perceptions play an important role in the applicant attraction phase of recruitment. Applicants assess the nature of the anticipatory psychological contract based on information provided by the company (e.g., in online recruitment communication) (Ryan, 2012) and the transactional and relational content transmitted in firms' recruitment communication (Backhaus & Tikoo, 2004; Ryan, 2012). Therefore, recruitment activities influence potential employees' perceptions of the elements of the anticipatory psychological contract, and trigger different levels of candidate engagement.

Transactional content. In some cases, the anticipatory psychological contract between potential employees and their potential employer is based on information regarding the employees' expected tasks and required skills in exchange for pay, rewards or other economic currency (Rousseau, 1990; Thompson & Bunderson, 2003). For recruitment managers, it is traditional to inform potential applicants about the expected work tasks, the required skills as well as the monetary compensation guaranteed in return for the employees' efforts. In fact, in many job descriptions, such work-related information plays a central role (Nolan, Gohlke, Gilmore, & Rosiello, 2013), suggesting that recruitment managers think that it is the best route to candidate engagement.

However, if firms focus their recruitment activities entirely on work-related information (e.g., information regarding remuneration, rewards, or work tasks) the firm's employer image could be perceived as purely "economic" by potential applicants (Ryan, 2012). Because transactional ties to employers are less self-affirming and fail to create a social bond with the employer (Lawler, Thye, & Yoon, 2009; Thompson & Bunderson, 2003), we hypothesize that recruitment communication focusing primarily on transactional content may negatively affect candidate engagement.

Hypothesis 1a: Higher levels of transactional employer image content are negatively associated with candidate engagement.

Relational content. A relational approach to communication signals an employer image focusing on personal connections with potential employees (Lawler et al., 2009; Ryan, 2012). In contrast to transactional content, relational content focuses on creating social currency by addressing individuals' desire for personal growth and self-expression (Rousseau, 2001; Thompson & Bunderson, 2003). Accordingly, firms can signal a social bond with potential employees if they communicate, for example, personal stories about their employees that are not entirely work-related (e.g., concerning leisure activities) or highlight a family-like company culture (e.g., employee friendships beyond work). Social identity theory

(Highhouse, Thornbury, & Little, 2007; Hogg & Terry, 2000) posits that such connections are essential in attracting potential employees. This argument also is consistent with the literature on meaningful work (Chalofsky, 2003; Koloc, 2013; Lepisto & Pratt, 2017), which suggests that employers create higher employee engagement if they do not only talk about work itself, but also about personal elements of the employee-employer relationship. Accordingly, we predict that relational content has a positive effect on candidate engagement.

Hypothesis 1b: Higher levels of relational employer image content are positively associated with candidate engagement.

4.2.2 Communication style and candidate engagement

Conceptually, developing a favorable employer image is likely to work best if recruitment activities communicate both distinctive and emotionally appealing content (Gardner et al., 2011; Uggerslev, Fassina, & Kraichy, 2012). In the context of social media platforms, McFarland and Ployhart (2015) emphasized that to create engagement, firms need to offer distinct and novel content. Furthermore, both McFarland and Ployhart (2015) and Stieglitz and Dang-Xuan (2013) described how emotional tone helps predict audience engagement with social media. Based on these conceptual models, we integrate these streams of research and study the effect of *information distinctiveness* and *emotional tone* on candidate engagement.

Information distinctiveness. Distinctiveness has become a core building block of brands and marketing (e.g., Holt, 2002, 2004; Rossolatos, 2013; Thellefsen & Sørensen, 2007), stemming from the fields of linguistics and semiotics (i.e., the study of signs and symbols). A distinct employer image helps differentiate a firm's employment offering from competing firms (Dineen & Allen, 2016; Lievens & Slaughter, 2016). In this regard, unique and novel information about a firm's employment offering may play a key role in increasing potential applicants' employer knowledge (Uggerslev et al., 2012). While job ads and billboard ads often lack information that goes beyond the basic outline of an open position, social media present richer media that allows firms to distribute distinct and novel information for recruitment and employer image-building purposes (McFarland & Ployhart, 2015).

For companies, the conversation-style nature of social media (especially microblogs, such as Twitter) offers a convenient means for continuously communicating different aspects of a firm's employment offering (McFarland & Ployhart, 2015; Swider, Zimmerman, & Barrick, 2015). Specifically, firms may use social media for sharing company-specific information that increases employer knowledge and thus develops a distinct employer image

(Gardner et al., 2011). Firms may provide insights into daily working life by sharing employees' social media posts using the firm's social media account. For example, Microsoft shares employee achievements ("Meet Donna Warton and see how she helped build the Devices Operations Team around #Surface. (Microsoft, 2016)" on their social media accounts.

As illustrated in this example, promoting a distinct employer image often may entail using uncommon vocabulary. Marketing research suggests that distinctive content and wording may increase the chance of imprinting a firm's value proposition in consumers' belief systems activities (e.g., Holt, 2002, 2004; Rossolatos, 2013; Thellefsen & Sørensen, 2007). Likewise, we argue that distinctive language aids employer image building and candidate engagement (Gardner et al., 2011).

Specifically, we expect company-specific information (e.g., "How a sense of humor & focus on social good helps keep #audit professional Paige Hall in balance #DeloitteCareers (Deloitte, 2016)") should lead to greater engagement than generic marketing content (e.g., "Flexibility + great job → Happy employees! #remotework (Dell, 2016)") because it provides them with more meaningful information about an employer and thereby increases their employer knowledge. As in the first example, firms can share insights into the team climate in a department, recent achievements, or other employee success stories in recruiting communication. Through these stories, the firm's recruitment-related audience gets a better understanding of the employment experience they can expect. Thus, company-specific (i.e., unique) and novel information provides potential applicants with new and memorable information. Consequently, we hypothesize that social media recruitment messaging with high levels of distinctive content will result in higher candidate engagement than social media recruitment content with low levels of distinctive messaging.

Hypothesis 2a: The level of message distinctiveness is positively associated with candidate engagement.

Emotional tone. Social contagion theory (Barsade, 2002) suggests that social networks serve as a conduit where information is disseminated based on "infectious" characteristics such as emotional tone (i.e., level of emotionality) (McFarland & Ployhart, 2015). In the context of recruitment, for instance, employer image building activities may address the anxiety of the job search situation through social media messages, such as "Tip: Connect with recruiters on @linkedin-they love to help! But, #whateveryou do avoid these #pitfalls" (3M

Careers, 2012). Recruitment messages may also send emotionally-appealing company insights, such as “A little [...] volunteering, a little fun, a lot of #GivingBack. [...] #WeAreCisco” (Cisco Careers, 2015).

Emotional tone affects which kind of information is spread in social media. For example, Stieglitz and Dang-Xuan (2013) found that emotionally-evocative political communication (i.e., information with high levels of either positive or negative sentiment) was shared more among social media users than political communication that expressed a neutral sentiment. Similarly, Berger and Milkman (2012) suggest that product advertisement might be more successful if it creates emotional arousal among consumers. They find that both positive and negative sentiment stimulates information sharing, and thus supports brand building. The brand management literature also has stressed the importance of creating an emotional connection between a brand and its audience in order to create brand loyalty (e.g., Morrison & Crane, 2007; Thomson, MacInnis, & Whan Park, 2005). In product marketing, emotionally-appealing brands have been shown to create more engagement among brand followers. Thus, in the recruitment context, we hypothesize that content communicated with a high emotional tone (i.e., high emotionality) will result in more candidate engagement than content with low emotional tone.

Hypothesis 2b: The level of emotional tone in messages is positively associated with candidate engagement.

4.2.3 The moderating role of employer image content vs. job ads content

Above, we argued that information distinctiveness and emotional tone will be positively associated with candidate engagement. However, we propose that these effects will be moderated by content type, namely whether the message content is merely a job ad (i.e., a job title and hyperlink to the job ad on the firm's website) vs. content tailored to shape the employer image (i.e., insights into the firm's culture, career advice or direct interaction with followers).

On social media, developing a desirable employer image in candidates' minds requires creating a two-sided conversation between firms and candidates (Lievens & Slaughter, 2016; McFarland & Ployhart, 2015). Thus, merely posting titles of job openings (e.g., “senior service engineer wanted”) combined with a hyperlink to the respective job ad on the firm's website may be functional, but will not establish a meaningful conversation. Moreover, with the limited amount of text available on social media such as Twitter (i.e., limit of 140 characters), posts containing vacant job titles and links to job ads often leave no room for new

information or emotionally-appealing messages. Thus, to unfold the positive effect of information distinctiveness and emotional tone, there must be meaningful content where these two style characteristics can be applied. Thus, a distinctive or emotional message should have a stronger effect if it is applied in the context of employer image content compared to a job ad. For example, informing potential candidates about an employer's working life (e.g., quotes from the company's senior management on their leadership philosophy), employer recognitions (e.g., the company has been named on Forbes "America's Best Employers" list), or generally company information (e.g., the company's stand on diversity) should lead to greater candidate engagement than job ads.

First, in terms of information distinctiveness, even distinctive job ad content does not necessarily provide potential candidates with insights about a potential employer. Job applicants are interested in employer culture and values, and place greater emphasis on value congruence than job characteristics such as pay or location (Cable & Judge, 1996). Given the uncertainty that applicants face during job search, they look for credible, visible signals from employers to make inferences about less visible organizational attributes (Rynes & Miller, 1983). Thus, we expect distinctive social media messages that offer novel insights about an employer's image to generate greater candidate engagement than distinctive messages about the job listing.

Likewise, we expect that emotional tone will have a greater effect on potential candidates when it appears in the context of employer image content rather than job ad messages. This is because job ad content (e.g., job title or location) is a less appropriate context for emotional tone compared to communicating employee stories, recruiting events, or company insights. Logically, a job ad draws interest and engagement because it fits with candidates' (and their friends') job search profiles, or it is irrelevant since it advertises a position with a different professional background (e.g., an engineering vacancy seen by a nurse). Therefore, even if job ad content contains high levels of emotional tone, potential candidates' engagement should not be affected since the vacancy's relevance does not increase with high emotional tone. For example, the tweet "Hot, Hot, Hot...Vacancy - Technical Support Agent; Ref: BE CCA2; Alness, Permanent, £8.00 per hour" may not engage job applicants more than job ad content with lower emotional tone (e.g., "Vacancy: Off Grid Mobile Finance Access Advisor: <http://...>") if it still is irrelevant to them.

Therefore, we argue that content type (i.e., employer image content vs. job ad content) will moderate the effects of information distinctiveness and emotional tone on candidate engagement.

Hypothesis 2c: The effect of *information distinctiveness* on candidate engagement will be moderated by content type, such that for employer image content the effect will be more positive than for job ad content.

Hypothesis 2d: The effect of *emotional tone* on candidate engagement will be moderated by content type, such that for employer image content the effect will be more positive than for job ad content.

4.3 Data and method

4.3.1 Twitter as an employer image management channel

In this study, we focused on firms' employer image content on the microblogging platform Twitter. Twitter is one of the largest social media platforms worldwide with more than 310 million monthly active users in almost every demographic group (Twitter, 2017). The platform allows users to post short messages – so-called “tweets” – with a length of up to 140 characters. This form of electronic word-of-mouth communication has been shown to be an important way for firms to increase and influence their online image (Jansen, Zhang, Sobel, & Chowdury, 2009). The character limit of tweets poses restrictions in terms of the amount of content that recruitment managers can convey in one single tweet. As a result, tweets often contain the essence of a larger story. For example, if a company has been named on Forbes “America’s Best Employers” list, a tweet will not be able to cover the entire story, but may summarize the company’s achievement and reference to a more extensive source of information. In such a form, tweets can be thought of as “call for action” to readers to follow up on a story by seeking more information. Twitter’s users benefit from the limited length of tweets because such short messages are written to the point and are therefore easier to follow. Today, companies post a variety of different HR-related content on Twitter (e.g., related to recruitment communication, insights into the company, or job openings). In Table 4.1 we provide example tweets to illustrate the diversity of HR-related content.

TABLE 4.1
Example tweets posted on HR-related Twitter channels of US Fortune 500 companies

Tweet source	Tweet content
#1: 3M Careers on Sep. 10, 2015	See how Feben Gobena applies science to life in Universum's Most Attractive Employer insert in the WSJ #LifeWith3M http://t.co/Y2N7BHDxSB
#2: 3M Careers on Sep. 21, 2015	Getting ready for #NBMBA15. If you're planning to attend, we'd love to meet you. Stop by and see us!
#3: Microsoft Careers on Sep. 19, 2015	"As we look ahead into the next century, leaders will be those who empower others." -@BillGates #WeekendWisdom
#4: Microsoft Careers on Oct. 3, 2015	Cloud Solution Architects, join us in Reading on Wed, 10/7 for an #Azure Hiring Event. RSVP: http://t.co/MiiXD1U156 http://t.co/qAHk5wX5Uo
#5: eBay Careers on May 1, 2015	We're excited to be #5 on the @anitaborg_org Top Companies for Women Technologists list! http://t.co/xkBRNebVmB @ebayinc #WIT
#6: Oracle Careers on Oct. 5, 2015	Hard-working team by day, and incredible superheroes by night, We have it all at @OracleCol #lifeatOracle http://t.co/OkIrLnDnhp
#7: Pfizer Careers on Sep. 21, 2015	Oncology Account Specialist - LB Force, Vaccines, Oncology, https://t.co/O1rmGZvBlf
#8: Time Warner Jobs on Dec. 2, 2013	Thrilled about the success of our 1st NYC Recruitment Mixer! Who knew how GREAT our teams could be when you "mix" them together! #LifeAtTW
#9: Visa Careers on Dec. 2, 2013	Associate Dispute Analyst - Visa: (#HighlandsRanch , CO) http://t.co/SEswyYrBH9 #ProjectMgmt #Job #Jobs #TweetMyJobs

Table 4.1 illustrates that firms approach employer image management in different ways. For example, the company 3M promotes an article highlighting a company executive's role in turning 3M into an attractive employer (see #1). Similarly, eBay promotes its image as attractive employer by referencing to their top placement on a well-known list of firms promoting women in the tech industry (see #5). Other tweets from Microsoft and Oracle illustrate more inspirational approach to convey a positive image of both companies as employers (see #3, #6). The tweets of 3M and Time Warner both reference recruiting events (see #2, #8). In this case, 3M uses Twitter to invite its Twitter followers to attend.

Of course, one way to use Twitter is to just tweet links to a job ad, essentially making job ads electronic. For example, the tweets of Microsoft, Pfizer, and Visa showcase how companies use Twitter to merely direct their followers to specific current job openings on their company websites (see #4, #7, #9). Such tweets on specific job openings mostly contain just the job title and, in some cases, the location of the open job position (e.g., city name). Thus, job ad tweets are intended to lead Twitter users to the company's website by clicking on the hyperlink in the tweet.

Tweets #1, #3, #5, and #6 in Table 4.1 all share a common goal, namely to present the respective firms' employment image in a positive, favorable way. Although the length of tweets is limited, the firms' Twitter audience learns about the companies' achievements, work ethic, and leadership style relating to a specific image of the firm as an employer. In this regard, these tweets are conceptually different from the tweets #4, #7, and #9. By posting job ad links on Twitter, firms convey virtually no information about the firm as an employer. Thus, job ad tweets do not fit the definitions of employer brand building – i.e., creating a favorable and distinct image of a firm as an employer (Lievens, 2007) – as they do not constitute a form of employer image management (Lievens & Slaughter, 2016).

TABLE 4.2
Description of tweet characteristics

Tweet characteristic	Description of tweet characteristic
Retweets per tweet ^c	Number of times a single tweet has been forwarded in its original form (i.e., retweeted) by another Twitter users.
Favorites per tweet	Number of times a single tweet has been liked (i.e., favorited) by clicking the “favorite” star button on Twitter.
Hash tags per tweet	Number of tags (i.e., hash tags indicated by a leading #-symbol) contained in a single tweet, e.g., #Jobs.
Users mentioned in tweet	Number of Twitter users mentioned in a single tweet, indicated by an @-symbol followed by the Twitter-username, e.g., @MMM.

Besides content, tweets have additional characteristics which we explain in Table 4.2. Twitter – as well as social media in general – is characterized by dialogue and two-way communication between users (Sprenger, Sandner, Tumasjan, & Welp, 2014). On Twitter, users show their engagement by retweeting or liking the tweets' content. As described in Table 4.2, retweets represent a form of sharing a tweet in its original form with other Twitter users. It is safe to assume that Twitter users will only retweet (i.e., share) a tweet if they find its content worth sharing with their own followers. As described in Table 4.2, favorites (i.e., liking) describe a way for users to show their appreciation of the content of a tweet and save the tweet for viewing it later. Thus, favorites represent another form of engagement with a Twitter channel.

4.3.2 Data collection and sample

For our data collection, we examined all US Fortune 500 companies that maintain an active (i.e., accounts with at least 20 tweets) HR and recruitment-related Twitter channel.

Importantly, while a company tends to maintain several Twitter channels for different communication purposes (e.g., for investor-relations or product marketing purposes), we collected our sample from firms' Twitter channels that focus entirely on HR, recruitment, and employer image management-related communication. We identified these channels by searching on companies' recruiting portals and by using the search function on Twitter. We identified a total of 166 Fortune 500 companies that maintained an active recruiting-specific Twitter channel (as of September 2015). Using Twitters' public API, we downloaded 3,200 tweets per company (which is the maximum that can be obtained at any one time due to download restrictions imposed by Twitter) resulting in a sample of tweets that were published on Twitter between September 2008 and October 2015. The large majority (about 88%) of the tweets in our dataset have been posted on Twitter in 2013 or later. For each of the 166 Twitter channels in our sample, we collected on average 1,256 tweets per channel (SD = 1,075 tweets).

Similar to other studies using Twitter as a data source (e.g., Lovejoy, Waters, & Saxton, 2012; Sprenger et al., 2014; Stieglitz & Dang-Xuan, 2013; Tumasjan, Sprenger, Sandner, & Welp, 2011; Zhang et al., 2011), we used "retweets" and "favorites" as measures of candidate engagement. In Table 4.3 we report a descriptive overview of the tweet characteristics in our data sample. It is important to note that only around one quarter (22.16%) of all tweets in our sample were retweeted at least once and only one fifth (18.78%) of all tweets were favorited by at least one user. Accordingly, the large majority of a company's tweets receive very little attention from Twitter users. However, Table 3 also indicates a large spread of these tweet characteristics.

TABLE 4.3
Description of the tweet-sample based on mean, standard deviation, maximum, and appearance

Tweet characteristic	M	SD	Max^a	Share^b
Retweets per tweet ^c	0.66	4.08	961	22.16%
Favorites per tweet	0.65	5.75	1,906	18.78%
Hash tags per tweet	1.85	1.87	13	68.99%
Users mentioned in tweet	0.40	0.85	11	26.00%

Note: Total number of tweets N = 213,613, a) Min = 0 in all tweets, b) The share of tweets where this tweet characteristic was found at least once, c) Based on tweets that are not retweets themselves (N = 197,600).

4.3.3 Method

To study how tweet content (“what”) and style (“how”) influence candidate engagement, we took several methodological steps. First, we used automated text categorization techniques to group the tweets in our sample into recruitment themes. This first step is required to ensure that we only study content that actually represents employer image management. Second, to extract the “what” and “how” of firms’ employer image building activities, we used the computational text analysis software “Linguistic Inquiry and Word Count (LIWC)” (Tausczik & Pennebaker, 2010), which identifies specific psychological characteristics of a given input text. Third, we used regression analysis to analyze the predictive validity of the “what” and “how” dimension for candidate engagement.

The LIWC dictionary and software (Tausczik & Pennebaker, 2010) has been applied in a variety of settings in psychological and other social science research ranging from identifying negative emotional tone in transcribed interactions between sales personnel and customers (King, Shapiro, Hebl, Singletary, & Turner, 2006) to studying agentic and communal characteristics in letters of recommendation (Madera, Hebl, & Martin, 2009). LIWC has the advantage that it has been tested with over 100,000 text files including a large share of tweets, thus providing validated text analysis results (Pennebaker, Boyd, Jordan, & Blackburn, 2015; Tausczik & Pennebaker, 2010). LIWC has been used in studies to draw conclusions from tweets (e.g., Pennebaker et al., 2015; Tumasjan et al., 2011). As described below, we used LIWC to assess both employer image content (i.e., *transactional* and *relational content*) and employer image style (i.e., *emotional tone* and *information distinctiveness*).

Transactional content – To assess the level of transactional employer image content, we relied on the LIWC variables *work*, *money*, and *reward* which represent individuals’ personal concerns and drives that are in line with the definition of transactional currency (i.e., being of a primarily economic nature) (Thompson & Bunderson, 2003).

Relational content - To assess the level of relational employer image content that focuses on emotional connections (including outside of work), we relied on the LIWC variables *family*, *friends*, and *leisure*. These variables measure individuals’ personal concerns and social processes that are in line with the definition of relational currency (i.e., focusing on social exchanges) (Thompson & Bunderson, 2003).

Information distinctiveness – To analyze *information distinctiveness*, we analyzed how many words of our tweet sample were recognized by LIWC. In its 2015 version, LIWC recognized on average 85.18% of all words in its 100,000 test text files and on average

82.60% of test tweets (Pennebaker et al., 2015). Thus, LIWC is able to capture a large share of words used in standard (i.e., books, newspapers) as well as social media texts (i.e. blog posts or tweets). As a result of these validation efforts, LIWC provides averages for each linguistic characteristic, permitting comparison of a given input text against its average. This means we know whether a text's linguistic characteristics are typical or atypical. In linguistics, the use of distinctive and unique language (i.e., idiolect) is expressed as the share of words that are rare in common language use (Mollet, Wray, Fitzpatrick, Wray, & Wright, 2010). Accordingly, lexical rarity (also known as extrinsic rarity) describes how much language is used that is not part of a standard language corpus (Chung & Nation, 2004; Nation & Kyongho, 1995).

For our analysis, we considered words to indicate distinctive or unique information if they were not recognized by LIWC's dictionary. Our operationalization is based on the fact that LIWC has been conceptualized with the goal of capturing all words commonly used in written texts. For this purpose LIWC works with a subset of the British National Corpus (BNC), a well-validated list of words used in the English language (Chung & Nation, 2004). Thus, if a word is not contained in LIWC's dictionary, it is likely to represent uncommon, unique, and thus distinct information. With this approach we are able to identify whether and to what extent a tweet is generic or provides informative, firm-specific content for its audience. In a generic tweet (e.g., "Flexibility + great job → Happy employees! #remotework" (Dell, 2016)), LIWC recognizes a higher share of words than in a firm-specific and distinct tweet (e.g., "Every day's #EarthDay at @3M HQ! We compost almost 20,000 lbs. of organic waste each month! #Lifewith3M" (3M Careers, 2015)).

Emotional tone – We relied on the LIWC variable *affect* to analyze the percentage of words in our tweet sample that were related to emotional tone. Measuring emotional tone with textual data has a long history in LIWC (Tausczik & Pennebaker, 2010). In its 2015 version, LIWC's dictionary features a total of 1,393 distinct words that are associated with *emotional tone* (such as happy, love, nice, and sweet, or cried, hurt, ugly, and nasty) (Pennebaker et al., 2015).

4.4 Analysis and results

4.4.1 Identification of content themes related to employer image building

To identify meaningful content themes in our sample that relate to employer image management, we followed the process laid out in existing research (Sprenger et al., 2014; Stieglitz & Dang-Xuan, 2012). Thus, the two lead researchers independently, manually

analyzed the tweet content of a smaller subset of tweets (N = 500). In a joint discussion, we arrived at a total of five content themes, namely *Insights*, *Events*, *Advice*, *Direct interaction*, and *Job ads*. Table 4.4 contains an overview of the five content themes including a short definition as well as an example tweet. As noted above, tweets following the *Job ads* theme merely contained job titles and hyperlinks to job openings on the firms' vacancies website, and thus do not represent employer image building (see Table 4.5). Accordingly, job ad tweets were excluded from the initial analysis (tests of hypotheses 1, 2a, and 2b) to arrive at a sample of tweets that represents employer image management content. To test Hypotheses 2c and 2d, we then examine the moderating effect of job ad (versus employer image) tweets in the entire sample.

TABLE 4.4
Description of content themes including example tweets

Content theme	Definition	Example tweet
Insights	Tweets describing work life, achievements, or employee stories of the company.	<i>"At 3M, we believe diverse perspectives are essential to innovation. I'm in. We're all in. Are you in? #LifeWith3M"</i>
Events	Tweets informing followers about meeting opportunities and company events related to recruitment.	<i>"We're recruiting at @michiganstateu's Career Gallery! Stop by to learn about opportunities w/Alcoa. #MySpartanCareer"</i>
Advice	Tweets giving general life advice or advice for potential applicants.	<i>"Starting a new job can feel intimidating; take these tips for starting out your new position on the right foot!... http://t.co/SIZEcQVH1r"</i>
Direct interaction	Tweets directly interacting with followers, e.g., by asking for answers to a question or directly responding to followers questions.	<i>"Tell us: What is the key to a great work and life balance? #OurAnthem"</i>
Job ads	Tweets advertising a company's job openings by linking to job ads.	<i>"If you are a recent #graduate with a #computer or #engineering degree, take a look at our #design positions: http://t.co/nJNKndIMxn"</i>

Based on these five content themes, two other trained coders manually classified a set of N = 3,215 tweets. The two coders independently classified the same tweets, and results revealed 85.80% agreement on all classification decisions. Following the recommendations by Krippendorff (2004), we calculated Scott's π to be .791, indicating high interrater reliability.

To automatically categorize the remaining (i.e., previously not manually classified) tweets in our sample, we turned to methods of automated text categorization developed in the area of computational linguistics, an interdisciplinary research field using methods from computer science and statistics to understand natural language content (Sebastiani, 2002). Specifically, we used machine learning techniques that are common for solving text

categorization tasks as the one present in our tweet sample (Joachims, 1998; Sebastiani, 2002). Instead of relying on a predefined set of rules on how to classify a text according to categories, machine learning follows an inductive approach of automatically building a text classifier (Liu, 2007; Sebastiani, 2002). Supervised machine learning uses training data to both automatically learn and test a classification model. Using a machine learning model optimized to our text categorization task (for more information on the procedures, see supplemental material in the Appendix), each of the 213,613 remaining tweets (i.e., tweets of our sample not used in the pre-study) were assigned to one of the five content themes. In Table 4.5 we report the total number of tweets within each theme (i.e., Insights = 55,715, Events = 7,576, Advice = 13,129, Job ads = 124,618, and Direct interaction = 12,575). We also report the characteristics of the tweets in the total sample, as well as the percentage of the total number of tweets within each theme.

TABLE 4.5

Total number of tweets and percentage of total per content category and tweet characteristic

	Total	Insights	Events	Advice	Direct interaction	Job ads
Number of tweets	213,613	55,715	7,576	13,129	124,618	12,575
	100%	26.08%	3.55%	6.15%	58.34%	5.89%
% of tweets per cat.						
Retweeted tweets	22.16%	30.96%	36.01%	34.21%	12.66%	17.07%
Favorited tweets	18.78%	29.63%	29.17%	32.77%	27.74%	10.93%
Replies to users	7.13%	0.53%	5.72%	0.37%	96.88%	1.83%
Mentioning users	26.00%	48.49%	64.72%	39.26%	95.45%	5.19%
Retweets	7.50%	23.31%	11.99%	6.27%	0.15%	1.02%

4.4.2 Analysis of content and style as predictor of candidate engagement

Table 4.6 presents means, standard deviations and correlations between the number of times tweets have been favorited and retweeted and their level of employer image content (i.e., transactional and relational content) and style (emotional tone and information distinctiveness). We used these variables as predictors in a series of regression analyses to test our hypotheses. Our analyses include several control variables. Following past social media research (Stieglitz & Dang-Xuan, 2013), we control for Tweet characteristics such as text length (i.e., word count), the number of user mentions, hash-tags (i.e., attributions to certain

topics), as well as the number of URLs (i.e., references to images or additional information such as job ads). Additionally, we control for Tweets' level of "netspeak", a variable that includes words frequently used in social media such as "thx" (thank you) or "lol" (laughing out loud) (Pennebaker et al., 2015).

TABLE 4.6
Mean, standard deviation, and correlation of dependent, independent and control variables

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
Dependent variables																	
1. # of favorites	1.14	8.65	-														
2. # of retweets	1.12	6.17	.72	-													
Transactional content																	
3. Work	6.96	6.56	-.03	-.02	-												
4. Money	0.82	2.39	-.01	-.01	.19	-											
5. Reward	1.77	3.84	-.01	-.01	.02	-.01	-										
Relational Content																	
6. Family	0.10	0.88	.00	.00	-.03	-.01	-.01	-									
7. Friends	0.22	1.19	.00	.00	-.03	.00	-.01	.02	-								
8. Leisure	1.25	2.98	.01	.01	-.02	-.01	.00	.10	.00	-							
Communication style																	
9. Distinctiveness	21.87	16.63	.03	.03	-.14	-.01	-.19	-.03	-.06	-.08	-						
1. Emotional tone	5.44	7.12	-.02	-.03	-.15	-.06	.42	.02	.02	.02	-.34	-					
Control variables																	
11. # of URLs	0.58	0.52	-.02	.00	.07	.01	-.11	-.02	-.06	-.07	.38	-.32	-				
12. # of hash tags	0.92	1.13	.04	.06	.14	.02	-.04	.00	-.02	.01	.09	-.13	.01	-			
13. # of user mentions	0.89	1.11	-.02	-.02	-.04	-.07	-.03	-.02	.02	-.03	.08	.04	-.10	-.06	-		
14. Tweet word count	18.85	5.36	.04	.06	.08	.03	-.07	-.01	-.01	-.01	-.12	-.34	.26	.12	-.10	-	
15. Tweet netspeak	6.09	4.52	.04	.04	-.08	-.03	-.13	-.01	-.04	-.01	.44	-.13	.43	-.02	-.05	-.11	-

Given the count-like nature of a tweet's number of favorites and retweets we used negative-binomial regressions, following past research analyzing Tweets (e.g., Stieglitz & Dang-Xuan, 2013). We report the results in Table 4.7.

Hypothesis 1a stated that the level of transactional content in social media employer image communication has a negative effect on candidate engagement. Our regression analyses indicate that content related to *work* and *money* decrease the number of times a tweet has been favorited by 1.41% ($exp(b) = .9859, p < .001$) and 3.66% ($exp(b) = .9634, p < .001$) respectively. Content related to *work* and *money* also decreased the number of times a tweet has been retweeted by 1.08% ($exp(b) = .9892, p < .001$) and 1.13% ($exp(b) = .9887, p < .001$) respectively. However, contrary to our expectations, content related to *reward* increases the number of times a tweet has been favorited by 1.95% ($exp(b) = 1.0195, p < .001$) as well as the number of times a tweet has been retweeted by 1.52% ($exp(b) = 1.0152, p < .001$). Thus, Hypothesis 1a is partially supported for "work" and "money", but not for "reward".

TABLE 4.7

Negative binomial regression of employer image content and style on favorites and retweets

	Number of favorites			Number of retweets		
	main effects			main effects		
	<i>b</i>	SE	exp(<i>b</i>)	<i>b</i>	SE	exp(<i>b</i>)
Transactional content						
Work	-.0142 ***	.00	.9859	-.0109 ***	.00	.9892
Money	-.0373 ***	.00	.9634	-.0114 ***	.00	.9887
Reward	.0194 ***	.00	1.0195	.0150 ***	.00	1.0152
Relational content						
Family	-.0007	.01	.9993	.0215 *	.01	1.0217
Friends	.0247 ***	.00	1.025	.0146 *	.01	1.0147
Leisure	.0231 ***	.01	1.0234	.0250 ***	.00	1.0253
Communication style						
Distinctiveness	.0185 ***	.02	1.0186	.0067 ***	.00	1.0067
Emotional tone	-.0078 ***	.01	.9923	-.0173 ***	.00	.9829
Control variables						
# of URLs	-.5467 ***	.02	.5788	-.5920 ***	.02	.5532
# of hash tags	.1798 ***	.01	1.197	.2801 ***	.01	1.3233
# of user mentions	-.3671 ***	.01	.6927	-.1174 ***	.01	.8892
Tweet word count	.0668 ***	.00	1.0691	.0922 ***	.00	1.0966
Tweet Netspeak level	.0122 ***	.00	1.0123	.0942 ***	.00	1.0988
Constant	-1.2197 ***	.05	.2953	-2.1447 ***	.05	.1171
Pseudo R^2		0.05			0.09	
N observations		88,995			74,257	
Log likelihood		-104,373.10			-95,521.41	

Note: *b* is the estimated coefficient., exp(*b*) is the exponentiated coefficient, and SE is estimated robust standard errors.

Pseudo R^2 is Maximum Likelihood R^2 .

* $p < .05$, ** $p < .01$, *** $p < .001$

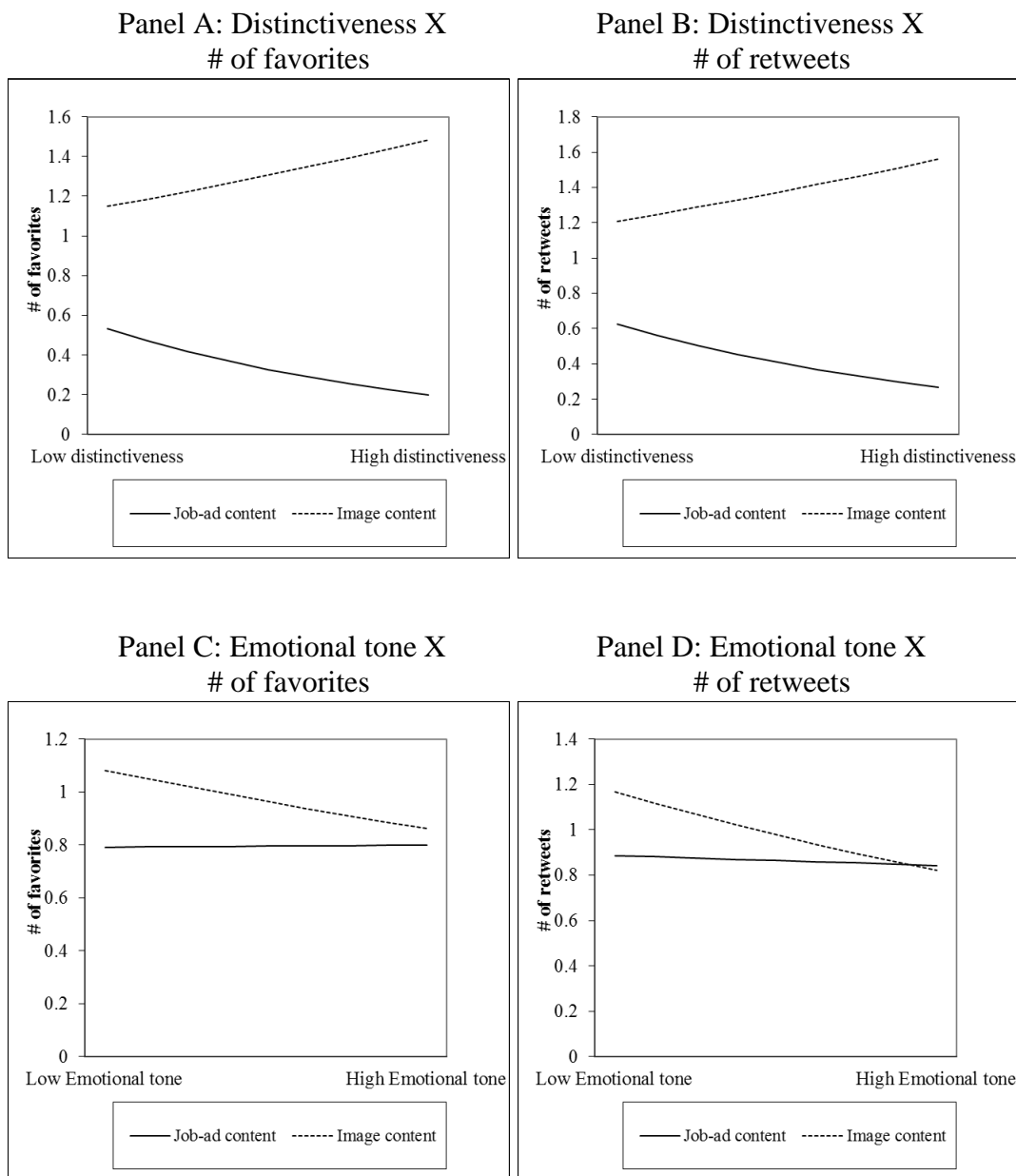
Hypothesis 1b stated that the level of relational content in social media employer image communication has a positive effect on resulting candidate engagement. Our regression analyses indicates that content related to *friends* and *leisure* increases the number of times a tweet has been favorited by 2.5% ($exp(b) = 1.0250$, $p < .001$) and 2.34% ($exp(b) = 1.0234$, $p < .001$) respectively. Content related to *family* did not significantly affect tweets' number of favorites. Content related to *family*, *friends* and *leisure* increases the number of times a tweet has been retweeted by 2.17% ($exp(b) = 1.0217$, $p < .05$), 1.47% ($exp(b) = 1.0147$, $p < .05$), and 2.53% ($exp(b) = 1.0253$, $p < .001$) respectively Thus, Hypothesis 1b is supported.

Hypothesis 2a stated that the distinctiveness component of social media employer image content has a positive effect on resulting candidate engagement. Our regression analyses indicates that *information distinctiveness* increases the number of times a tweet has

been favorited by 1.86% ($exp(b) = 1.0186, p < .001$) as well as the number of times a tweet has been retweeted by 0.67% ($exp(b) = 1.0067, p < .001$). Thus, Hypothesis 2a is supported.

Hypothesis 2b stated that the emotional tone of social media employer image content has a positive effect on resulting candidate engagement. However, our regression analyses indicated that *emotional tone* decreases the number of times a tweet has been favorited by 0.77% ($exp(b) = .9923, p < .001$) as well as the number of times a tweet has been retweeted by 1.71% ($exp(b) = .9829, p < .001$). Thus, Hypothesis 2b is not supported.

FIGURE 4.1
Interaction plots



Hypotheses 2c and 2d stated that the effect of information distinctiveness (2c) and emotional tone (2d) on candidate engagement will be moderated by content type, such that information distinctiveness and emotional tone are more consequential to engagement for employer image management content than for job ad content. To test these hypotheses, we dummy-coded tweets of all five content themes into two categories, namely tweets containing employer image content (i.e., containing all tweets of the themes *Insights*, *Events*, *Advice*, *Direct interaction*) and tweets containing job ads. We included this dummy-variable as a moderator in two negative-binomial regression models. These two models included tweets' emotional tone and information distinctiveness as well as the interaction effects with the dummy-coded content categories predicting favorites and retweets, respectively. Using the indirect method of simple slope testing (Dawson, 2014), results revealed that content type indeed moderates the effect of information distinctiveness and emotional tone on candidate engagement. Figure 4.1 illustrates the interaction plots of our results. Panels A and B illustrate that the effect of information distinctiveness on candidate engagement is more positive for employer image content (favorites: 0.83%, $exp(b) = 1.0083$, $p < .001$; retweets: 0.82%, $exp(b) = 1.0082$, $p < .001$) than for job ads (favorites: -3.10%, $exp(b) = .9690$, $p < .001$; retweets: -2.69%, $exp(b) = .9731$, $p < .001$), supporting Hypothesis 2c. This result reveals that the effect for information distinctiveness is negative when it comes to job ads.

Panels C and D illustrate that the effect of emotional tone is more negative for employer image content (favorites: -2.01%, $exp(b) = .9799$, $p < .001$; retweets: -3.07%, $exp(b) = .9693$, $p < .001$) than for job ads (favorites: 0.09%, $exp(b) = 1.0009$, $p > .10$; retweets: -0.45%, $exp(b) = .9955$, $p > .10$). These results are in line with the findings of Hypothesis 2b: increasing levels of emotional tone are negatively related with candidate engagement, particularly for employer image content. We return to these moderation findings in the discussion section.

Finally, we analyzed the data with and without the control variables, and results were nearly identical after controlling for these variables (no significance levels were affected).

4.4.3 Post-hoc analysis of emotional tone

Although we did not have specific hypotheses for negative versus positive emotional tone, we conducted a post-hoc analysis to examine whether the effect of emotional tone is dependent on whether a tweet's emotional tone is negative or positive. Using the same set of variables in the regression but replacing emotional tone with LIWC's variables for "positive emotions" and "negative emotions", we calculated the effect of positive and negative emotions separately (Pseudo $R^2 = 0.05$). We found that positive emotions have a *negative*

effect on favorites (-0.87%, $exp(b) = .9913$, $p < 0.01$, 95% CI [.9849 - .9976]) and retweets (-1.59%, $exp(b) = .9841$, $p < .001$, 95% CI [.9800 - .9882]). Similarly, negative emotions have a *negative* effect on favorites (-8.23%, $exp(b) = .9177$, $p < 0.001$, 95% CI [.8982 - .9375]) and retweets (-7.54%, $exp(b) = .9246$, $p < .001$, 95% CI [.9058 - .9436]). This analysis also shows that the negative effect of negative emotions on favorites and retweets is larger than the effect of positive emotions since confidence intervals do not overlap. In this vein, our findings are consistent with the overall negative effect of *emotional tone*.

4.5 Discussion and conclusion

The emergence of social media has changed the recruitment landscape. Social media platforms like Twitter are an important part of many people's lives, and many firms use social media to engage with potential job applicants (Zhang et al., 2011). Thus, to understand employers' communication with applicants, it has become more important to understand the antecedents of candidate engagement with social media communications. However, virtually no research has examined how firms can use social media communication to position themselves as attractive employers (McFarland & Ployhart, 2015; Zhang et al., 2011).

4.5.1 Contributions to theory

In this study, we focused on how recruitment tweets affected potential applicants' behavioral engagement with the communication, including their decisions to retweet and favorite firms' messages. Based on a large data collection effort of about 215,000 recruitment-related tweets, our study makes three primary contributions to the literature. First, our study contributes to the recruitment literature by showing how the content and style of social media messaging are related to candidate engagement. Results revealed that communicating about *work* and *money* may have a negative effect on recruitment-related candidate engagement, whereas communicating about *family*, *friends* and *leisure* increase candidate engagement. Accordingly, a transactional recruiting focus, traditionally proposed in the HRM literature (Lievens, 2007; Turban & Cable, 2003), may have negative consequences for creating engagement with a firm's employer image building activities. These results align with other findings suggesting that some goals (in this case: building a positive employer image and increased candidate engagement) may better be achieved by following an *indirect* rather than a *direct* route. As both Kay (2011) and Pink (2010) discussed in their popular books, if you want employees to help you make a lot of money, talk about something purposeful instead of talking about making money.

Thus, although the transactional, economic aspects of a psychological contract are without doubt essential in employee-employer relationships (Deery, Iverson, & Walsh, 2006; Thompson & Bunderson, 2003), our study suggests that relational content has a higher chance of creating an active, online followership. Our results offer a useful counterpoint to the large body of research suggesting that the transactional aspects of the employee-employer relationship are the best predictors of firms' attractiveness as employers (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Lambert, 2011; Uggerslev et al., 2012). Thus, our results suggest that future research would benefit from studying how employer image building activities can foster a social bond with potential employees that creates excitement, attraction, and action.

Second, we contribute to the literature on how social media communications help firms build their employer images, in line with recent calls for additional focus (Lievens & Slaughter, 2016; McFarland & Ployhart, 2015). We add to this field by identifying five content themes of firms' social media communication: *Insights*, *Events*, *Advice*, *Direct interaction*, and *Job ads*. We argued and showed that *job ads* (essentially posting job openings on Twitter) are not conceptually equivalent to employer image and do not serve firms' aim of increasing candidate engagement. In this vein, results indicate that content type (i.e., employer image vs. job ad content) moderates the effects of content characteristics (i.e., information distinctiveness and emotional tone) on candidate engagement. Thus, our results show that firms going beyond job ads can use social media as a low-cost, instantaneous marketing tool to build employer knowledge and increase candidate engagement—expressed through liking and sharing tweets. This finding also is in line with recruitment research stating that potential applicants prefer information that increases their employer knowledge (Cable & Turban, 2001; Lievens & Slaughter, 2016; Van Hoye, Bas, Cromheecke, & Lievens, 2013).

Next, this study contributes to the literature by focusing on the *style* of firms' communication, an area that has been virtually overlooked in recruitment research. Conceptually, we integrated research on emotional tone as a predictor of engagement (e.g., Berger & Milkman, 2012; Stieglitz & Dang-Xuan, 2013) with conceptual research on information distinctiveness (Gardner et al., 2011). Methodologically, we introduced computational text analysis software to the recruitment domain (LIWC; Tausczik & Pennebaker, 2010), which allows us to identify specific psychological characteristics of recruitment communications. We used supervised machine learning to apply our grounded classification model to categorize a very large sample of recruitment communications. This

combination of new conceptual, methodological, and analytical approaches offers important new insights on communication style in the context of recruitment.

For example, by conceptualizing and testing the *distinctiveness* of social media recruitment content, our findings add an important additional dimension in explaining variance in potential applicants' reactions to firms' communications (i.e., sharing and liking), an area of research that has been neglected (but see Edwards & Edwards, 2013). Theoretically, when firms communicate distinct content they help create a distinct employer image. Our results show that higher levels of information distinctiveness in social media recruitment content are positively related to potential applicants' involvement with a firm's employer image-building activities. These findings add to the notion that a distinct employer image may play a key role in differentiating a firm's employment offering from other firms competing for the same talent pool (Dineen & Allen, 2016; Lievens & Slaughter, 2016). In addition, these results answer a call to add a social media perspective to the growing literature on employer image (McFarland & Ployhart, 2015). The fact that content type (i.e., employer image content vs. job ad content) moderates the effect of information distinctiveness on candidate engagement also indicates that caution is advised in social media recruiting. Whereas employer image content benefits from higher levels of information distinctiveness, mere job ad tweets create *less* candidate engagement when they are overly specific (i.e., highly distinctive). Thus, future research needs to differentiate between content types on social media when investigating the effect of different employer image-building strategies.

Finally, our results also contribute to the literature on viral marketing, which has focused on why certain social media messages are shared and liked more than others. Past research mainly has suggested that social media messages are more likely to be passed on if they emotionally connect with the message recipient (Dobele, Lindgreen, Beverland, Vanhamme, & van Wijk, 2007; Kaplan & Haenlein, 2011). However, our results revealed a *negative* effect of emotional tone on potential job candidates for employer image content. Interestingly, emotional tone had no effect on candidate engagement for job ad content. Thus, a strategy of emotionally loaded employer image building lowers engagement for image content but does not affect people's reactions to job ads. It may be that the context of job search and employment image changes the way emotionality is interpreted (Yu, 2009) and future research is needed in this direction. For example, since employer image communications are associated with human resource departments, it is possible that emotional messages are perceived as "soft" or "unprofessional." As a result, we advise researchers to take caution in transferring findings on the "how" of social media communication across

audiences. More generally, future research should include distinctiveness and emotional tone when examining employer image communication.

4.5.2 Limitations and future research

Like all studies, ours has limitations. First, given the scarcity of research on social media employer image building, we started inductively with a large sample of actual tweets when forming our categories of communication. As such, we revealed and tested audience reactions to five content themes of social media communications.

A second important limitation is that we did not study how firms' recruitment communications affected applicants' employer knowledge. That is, we jumped from the objective characteristics of the communication (e.g., themes, distinctiveness, emotionality) directly to the audience engagement (i.e., liking and sharing). Presumably, people's beliefs and reactions to the organization were affected based on social media communication, but our methodology could not focus on this data (obviously we could not contact all of the individuals who liked a tweet, for example). For the same reason, our study also did not examine how audience engagement was related to decisions to apply to an employer, or accept a job. Future research is needed to examine the linkages between social media communication, changes in beliefs, and ultimate recruitment outcomes.

Furthermore, the effect sizes in this study are relatively small (Cohen, 1988): our variables predicted between 5-9% total variance in reactions to tweets. The possible criticism, of course, is that researchers should focus on other factors that account for more of the variance in job applicants' behaviors. On the other hand, Cortina & Landis (2009) argue that the context of the research setting should be considered when evaluating small effect sizes. In our study, the behaviors that we were trying to predict (retweets and favorites) were present in only a small fraction of our sample (see Table 4.4). That is, most people simply don't retweet or favorite tweets. Furthermore, similar to other social media settings (Sparks, Perkins, & Buckley, 2013), people that decide to retweet or favorite are likely to rely on heuristic information processing (i.e., using mental short cuts to make quick decisions whether to retweet or favorite a tweet or not) (Chaiken, 1980). In this vein, even small effects have been shown to influence such subtle processes (Prentice & Miller, 1992). Since corporate social media channels usually feature large audiences (above 10,000 followers), even small effect sizes can have an important impact on a large number of people. In this regard, the magnitude of our effect sizes is in line with other social media studies (Kross et al., 2013; Sparks et al., 2013; Stieglitz & Dang-Xuan, 2013).

Last, we relied on methods from computational linguistics to classify our tweets sample. While these methods allowed us to retrieve information from large datasets that otherwise would require unreasonable personal resources, we acknowledge that such automated classification methods have limitations. For example, a common problem in automated text analysis is that content is misinterpreted due to spelling mistakes. As a consequence, tweets might be assigned a wrong category. This issue might be mitigated in our study because most firms maintain a professional online appearance and minimize spelling mistakes. Furthermore, both the interrater reliability for the training sample, as well as the precision, recall and F_1 scores of our classification results indicate very good coding and classification quality (Agarwal, Xie, Vovsha, Rambow, & Passonneau, 2011; Krippendorff, 2004; Yang & Liu, 1999). Nevertheless, we encourage future research to replicate these initial results.

4.6 Conclusion

In conclusion, we develop a theoretical frame to study the “what” and “how” of firms’ recruitment communication in a social media context. We find that candidate engagement, expressed through social media actions of liking and sharing, are related to the psychological contract focus of the communications (i.e., transactional vs. relational) as well as by their communication style (i.e., emotional tone and information distinctiveness). We hope that our study stimulates further research on employer image building using social media, and its influence on applicant attraction.

References

- 3M Careers. (2012). Tip: Connect with recruiters on @linkedin-they love to help! But, #whateveryou do avoid these #pitfalls. Retrieved March 8, 2016, from <https://twitter.com/3MCareers/status/258192645480919040>
- 3M Careers. (2015). Every day's #EarthDay at @3M HQ! We compost almost 20,000 lbs. of organic waste each month! #Lifewith3M. Retrieved February 23, 2017, from <http://twitter.com/3MCareers/status/590990243794391040>
- Agarwal, A., Xie, B., Vovsha, I., Rambow, O., & Passonneau, R. (2011). Sentiment analysis of Twitter data. In *Proceedings of the Workshop on Languages in Social Media* (pp. 30–38). Stroudsburg, PA, USA: Association for Computational Linguistics.
- Argyris, C. (1960). *Understanding organizational behavior*. Oxford, England: Dorsey.
- Backhaus, K., & Tikoo, S. (2004). Conceptualizing and researching employer branding. *Career Development International*, 9(5), 501–517. <http://doi.org/10.1108/13620430410550754>
- Barsade, S. G. (2002). The Ripple Effect: Emotional Contagion and Its Influence on Group Behavior. *Administrative Science Quarterly*, 47(4), 644. <http://doi.org/10.2307/3094912>
- Berger, J., & Milkman, K. L. (2012). What Makes Online Content Viral? *Journal of Marketing Research*, 49(2), 192–205. <http://doi.org/10.1509/jmr.10.0353>
- Breaugh, J. A., & Starke, M. (2000). Research on employee recruitment: so many studies, so many remaining questions. *Journal of Management*, 26(3), 405–434. <http://doi.org/10.1177/014920630002600303>
- Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105–114. <http://doi.org/10.1016/j.jbusres.2011.07.029>
- Cable, D. M., & Graham, M. E. (2000). The determinants of job seekers' reputation perceptions. *Journal of Organizational Behavior*, 21(8), 929–947. [http://doi.org/10.1002/1099-1379\(200012\)21:8<929::AID-JOB63>3.0.CO;2-O](http://doi.org/10.1002/1099-1379(200012)21:8<929::AID-JOB63>3.0.CO;2-O)
- Cable, D. M., & Judge, T. A. (1996). Person–Organization Fit, Job Choice Decisions, and Organizational Entry. *Organizational Behavior and Human Decision Processes*, 67(3), 294–311. <http://doi.org/http://dx.doi.org/10.1006/obhd.1996.0081>
- Cable, D. M., & Turban, D. B. (2001). Establishing the dimensions, sources and value of job seekers' employer knowledge during recruitment. In G. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 20, pp. 115–163). New York, NY (USA): Elsevier Science.
- Cardoso-Cachopo, A., & Oliveira, A. L. (2003). An empirical comparison of text categorization methods. In M. A. Nascimento, E. S. de Moura, & A. L. Oliveira (Eds.), *Proceedings of the 10th International Symposium, SPIRE 2003, Manaus, Brazil, October 8-10, 2003* (pp. 183–196). Manaus, Brazil: Springer. http://doi.org/10.1007/978-3-540-39984-1_14
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5), 752–766. <http://doi.org/10.1037/0022-3514.39.5.752>
- Chalofsky, N. (2003). An emerging construct for meaningful work. *Human Resource Development International*, 6(1), 69–83. <http://doi.org/10.1080/1367886022000016785>
- Chapman, D. S., Uggerslev, K. L., Carroll, S. a, Piasentin, K. a, & Jones, D. a. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, 90(5), 928–44. <http://doi.org/10.1037/0021-9010.90.5.928>
- Chui, M., Manyika, J., Bughin, J., Dobbs, R., Roxburgh, C., Sarrazin, H., ... Westergren, M. (2012). *The social economy: Unlocking value and productivity through social technologies* (No. July 2012). Retrieved October 3, 2017, from <http://www.mckinsey.com/industries/high-tech/our-insights/the-social-economy>
- Chung, T. M., & Nation, P. (2004). Identifying technical vocabulary. *System*, 32(2), 251–263. <http://doi.org/10.1016/j.system.2003.11.008>

- Cisco Careers. (2015). A little @Habitat_org volunteering, a little fun, a lot of #GivingBack. (via @satyachhabra) #WeAreCisco. Retrieved March 8, 2016, from <https://twitter.com/WeAreCisco/status/650354628761137152>
- Collier, N., & Doan, S. (2012). Syndromic classification of Twitter messages. In P. Kostkova, M. Szomszor, & D. Fowler (Eds.), *Proceedings of the 4th International Conference, eHealth 2011, Málaga, Spain, November 21-23, 2011* (pp. 186–195). Springer. http://doi.org/10.1007/978-3-642-29262-0_27
- Collins, C. J., & Kanar, A. M. (2013). Employer brand equity and recruitment research. In K. Y. T. Yu & D. M. Cable (Eds.), *The Oxford Handbook of Recruitment* (pp. 284–297). New York: Oxford University Press.
- Dawson, J. F. (2014). Moderation in Management Research: What, Why, When, and How. *Journal of Business and Psychology, 29*(1), 1–19. <http://doi.org/10.1007/s10869-013-9308-7>
- Deery, S. J., Iverson, R. D., & Walsh, J. T. (2006). Toward a Better Understanding of Psychological Contract Breach: A Study of Customer Service Employees. *Journal of Applied Psychology, 91*(1), 166–175. <http://doi.org/10.1037/0021-9010.91.1.166>
- Dell. (2016). Flexibility + great job = Happy employees! #remotework. Retrieved March 8, 2016, from <https://twitter.com/CareersAtDell/status/692698859995283456>
- Deloitte. (2016). How a sense of humor & focus on social good helps keep #audit professional Paige Hall in balance #DeloitteCareers. Retrieved March 8, 2016, from <https://twitter.com/lifeatdeloitte/status/702162753524523009>
- Dineen, B. R., & Allen, D. G. (2016). Third party employment branding: Human capital inflows and outflows following “Best Places to Work” certifications. *Academy of Management Journal, 59*(1), 90–112. <http://doi.org/10.5465/amj.2013.1091>
- Dobele, A., Lindgreen, A., Beverland, M., Vanhamme, J., & van Wijk, R. (2007). Why pass on viral messages? Because they connect emotionally. *Business Horizons, 50*(4), 291–304. <http://doi.org/10.1016/j.bushor.2007.01.004>
- Drucker, H., Donghui Wu, & Vapnik, V. N. (1999). Support vector machines for spam categorization. *IEEE Transactions on Neural Networks, 10*(5), 1048–1054. <http://doi.org/10.1109/72.788645>
- Edwards, M. R. (2010). An integrative review of employer branding and OB theory. *Personnel Review, 39*(1), 5–23. <http://doi.org/10.1108/00483481011012809>
- Edwards, M. R., & Edwards, T. (2013). Employee Responses to Changing Aspects of the Employer Brand Following a Multinational Acquisition: A Longitudinal Study. *Human Resource Management, 52*(1), 27–54. <http://doi.org/10.1002/hrm.21519>
- Gardner, T. M., Erhardt, N. L., & Martin-Rios, C. (2011). Rebranding Employment Branding: Establishing a New Research Agenda to Explore the Attributes, Antecedents, and Consequences of Workers’ Employment Brand Knowledge. In A. Joshi, H. Liao, & J. J. Martocchio (Eds.), *Research in Personnel and Human Resources Management* (Volume 30, Vol. 30, pp. 253–304). Bingley: Emerald Group Publishing. [http://doi.org/10.1108/S0742-7301\(2011\)0000030008](http://doi.org/10.1108/S0742-7301(2011)0000030008)
- Highhouse, S., Thornbury, E. E., & Little, I. S. (2007). Social-identity functions of attraction to organizations. *Organizational Behavior and Human Decision Processes, 103*(1), 134–146. <http://doi.org/10.1016/j.obhdp.2006.01.001>
- Hogg, M. A., & Terry, D. J. (2000). Social Identity and Self-Categorization Processes in Organizational Contexts. *Academy of Management Review, 25*(1), 121–140. <http://doi.org/10.5465/AMR.2000.2791606>
- Holt, D. B. (2002). Why Do Brands Cause Trouble? A Dialectical Theory of Consumer Culture and Branding. *Journal of Consumer Research, 29*(1), 70–90. <http://doi.org/10.1086/339922>
- Holt, D. B. (2004). *How Brands Become Icons: The Principles of Cultural Branding*. Boston, MA (USA): Harvard Business Press.
- Jansen, B. J., Zhang, M., Sobel, K., & Chowdury, A. (2009). Twitter power: Tweets as electronic word of mouth. *Journal of the American Society for Information Science and Technology, 60*(11), 2169–2188. <http://doi.org/10.1002/asi.21149>

- Joachims, T. (1998). Text categorization with Support Vector Machines: Learning with many relevant features. In C. Nédellec & C. Rouveirol (Eds.), *Proceedings of the 10th European Conference on Machine Learning on April 21–23, 1998* (pp. 137–142). Chemnitz, Germany: Springer. <http://doi.org/10.1007/BFb0026683>
- Kahn, W. A. (1990). Psychological Conditions of Personal Engagement and Disengagement at Work. *Academy of Management Journal*, 33(4), 692–724. <http://doi.org/10.2307/256287>
- Kaplan, A. M., & Haenlein, M. (2011). Two hearts in three-quarter time: How to waltz the social media/viral marketing dance. *Business Horizons*, 54(3), 253–263. <http://doi.org/10.1016/j.bushor.2011.01.006>
- Kay, J. (2011). *Obliquity*. London, UK: Profile Books.
- Keller, K. L. (2009). Building strong brands in a modern marketing communications environment. *Journal of Marketing Communications*, 15(2–3), 139–155. <http://doi.org/10.1080/13527260902757530>
- Keller, K. L., Sternthal, B., & Tybout, A. (2002). Three questions that you need to ask about your brand. *Harvard Business Review*, 80(9), 80–89.
- King, E. B., Shapiro, J. R., Hebl, M. R., Singletary, S. L., & Turner, S. (2006). The stigma of obesity in customer service: A mechanism for remediation and bottom-line consequences of interpersonal discrimination. *Journal of Applied Psychology*, 91(3), 579–593. <http://doi.org/10.1037/0021-9010.91.3.579>
- Koloc, N. (2013). What Job Candidates Really Want: Meaningful Work. Retrieved April 4, 2017, from <https://hbr.org/2013/04/what-job-candidates-really-wan>
- Krippendorff, K. (2004). Reliability in content analysis. *Human Communication Research*, 30(3), 411–433. <http://doi.org/10.1111/j.1468-2958.2004.tb00738.x>
- Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., ... Ybarra, O. (2013). Facebook Use Predicts Declines in Subjective Well-Being in Young Adults. *PLoS ONE*, 8(8), e69841. <http://doi.org/10.1371/journal.pone.0069841>
- Lambert, L. S. (2011). Promised and delivered inducements and contributions: An integrated view of psychological contract appraisal. *Journal of Applied Psychology*, 96(4), 695–712. <http://doi.org/10.1037/a0021692>
- Landers, R. N., & Schmidt, G. B. (2016). *Social Media in Employee Selection and Recruitment*. Cham: Springer International Publishing.
- Lawler, E. J., Thye, S. R., & Yoon, J. (2009). *Social Commitments in a Depersonalized World*. New York: Russell Sage Foundation.
- Lepisto, D. A., & Pratt, M. G. (2017). Meaningful work as realization and justification. *Organizational Psychology Review*, 7(2), 99–121. <http://doi.org/10.1177/2041386616630039>
- Lievens, F. (2007). Employer branding in the Belgian Army: The importance of instrumental and symbolic beliefs for potential applicants, actual applicants, and military employees. *Human Resource Management*, 46(1), 51–69. <http://doi.org/10.1002/hrm.20145>
- Lievens, F., & Highhouse, S. (2003). The relation of instrumental and symbolic attributes to a company's attractiveness as an employer. *Personnel Psychology*, 56(1), 75–102. <http://doi.org/10.1111/j.1744-6570.2003.tb00144.x>
- Lievens, F., & Slaughter, J. E. (2016). Employer Image and Employer Branding: What We Know and What We Need to Know. *Annual Review of Organizational Psychology and Organizational Behavior*, 3(1), 407–440. <http://doi.org/10.1146/annurev-orgpsych-041015-062501>
- Lievens, F., Van Hove, G., & Anseel, F. (2007). Organizational identity and employer image: towards a unifying framework. *British Journal of Management*, 18(s1), 45–59. <http://doi.org/10.1111/j.1467-8551.2007.00525.x>
- Liu, B. (2007). *Web data mining: exploring hyperlinks, contents, and usage data*. New York: Springer.
- Lovejoy, K., Waters, R. D., & Saxton, G. D. (2012). Engaging stakeholders through Twitter: How nonprofit organizations are getting more out of 140 characters or less. *Public Relations Review*, 38(2), 313–318. <http://doi.org/10.1016/j.pubrev.2012.01.005>

- Madera, J. M., Hebl, M. R., & Martin, R. C. (2009). Gender and letters of recommendation for academia: Agentic and communal differences. *Journal of Applied Psychology, 94*(6), 1591–1599. <http://doi.org/10.1037/a0016539>
- Mai, K. M., Ellis, A. P. J., Christian, J. S., & Porter, C. O. L. H. (2016). Examining the effects of turnover intentions on organizational citizenship behaviors and deviance behaviors: A psychological contract approach. *Journal of Applied Psychology, 101*(8), 1067–1081. <http://doi.org/10.1037/apl0000115>
- McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. *Journal of Applied Psychology, 100*(6), 1653–1677. <http://doi.org/10.1037/a0039244>
- McQuail, D., & Windahl, S. (1993). *Communication Models for the Study of Mass Communications*. New York, NY: Routledge.
- Microsoft. (2016). Meet Donna Warton and see how she helped build the Devices Operations Team around #Surface. Retrieved March 8, 2016, from <https://twitter.com/MicrosoftJobs/status/704696449737605120>
- Mollet, E., Wray, A., Fitzpatrick, T., Wray, N. R., & Wright, M. J. (2010). Choosing the best tools for comparative analyses of texts. *International Journal of Corpus Linguistics, 15*(4), 429–473. <http://doi.org/10.1075/ijcl.15.4.01mol>
- Montes, S. D., & Zweig, D. (2009). Do promises matter? An exploration of the role of promises in psychological contract breach. *Journal of Applied Psychology, 94*(5), 1243–1260. <http://doi.org/10.1037/a0015725>
- Moraes, R., Valiati, J. F., & Gavião Neto, W. P. (2013). Document-level sentiment classification: An empirical comparison between SVM and ANN. *Expert Systems with Applications, 40*(2), 621–633. <http://doi.org/10.1016/j.eswa.2012.07.059>
- Morrison, S., & Crane, F. G. (2007). Building the service brand by creating and managing an emotional brand experience. *Journal of Brand Management, 14*(5), 410–421. <http://doi.org/10.1057/palgrave.bm.2550080>
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human Resource Systems and Helping in Organizations: A Relational Perspective. *Academy of Management Review, 36*(1), 33–52. <http://doi.org/10.5465/amr.2009.0402>
- Nation, P., & Kyongho, H. (1995). Where would general service vocabulary stop and special purposes vocabulary begin? *System, 23*(1), 35–41. [http://doi.org/10.1016/0346-251X\(94\)00050-G](http://doi.org/10.1016/0346-251X(94)00050-G)
- Nolan, K. P., Gohlke, M., Gilmore, J., & Rosiello, R. (2013). Examining How Corporations Use Online Job Ads to Communicate Employer Brand Image Information. *Corporate Reputation Review, 16*(4), 300–312. <http://doi.org/10.1057/crr.2013.19>
- Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX.
- Pink, D. H. (2010). *Drive: The surprising truth about what motivates us*. Edinburgh: Canongate.
- Prentice, D. A., & Miller, D. T. (1992). When small effects are impressive. *Psychological Bulletin, 112*(1), 160–164. <http://doi.org/10.1037/0033-2909.112.1.160>
- Rossolatos, G. (2013). An Anatomy of the Verbo-Visual Rhetorical Landscape of the World's Most Valuable Brands. *International Journal of Marketing Semiotics, 1*, 73–125. <http://doi.org/10.2139/ssrn.2251819>
- Rousseau, D. M. (1990). New hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior, 11*(5), 389–400. <http://doi.org/10.1002/job.4030110506>
- Rousseau, D. M. (2001). Schema, promise and mutuality: The building blocks of the psychological contract. *Journal of Occupational and Organizational Psychology, 74*(4), 511–541. <http://doi.org/10.1348/096317901167505>
- Ryan, A. M. (2012). Applicant-organization relationship and employee-organization relationship: What is the connection? In L. M. Shore, J. A.-M. Coyle-Shapiro, & L. E. Tetrick (Eds.), *The employee-organization relationship* (pp. 363–389). New York, NY (USA): Routledge.
- Rynes, S. L., & Miller, H. E. (1983). Recruiter and job influences on candidates for employment. *Journal of Applied Psychology, 68*(1), 147–154. <http://doi.org/10.1037/0021-9010.68.1.147>

- Sebastiani, F. (2002). Machine learning in automated text categorization. *ACM Computing Surveys*, 34(1), 1–47. <http://doi.org/10.1145/505282.505283>
- Shannon, C. E., & Weaver, W. (1949). *The mathematical theory of communication*. Urbana, Illinois: University of Illinois Press.
- Simon, H. A. (1951). A Formal Theory of the Employment Relationship. *Econometrica*, 19(3), 293. <http://doi.org/10.2307/1906815>
- Sparks, B. A., Perkins, H. E., & Buckley, R. (2013). Online travel reviews as persuasive communication: The effects of content type, source, and certification logos on consumer behavior. *Tourism Management*, 39, 1–9. <http://doi.org/10.1016/j.tourman.2013.03.007>
- Sprenger, T. O., Sandner, P. G., Tumasjan, A., & Welpe, I. M. (2014). News or noise? Using Twitter to identify and understand company-specific news flow. *Journal of Business Finance & Accounting*, 41(7–8), 791–830. <http://doi.org/10.1111/jbfa.12086>
- Stieglitz, S., & Dang-Xuan, L. (2012). Political Communication and Influence through Microblogging--An Empirical Analysis of Sentiment in Twitter Messages and Retweet Behavior. In *2012 45th Hawaii International Conference on System Sciences* (pp. 3500–3509). IEEE. <http://doi.org/10.1109/HICSS.2012.476>
- Stieglitz, S., & Dang-Xuan, L. (2013). Emotions and Information Diffusion in Social Media—Sentiment of Microblogs and Sharing Behavior. *Journal of Management Information Systems*, 29(4), 217–248. <http://doi.org/10.2753/MIS0742-1222290408>
- Swider, B. W., Zimmerman, R. D., & Barrick, M. R. (2015). Searching for the right fit: Development of applicant person-organization fit perceptions during the recruitment process. *Journal of Applied Psychology*, 100(3), 880–893. <http://doi.org/10.1037/a0038357>
- Tausczik, Y. R., & Pennebaker, J. W. (2010). The Psychological Meaning of Words: LIWC and Computerized Text Analysis Methods. *Journal of Language and Social Psychology*, 29(1), 24–54. <http://doi.org/10.1177/0261927X09351676>
- Thellefsen, T., & Sørensen, A. C. (2007). A Semiotic Note on Branding. *Cybernetics & Human Knowing*, 14(4), 59–69.
- Thompson, C. J., Rindfleisch, A., & Arsel, Z. (2006). Emotional Branding and the Strategic Value of the Doppelgänger Brand Image. *Journal of Marketing*, 70(1), 50–64. <http://doi.org/10.1509/jmkg.2006.70.1.50>
- Thompson, J. A., & Bunderson, J. S. (2003). Violations of principle: Ideological currency in the psychological contract. *Academy of Management Review*, 28(4), 571–586. <http://doi.org/10.5465/AMR.2003.10899381>
- Thomson, M., MacInnis, D. J., & Whan Park, C. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology*, 15(1), 77–91. http://doi.org/10.1207/s15327663jcp1501_10
- Tumasjan, A., Sprenger, T. O., Sandner, P. G., & Welpe, I. M. (2011). Election forecasts with Twitter: How 140 characters reflect the political landscape. *Social Science Computer Review*, 29(4), 402–418. <http://doi.org/10.1177/0894439310386557>
- Turban, D. B., & Cable, D. M. (2003). Firm reputation and applicant pool characteristics. *Journal of Organizational Behavior*, 24(6), 733–751. <http://doi.org/10.1002/job.215>
- Twitter (2017). About Twitter. Retrieved April 5, 2017, from <https://about.twitter.com/company>
- Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology*, 65(3), 597–660. <http://doi.org/10.1111/j.1744-6570.2012.01254.x>
- Van Hove, G., Bas, T., Cromheecke, S., & Lievens, F. (2013). The instrumental and symbolic dimensions of organisations' image as an employer: A large-scale field study on employer branding in turkey. *Applied Psychology*, 62(4), 543–557. <http://doi.org/10.1111/j.1464-0597.2012.00495.x>
- Yang, Y., & Liu, X. (1999). A re-examination of text categorization methods. In *Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval - SIGIR '99* (pp. 42–49). New York, New York, USA: ACM Press. <http://doi.org/10.1145/312624.312647>

Yu, K. Y. T. (2009). Affective influences in person–environment fit theory: Exploring the role of affect as both cause and outcome of P-E fit. *Journal of Applied Psychology, 94*(5), 1210–1226. <http://doi.org/10.1037/a0016403>

Zhang, M., Jansen, B. J., & Chowdhury, A. (2011). Business engagement on Twitter: a path analysis. *Electronic Markets, 21*(3), 161–175. <http://doi.org/10.1007/s12525-011-0065-z>

Appendix 4.A

Supplemental material for tweet analysis

We used the sample of manually classified tweets as input for our supervised machine learning model. For text categorization tasks, a variety of classifiers and learning models have been developed, such as Naïve Bayesian text classification or support vector machines (SVM) (Liu, 2007). We relied on a SVM approach since SVM has shown superior performance across a variety of text categorization tasks ranging from detecting spam in e-mail messages (Drucker, Donghui Wu, & Vapnik, 1999), over categorizing customer requests received by help-desk assistants (Cardoso-Cachopo & Oliveira, 2003) to classifying the most commonly used text categorization test set “Reuters-21578”, a reference test sample to compare different machine learning methods (Joachims, 1998). SVM has also successfully been used to study tweet sentiments (Agarwal et al., 2011), or to identify predictors of influenza rates based in tweet content (Collier & Doan, 2012). Among supervised machine learning models, SVM has been frequently reported as the most accurate method for text categorization tasks (Liu, 2007; Moraes, Valiati, & Gavião Neto, 2013). We used SVM to train a linear classifier that uses statistical learning theory to map text features in high dimensional spaces (a common mathematical transformation used in computational linguistics) and separate these text features in so-called “hyperplanes” (i.e., a mathematical way of dimension reduction). Using the text features provided for each content category as part of the training set, these hyperplanes are mathematically optimized to achieve the widest margin between category features to effectively distinguish the features belonging to different content categories (Cardoso-Cachopo & Oliveira, 2003; Joachims, 1998; Liu, 2007).

We trained our text categorization classifier with three distinct feature sets, namely the actual content of the tweet, the hash-tags used in each tweet as well as tweet-specific characteristics (i.e., “Is this tweet a reply to another tweet?”, “How many users were mentioned in this tweet?”, and “How many URLs did this tweet contain?”). In line with other research following a SVM approach (e.g., Cardoso-Cachopo & Oliveira, 2003; Joachims, 1998), the actual tweet text was preprocessed in two steps.

First, we applied term frequency–inverse document frequency (tf-idf) weighting. Term frequency (tf) is a measure of how often a term appears in a text corpus. Inverse document frequency (idf) increases the weight that rarely-appearing terms receive in the classifier and decreases the weight of frequently appearing terms in the classifier.

Second, we used latent semantic analysis (LSA) to ensure that terms that appear closer to each other (e.g., within the same tweet or in tweets of the same category) receive more

weight when classifying our tweet sample than terms that appear further apart (e.g., in tweets of different content categories). To tune the weight that each of the three feature sets (i.e., tweet content, hash-tags, tweet characteristics) should receive in the classifier we applied a grid search technique. Grid search trains a variety of classifiers each using different weights for the three feature sets. This process ensures that at the end the classifier is tuned for best classification performance.

Our classifier was trained using a random selection of 2,668 tweets over all five content categories (i.e., 80% of the manually classified training sample). In line with prior research, we retained 20% of the manually classified training data (i.e., 547 tweets) to evaluate the performance of our classifier using the standard recall, precision and F_1 measures (Liu, 2007; Moraes et al., 2013; Yang & Liu, 1999). These fit statistics are calculated taking the category that has been manually assigned to each tweet during the pre-study as “ground truth”. Recall is commonly defined as the ratio of a classifier’s correct assignments of a tweet to a content category over all tweets in this category. Precision is commonly defined as the ratio of a classifier’s correct assignments of a tweet to a content category over a classifier’s total assignments of tweets to a content category (i.e., the sum of both correctly and incorrectly assigned tweets). The F_1 score is defined as the harmonic mean of both recall and precision (Liu, 2007).

Table 4.A1 reports the fit (i.e., performance) statistics of our optimized classifier. Overall, the averages of all three fit statistics over all five content categories (i.e., recall = .91, precision = .91, and F_1 score = .91) indicate a high performance of our classifier in line with other studies using a SVM approach to classify tweets (e.g., Agarwal et al., 2011; Collier & Doan, 2012).

TABLE 4.A1
Fit statistics of classification model for each content category

Content category	Precision	Recall	F_1 score	Support (N)
Insights	.84	.89	.86	146
Events	.87	.85	.86	48
Advice	.88	.71	.79	21
Direct interaction	.96	.74	.84	35
Job ads	.95	.96	.96	297
Average	.91	.91	.91	547

Note: Support (N) describes the number of tweets used to calculate precision, recall, and the F_1 score for the classifier of each content category.





5 Conclusion¹⁰

5.1 General discussion and summary of findings

This thesis contributes to the entrepreneurship, recruitment, and management literature by investigating firms' recruitment-related identity claims as antecedents of employer image and their influence on employer attractiveness. Within the overarching theoretical framework of heterogeneous and homogeneous recruitment-related identity claims (Navis & Glynn, 2011), this thesis draws on instrumental-symbolic theory (Lievens & Highhouse, 2003) and (anticipatory) psychological contract theory (Ryan, 2012; Thompson & Bunderson, 2003) as theoretical frameworks to study heterogeneous claims, and it draws on legitimacy theory (Bitektine, 2011; Überbacher, 2014; Williamson, 2000) to study homogeneous claims. These theories make it possible to derive and test hypotheses regarding antecedents of employer image and their influence on new ventures' and large firms' employer attractiveness. Overall, this thesis makes contributions by answering the following three research questions.

First, with regard to the question of the relative importance of heterogeneous and homogeneous recruitment-related identity claims, this thesis demonstrates that, although both are positively related to employer attractiveness, heterogeneous claims play a more important role in potential employees' employer attractiveness judgements than do considerations of firms' legitimacy resulting from homogeneous claims. Related, this thesis also addresses the question of the influence of potential employees' entrepreneurial orientation on their employer attractiveness judgements. By integrating PO fit theory (Kristof-Brown et al., 2005; Slaughter & Greguras, 2009), the present work demonstrates that more (vs. less) entrepreneurially-minded potential applicants indeed perceive aspects of new ventures' heterogeneous identity claims (especially if related to firms' visionary or innovative image) to be more important.

Second, given its findings with regard to the higher importance of heterogeneous claims compared to homogeneous claims (Moser, Tumasjan, & Welp, 2017b), this thesis also addresses the question of which combinations of heterogeneous recruitment-related identity can be associated with high employer attractiveness. For new ventures, it seems important to find combinations of employer attributes that are related to high employer attractiveness but that, at the same time, align with their resources, which tend to be scarce for new ventures at the beginning of their operations (Williamson et al., 2002). The present thesis contributes a compensatory theory of new ventures' employer attractiveness by integrating the

¹⁰ This section is partly based on Moser, Tumasjan, and Welp (2017a, 2017b), and Moser, Tumasjan, Cable, and Welp (2017).

instrumental-symbolic theory with a neo-configurational perspective. Accordingly, instead of offering more employer benefits (i.e., making more heterogeneous identity claims) as assumed by the so-called “universalistic” perspective (Meuer, 2017), the compensatory theory presented in this thesis finds that new ventures can appear equally attractive if they focus on fewer benefits that are well-chosen and firm-specific (Moser, Tumasjan, & Welppe, 2017a). This thesis also contextualizes this contribution by showing that the synergistic combinations of new ventures’ heterogeneous identity claims are also dependent on the firm’s business model focus and human capital needs.

Third, responding to recent calls in the literature to keep pace with the advancement of social media (Collins & Kanar, 2013; Lievens & Slaughter, 2016; McFarland & Ployhart, 2015), this thesis contributes to the recruitment literature by addressing the question of the importance of heterogeneous recruitment-related claims beyond the traditional recruitment channels (e.g., job ads in newspapers or on websites). Specifically, by studying firms’ recruitment-related communication in social media (e.g., Twitter), the present thesis contributes a better understanding of what recruitment-related content themes create higher engagement among firms’ social media audience (Moser, Tumasjan, Cable, et al., 2017). Related, this thesis also contributes a better understanding of the style in which heterogeneous claims are communicated, a topic that has been woefully understudied in the recruitment literature.

On a more general level, this thesis also demonstrates the usefulness of integrating theories from different disciplines. For example, to address the recruitment challenges that new ventures are facing, the entrepreneurship literature greatly benefits from theories originating from the fields of marketing (e.g., the instrumental-symbolic theory; Lievens, 2003) or institutional research (e.g., legitimacy theory; Bitektine, 2011). The thesis also demonstrates that findings from studies conducted in large-firm contexts (e.g., Lievens, 2007; Lievens & Highhouse, 2003; Uggerslev et al., 2012) cannot be directly transferred to entrepreneurial contexts. Instead, integrating theories from other fields with findings in entrepreneurial contexts (e.g., liabilities of smallness and newness, Aldrich & Auster, 1986) can help to develop new theory, such as the compensatory theory for new ventures’ employer attractiveness proposed in Chapter 3 of this thesis. On an empirical level, this thesis also demonstrates the usefulness of novel approaches to data collection, such as digital trace data of employee reviews (see Chapter 3) or employer communication (see Chapter 4). Related, this thesis also shows how large bodies of unstructured, textual data can be handled methodologically with the use of novel approaches to text analysis such as supervised

machine learning models of automated text categorization to advance recruitment research in the digital era (see Chapter 4).

5.2 Implications for theory

The empirical parts of this thesis (Chapters 2-4) each build and test theory on the role of employer image and employer attractiveness in different organizational and entrepreneurial contexts. In the following paragraphs, the findings and contributions of each empirical chapter will be briefly summarized and are linked to existing literature.

Chapter 2 develops and tests theory on the use of heterogeneous and homogeneous recruitment-related entrepreneurial identity claims based on Navis and Glynn's (2011) framework of legitimate distinctiveness. Thereby, this thesis demonstrates that their framework not only is applicable in an investor-related context (as used by Navis & Glynn, 2011), but also serves as a meaningful framework to study the employer attractiveness of new ventures.

An important finding of Chapter 2 is related to the concept of "situational balancing" (Deephouse, 1999). Accordingly, firms need to balance out heterogeneous and homogeneous claims according to the situation in question. Although, in extant studies, an emphasis on legitimation strategies (i.e., homogeneous identity claims) has been shown to, for example, facilitate appropriating value from innovation (Rao, Chandy, & Prabhu, 2008) or increase chances of survival in the very early stages of new venture formation (Delmar & Shane, 2004), the present thesis finds that for situations in which potential employees judge the employer attractiveness of new ventures, new ventures' heterogeneous identity claims receive more importance than do their homogeneous claims (Moser, Tumasjan, & Welpel, 2017b). Specifically, Chapter 2 describes a study in which participants placed the highest importance on the transactional, monetary claims in their decision making, suggesting that these transactional elements in particular could be considered "hygiene factors" by potential employees.

To understand not only the "how" of potential employees' employer attractiveness judgements also the "why", the empirical study described in Chapter 2 integrates PO fit theory (Kristof-Brown et al., 2005). Specifically, Chapter 2 builds theory on the usefulness of heterogeneous and homogeneous claims in attracting the entrepreneurially-minded employees needed to develop new ventures' strategic human capital (Hayton, 2003). Taking participants' entrepreneurial orientation (i.e., innovative, proactive, and risk-taking behavior) into consideration (de Jong et al., 2015), this thesis finds that innovative potential employees are especially attracted by new ventures' heterogeneous claims related to the firm's vision as well

as by homogeneous claims related to the legitimacy of the founder. Moreover, in contrast to less entrepreneurially-minded potential employees, innovative applicants considered transactional attributes to be less important.

Furthermore, this thesis finds that individuals' proactive behavior and risk-taking behavior only influence their employer attractiveness judgements if the individuals have either accumulated several years of work experience or have increased knowledge about the working conditions in startups. These results show that individuals' previous career experiences, when combined with their entrepreneurial orientation, have an important effect on their perceptions of new ventures' employer attractiveness. Conceptually, these findings can be linked to career imprinting theory (Higgins, 2005), which posits that individuals' past exposure to career-influencing contexts shapes their attitudes toward future employment decisions (Higgins, 2005; Marquis & Tilcsik, 2013). Accordingly, potential employees' career-related decisions with regard to new venture employment will be more nuanced if these individuals have a higher interest in new venture employment and more new venture-specific work experience.

Chapter 3 of this thesis proposes and empirically tests a compensatory theory of new venture employer attractiveness. Accordingly, multiple distinct combinations of heterogeneous identity claims can be equally associated with high employer attractiveness. In contrast to previous research, which has virtually exclusively investigated simple linear relationships between recruitment-related identity claims and employer attractiveness (for a review, see Uggerslev et al., 2012), the empirical study described in Chapter 3 identifies multiple combinations of identity claims that are associated with high employer attractiveness. Thus, in contrast to the literature examining "best practices" in recruitment (Heneman & Berkley, 1999; Wyatt, Pathak, & Zibarras, 2010), this finding suggests that there may not be a universal "best practice" strategy for increasing employer attractiveness in the context of new ventures.

Conceptually, the combinations of recruitment-related identity claims identified in Chapter 3 align with findings in the HRM literature with regards to HR systems (Lepak & Snell, 1999; Mossholder, Richardson, & Settoon, 2011). HR systems are described as a combination of HRM practices (e.g., in the form of benefits, compensation, or training) that firms perform to develop and foster employees' knowledge, skills, and abilities (Jiang, Lepak, Hu, & Baer, 2012b; Kaifeng Jiang, Hu, Liu, & Lepak, 2015). The combinations of heterogeneous identity claims identified in Chapter 3 conceptually align with two archetypal HR systems that are well established in the HRM literature (Boxall & Macky, 2009; Lepak &

Snell, 1999; Lepak, Taylor, Tekleab, Marrone, & Cohen, 2007; Mossholder, Richardson, & Settoon, 2011) – namely, “collaborative HR systems” and “commitment HR systems”. In collaborative HR systems, monetary incentives, firms’ company culture, and the alignment of individuals’ work attitude with the goals of the company play central roles (Mossholder et al., 2011). In commitment HR systems, well-being, the development of employees, and a strong company culture that supports intrinsically motivated employees to perform at their best play important roles (Lepak & Snell, 2002; Mossholder et al., 2011). The findings in Chapter 3 show that by embracing the causal relationship between different heterogeneous identity claims (e.g., of an instrumental or symbolic nature), new avenues can be opened for studying elements of firms’ employment offerings as synergistic combinations instead of analyzing their individual, isolated effect on employer attractiveness.

Chapter 3 also finds that the importance of specific heterogeneous claims for new ventures’ employer attractiveness is dependent on the firms’ business model focus and human capital needs. Since new ventures typically have limited resources (Williamson, 2000), they need to allocate them wisely in order to attract talent that fits with their overall strategic business goals (Jiang et al., 2012b; Lepak et al., 2007). The findings of this thesis illustrate that, for example, new ventures with a business focus looking for a skilled engineer should provide a different kind of employment offering than consumer-oriented firms looking for a talented sales-person.

Chapter 4 of this thesis focuses on how heterogeneous recruitment-related identity claims are expressed in social media messages. Specifically, the empirical study described in Chapter 4 showed that the content and communication style of recruitment-related identity claims affected potential applicants’ behavioral engagement. The study of the content themes of heterogeneous claims revealed that communicating about *work* and *money* may have a negative effect on recruitment-related candidate engagement, whereas communicating about *family*, *friends* and *leisure* may increase candidate engagement (Moser, Tumasjan, Cable, et al., 2017).

This finding is important, as it contrasts with the transactional recruiting focus traditionally proposed in the HRM literature (Lievens, 2007; Turban & Cable, 2003) and shows that this focus may even have negative consequences for firms’ employer image building. Although identity claims with a more transactional, economic focus are undoubtedly essential in employee-employer relationships (Deery, Iverson, & Walsh, 2006; Thompson & Bunderson, 2003), this thesis suggests that identity claims with a focus on relational content may have a higher chance of engaging potential employees. Thus, this thesis offers a useful

counterpoint to the large body of research suggesting that transactional identity claims in the employee-employer relationship are the best predictors of employer attractiveness (Chapman et al., 2005; Lambert, 2011; Uggerslev et al., 2012). With regard to the communication style of identity claims, this thesis shows that a more fact-driven communication style with firm-specific content is positively related to potential applicants' involvement with a firm's employer image. However, in opposition to findings in the (viral) marketing literature, this thesis also finds that the emotional tone of identity claims may have a negative effect on potential employees' employer image. This finding suggests that the context of job search and employment image changes the way emotionality is interpreted (Yu, 2009). Since heterogeneous identity claims are associated with firms' human resource departments (in contrast to, e.g., product marketing), it is possible that emotional messages are perceived as "soft" or "unprofessional." As such, this thesis argues that researchers should take caution in transferring social-media-related findings across audiences.

5.3 Implications for practice

The studies presented in this thesis also offer a number of practical implications for entrepreneurs, recruiters, and managers in general. First, although new ventures in particular tend to have limited (financial) resources, they need to make identity claims of a transactional nature. Transactional elements of firms' employment offerings include monetary incentives such as remuneration or bonus payments. Although this thesis finds that transactional elements of new ventures' employment offerings are less important for entrepreneurially-minded potential employees than for other individuals, it is recommended that firms should make transactional claims as part of the employment offering since, in practice, these claims seem to be considered "hygiene" or "must have" factors for many individuals and, in this thesis, were found to most strongly influence potential employees' employer attractiveness judgements (Moser, Tumasjan, & Welp, 2017b). Importantly, however, new ventures may also offer other transactional, non-monetary incentives (e.g., free food, yoga classes, company get-togethers, etc.; Moser, Tumasjan, & Welp, 2015) – that may offset potentially lower monetary incentives. In this regard, Chapter 3 contains a comprehensive list of instrumental and symbolic aspects of new ventures' employment offerings that are communicated frequently in practice.

Second, this thesis also demonstrates that entrepreneurs and managers need to understand their employment offerings as synergistic combinations of heterogeneous and homogeneous claims with different practical appearances. Specifically, this thesis suggests that new ventures may achieve high employer attractiveness if they make a set of well-chosen

and firm-specific identity claims. Chapter 3 of this thesis introduces several, equally successful employer image management strategies, all of which can be related to high employer attractiveness. In this regard, new ventures' company culture and spirit, especially when perceived as visionary, play an important role in high employer attractiveness ratings. Related to the first practical implication, if new ventures choose not to clearly make identity claims related to remuneration (e.g., salary), they may need to compensate for this by making at least some other instrumental heterogeneous identity claims, such as by highlighting their opportunities for development and training. In this regard, this thesis demonstrates that new ventures may achieve high employer attractiveness via multiple paths. They can thus allocate their limited resources in different ways and still be perceived as attractive employers. However, as the findings of this thesis show, new ventures are well advised to take their business model focus and human capital needs into consideration when developing recruitment strategies, as these tend to influence which combinations of claims are related to employer attractiveness.

Third, in practice, new ventures (and some large firms) seek entrepreneurially-minded employees to increase their performance (Mitchell, 2014). In this regard, the present thesis suggests that specifically highlighting heterogeneous claims related to a firm's ideological nature (e.g., its vision or mission) may help to attract potential employees with a propensity for innovative behavior, which is considered central for entrepreneurial orientation (de Jong et al., 2015). In this regard, this thesis also finds that new ventures must follow different recruitment strategies to attract more experienced, senior employees than to attract inexperienced, junior employees. More experienced job seekers with a strong entrepreneurial orientation tend to place higher importance on heterogeneous claims related to new ventures' vision as well as homogeneous claims related to a legitimate and reputable team of founders. In contrast, entrepreneurially-minded, risk-loving junior talents tend to place higher importance on relational heterogeneous claims, such as the firms' culture or training and development offering.

Fourth, the empirical findings presented in Chapter 4 of this thesis suggest that HR managers and recruiters managing firms' social media presence should make heterogeneous identity claims with different content themes. Content related to the promotion of job ads created very little engagement with firms' audiences. However, information about the company and its employees, information about events and meetings opportunities, and general career advice created higher levels of engagement. The same study (Chapter 4) also finds that, within a recruitment context, social media messages should have a low emotional profile (i.e.,

a neutral emotional tone) and contain distinct, company-specific information. Although firms' recruitment communication on social media tends to be work-related, this thesis finds that practitioners would be well-advised to also communicate non-work-related information. Content related to employees' leisure activities and their friends or families seems to create a more familiar and communal climate, which was found to be related to higher audience engagement in the empirical study presented in Chapter 4.

In summary, the present thesis demonstrates that both heterogeneous and homogeneous recruitment-related identity claims are important for a favorable employer image and high employer attractiveness. In practice, the claims' different forms require situational balancing and a well-chosen employer image management strategy. In this regard, the present thesis presents practitioners with a number of novel approaches to employer image management, especially in new ventures, and thereby expands the list of possible tactics already discussed in the literature (for a review, see Lievens & Slaughter, 2016).

5.4 Directions for future research

The findings of this thesis have demonstrated the usefulness of the legitimate distinctiveness framework, with its distinction of heterogeneous and homogeneous identity claims to study antecedents of firms' employer image and employer attractiveness (Navis & Glynn, 2011). According to this framework (Deephouse, 1999; Navis & Glynn, 2011), strategies of 'standing out' among other firms competing for the same talent pool by making heterogeneous recruitment-related identity claims have to be balanced with strategies of 'fitting in' with expectations and norms in firms' markets by making homogeneous recruitment-related identity claims. In addition to the findings of this thesis that address this challenge of strategic balance, the results of the empirical studies presented in Chapters 2–4 also offer several directions for future research, which are outlined in the following paragraphs.

First, the empirical study presented in Chapter 3 used an inductive approach (Thomas, 2006) to identify specific aspects of new ventures' employment offerings that resemble heterogeneous identity claims. Thereby, the findings of this study make an important empirical contribution to the woefully understudied area of new-venture-specific heterogeneous identity claims. Although an inductive approach is appropriate in situations where empirical research is scarce (Krippendorff, 1989; Thomas, 2006), further research is needed to validate these empirical findings. Given that this thesis identified new ventures' company culture and company vision as central elements of their heterogeneous identity claims, these findings encourage further research and contributions to the entrepreneurship

literature by understanding the psychological mechanisms that these claims seem to trigger in the minds of entrepreneurially-oriented potential employees. Related, this thesis uncovered several different synergistic combinations of different heterogeneous identity claims (see Chapter 3). Future research is needed to analyze whether these combinations of heterogeneous identity claims also present suitable strategies for firms with low levels of legitimacy (i.e., weak homogeneous identity claims).

Second, another important avenue for future research concerns the specific context of the firms in question. For example, Chapter 2 presented an empirical study in which participants were asked about their preferences for specific elements of the employment offering of new ventures. The findings of this study present a first contribution towards understanding the preferences of job seekers interested in employment in new ventures. However, given that new ventures also compete against more established, larger firms on the labor market, future research should analyze how new ventures' employment offering compares to the offering of more established and larger companies. Similarly, the entrepreneurship literature would also benefit from future research that more clearly distinguishes between the different stages of the entrepreneurial process. Arguably, nascent ventures face greater resource restrictions compared to later-stage ventures with proven track records and financial support from investors. Since extant research has shown that organizational requirements and processes change over the course of entrepreneurial stages (e.g., Cardon & Stevens, 2004; Cardon & Tarique, 2008), future research would benefit from analyzing how firms' heterogeneous and homogeneous recruitment-related identity claims change through the different entrepreneurial stages.

Third, this thesis also studied how firms communicate heterogeneous identity claims in social media. An important finding of this thesis is that work-related, transactional identity claims create less engagement among firms' social media audience than does non-work-related, relational social media content. This finding, presented in Chapter 3, offers a counterpoint to the empirical results presented in Chapter 2, which identified transactional identity claims as the highest predictor of employer attractiveness. Although these findings might appear contradictory, they could also indicate that potential employees consider transactional elements to be "hygiene factors" or obligatory elements of firms' employment offerings, in that they play an important role in their conscious decision-making processes but not in their emotional engagement with firms' employment communication in social media. Thus, further research is needed to understand why transactional elements of firms' employment offerings trigger reactions among potential employees.

Fourth, with regard to homogeneous identity claims, this thesis studied mainly the legitimacy of the company itself as well as of its founders as signals of homogeneous identity claims. Extant research has found that founders with backgrounds from prestigious universities (i.e., featuring high founder legitimacy) are more likely to attract more renowned investors (thus leading to higher company legitimacy) (Marion, 2016). This raises the question of whether startup and founder legitimacy influence each other. Furthermore, although startup and founder legitimacy have been described as central elements of new ventures' legitimacy (Williamson, 2000), new ventures may be able to make homogeneous identity claims using other, additional signals of legitimacy, such as the firm age or number of employees. Thus, future research should also investigate the influence of other sources of legitimacy on firms' employer attractiveness.

Last, the findings of this thesis contribute a number of implications regarding the tactics that firms, especially new ventures, may follow to foster their employer image and increase their employer attractiveness. Although the recruitment literature contains reviews that have started to summarize these tactics (e.g., Lievens & Slaughter, 2016), an overarching conceptual framework through which to study these tactics is lacking. Thus, to overcome the recruitment challenges faced by both new ventures and large firms, a structured way to study employer image management tactics is needed. The analysis in this thesis focused on the antecedents of employer image and employer attractiveness from the perspective of potential applicants, as well as social media as an important communication channel for modern firms. However, new ventures in particular also tap into other recruitment channels, such as recruiting from informal networks of family and friends. Therefore, future research should establish an overarching conceptual framework to serve as guidance for future studies aiming to identify new tactics to recruit talented employees. In line with extant literature (Cable & Turban, 2001), this framework should include aspects, channels, and sources of job seekers' employer knowledge, job seekers' information processing motives, and the influence of job seekers' personality on their image of a recruiting organization and its attractiveness as employer.

In conclusion, this thesis has demonstrated the importance of making both heterogeneous and homogeneous recruitment-related identity claims in order to build a favorable employer image that increases firms' attractiveness as employers. The findings across multiple empirical studies suggest that firms make multi-faceted identity claims. These are either heterogeneous and, therefore, feature instrumental or symbolic elements as well as transactional, relational, and ideological aspects (Lievens & Highhouse, 2003; Ryan, 2012;

Thompson & Bunderson, 2003) and or homogeneous and, therefore, based on legitimacy signals related to the firm itself as well as its founders (Williamson, 2000). This thesis has also demonstrated that the importance of the claims in job seekers' employer attractiveness judgements is influenced by individuals' personalities as well as by the communication style of the companies. By offering several directions for future research, this thesis encourages further studies helping to understand how firms, and especially new ventures, can develop a favorable employer image and increase their attractiveness as employers.

5.5 References

- Bitektine, A. (2011). Toward a theory of social judgments of organizations: The case of legitimacy, reputation, and status. *Academy of Management Review*, 36(1), 151–179.
- Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: progressing the high-involvement stream. *Human Resource Management Journal*, 19(1), 3–23. <http://doi.org/10.1111/j.1748-8583.2008.00082.x>
- Cable, D. M., & Turban, D. B. (2001). Establishing the dimensions, sources and value of job seekers' employer knowledge during recruitment. In G. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 20, pp. 115–163). New York, NY (USA): Elsevier Science.
- Cardon, M. S., & Stevens, C. E. (2004). Managing human resources in small organizations: What do we know? *Human Resource Management Review*, 14(3), 295–323. <http://doi.org/10.1016/j.hrmr.2004.06.001>
- Cardon, M. S., & Tarique, I. (2008). Organizational attractiveness of small businesses. In R. Barrett & S. Mayson (Eds.), *International handbooks of entrepreneurship and HRM* (pp. 345–360). Cheltenham, U.K.: Edward Elgar.
- Chapman, D. S., Uggerslev, K. L., Carroll, S. a, Piasentin, K. a, & Jones, D. a. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, 90(5), 928–44. <http://doi.org/10.1037/0021-9010.90.5.928>
- Collins, C. J., & Kanar, A. M. (2013). Employer brand equity and recruitment research. In K. Y. T. Yu & D. M. Cable (Eds.), *The Oxford Handbook of Recruitment* (pp. 284–297). New York: Oxford University Press.
- de Jong, J. P. J., Parker, S. K., Wennekers, S., & Wu, C.-H. (2015). Entrepreneurial Behavior in Organizations: Does Job Design Matter? *Entrepreneurship Theory and Practice*, 39(4), 981–995. <http://doi.org/10.1111/etap.12084>
- Deephouse, D. (1999). To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal*, 20(2), 147–166. [http://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2<147::AID-SMJ11>3.0.CO;2-Q](http://doi.org/10.1002/(SICI)1097-0266(199902)20:2<147::AID-SMJ11>3.0.CO;2-Q)
- Deery, S. J., Iverson, R. D., & Walsh, J. T. (2006). Toward a Better Understanding of Psychological Contract Breach: A Study of Customer Service Employees. *Journal of Applied Psychology*, 91(1), 166–175. <http://doi.org/10.1037/0021-9010.91.1.166>
- Delmar, F., & Shane, S. (2004). Legitimizing first: Organizing activities and the survival of new ventures. *Journal of Business Venturing*, 19(3), 385–410.
- Hayton, J. C. (2003). Strategic human capital management in SMEs: An empirical study of entrepreneurial performance. *Human Resource Management*, 42(4), 375–391. <http://doi.org/10.1002/hrm.10096>
- Heneman, H. G., & Berkley, R. A. (1999). Applicant attraction practices and outcomes among small businesses. *Journal of Small Business Management*, 37(1), 53–74.
- Higgins, M. C. (2005). *Career Imprints: Creating Leaders Across An Industry*. San Francisco, CA (USA): John Wiley & Sons.
- Jiang, K., Hu, J., Liu, S., & Lepak, D. P. (2017). Understanding Employees' Perceptions of Human Resource Practices: Effects of Demographic Dissimilarity to Managers and Coworkers. *Human Resource Management*, 56(1), 69–91. <http://doi.org/10.1002/hrm.21771>
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How Does Human Resource Management Influence Organizational Outcomes? A Meta-analytic Investigation of Mediating Mechanisms. *Academy of Management Journal*, 55(6), 1264–1294. <http://doi.org/10.5465/amj.2011.0088>
- Krippendorff, K. (1989). Content analysis. In E. Barnouw, G. Gerbner, W. Schramm, T. L. Worth, & L. Gross (Eds.), *International encyclopedia of communication* (pp. 403–407). New York, NY: Oxford University Press.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, 58(2), 281–342. <http://doi.org/10.1111/j.1744-6570.2005.00672.x>

- Lambert, L. S. (2011). Promised and delivered inducements and contributions: An integrated view of psychological contract appraisal. *Journal of Applied Psychology, 96*(4), 695–712. <http://doi.org/10.1037/a0021692>
- Lepak, D. P., & Snell, S. A. (1999). The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development. *Academy of Management Review, 24*(1), 31–48. <http://doi.org/10.5465/AMR.1999.1580439>
- Lepak, D. P., & Snell, S. A. (2002). Examining the Human Resource Architecture: The Relationships Among Human Capital, Employment, and Human Resource Configurations. *Journal of Management, 28*(4), 517–543. <http://doi.org/10.1177/014920630202800403>
- Lepak, D. P., Taylor, M. S., Tekleab, A. G., Marrone, J. A., & Cohen, D. J. (2007). An examination of the use of high-investment human resource systems for core and support employees. *Human Resource Management, 46*(2), 223–246. <http://doi.org/10.1002/hrm.20158>
- Lievens, F. (2007). Employer branding in the Belgian Army: The importance of instrumental and symbolic beliefs for potential applicants, actual applicants, and military employees. *Human Resource Management, 46*(1), 51–69. <http://doi.org/10.1002/hrm.20145>
- Lievens, F., & Highhouse, S. (2003). The relation of instrumental and symbolic attributes to a company's attractiveness as an employer. *Personnel Psychology, 56*(1), 75–102. <http://doi.org/10.1111/j.1744-6570.2003.tb00144.x>
- Lievens, F., & Slaughter, J. E. (2016). Employer Image and Employer Branding: What We Know and What We Need to Know. *Annual Review of Organizational Psychology and Organizational Behavior, 3*(1), 407–440. <http://doi.org/10.1146/annurev-orgpsych-041015-062501>
- Marion, T. J. (2016). 4 Factors That Predict Startup Success, and One That Doesn't. Retrieved November 2, 2016, from <https://hbr.org/2016/05/4-factors-that-predict-startup-success-and-one-that-doesnt>
- Marquis, C., & Tilcsik, A. (2013). Imprinting: Toward a Multilevel Theory. *The Academy of Management Annals, 7*(1), 195–245. <http://doi.org/10.1080/19416520.2013.766076>
- McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. *Journal of Applied Psychology, 100*(6), 1653–1677. <http://doi.org/10.1037/a0039244>
- Meuer, J. (2017). Exploring the Complementarities Within High-Performance Work Systems: A Set-Theoretic Analysis of UK Firms. *Human Resource Management, 56*(4), 651–672. <http://doi.org/10.1002/hrm.21793>
- Mitchell, A. (2014). 7 tips for hiring the team your startup needs to succeed. Retrieved May 5, 2015, from <http://www.entrepreneur.com/article/235097>
- Moser, K. J., Tumasjan, A., Cable, D. M., & Welpe, I. M. (2017). *Don't be so emotional: Employer image communication on social media* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2015). "Small, but attractive: the effect of employer branding and legitimacy on startup attractiveness." *Academy of Management Proceedings, 2015*(1), 10528–10528. <http://doi.org/10.5465/AMBPP.2015.105>
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2017a). *Learning from the best: A set-theoretic analysis of new ventures' employment offering* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.
- Moser, K. J., Tumasjan, A., & Welpe, I. M. (2017b). Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors. *Journal of Business Venturing, 32*(5), 588–610. <http://doi.org/10.1016/j.jbusvent.2017.05.001>
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human Resource Systems and Helping in Organizations: A Relational Perspective. *Academy of Management Review, 36*(1), 33–52. <http://doi.org/10.5465/amr.2009.0402>
- Navis, C., & Glynn, M. A. (2011). Legitimate distinctiveness and the entrepreneurial identity: Influence on investor judgments of new venture plausibility. *Academy of Management Review, 36*(3), 479–499.

- Rao, R. S., Chandy, R. K., & Prabhu, J. C. (2008). The fruits of legitimacy: Why some new ventures gain more from innovation than others. *Journal of Marketing*, 72(4), 58–75. <http://doi.org/10.1509/jmkg.72.4.58>
- Ryan, A. M. (2012). Applicant-organization relationship and employee-organization relationship: What is the connection? In L. M. Shore, J. A.-M. Coyle-Shapiro, & L. E. Tetrick (Eds.), *The employee-organization relationship* (pp. 363–389). New York, NY (USA): Routledge.
- Slaughter, J. E., & Greguras, G. J. (2009). Initial Attraction to Organizations: The influence of trait inferences. *International Journal of Selection and Assessment*, 17(1), 1–18. <http://doi.org/10.1111/j.1468-2389.2009.00447.x>
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246. <http://doi.org/10.1177/1098214005283748>
- Thompson, J. A., & Bunderson, J. S. (2003). Violations of principle: ideological currency in the psychological contract. *Academy of Management Review*, 28(4), 571–586. <http://doi.org/10.5465/AMR.2003.10899381>
- Turban, D. B., & Cable, D. M. (2003). Firm reputation and applicant pool characteristics. *Journal of Organizational Behavior*, 24(6), 733–751. <http://doi.org/10.1002/job.215>
- Überbacher, F. (2014). Legitimation of new ventures: A review and research programme. *Journal of Management Studies*, 51(4), 667–698. <http://doi.org/10.1111/joms.12077>
- Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology*, 65(3), 597–660. <http://doi.org/10.1111/j.1744-6570.2012.01254.x>
- Williamson, I. O. (2000). Employer legitimacy and recruitment success in small businesses. *Entrepreneurship Theory and Practice*, 25(1), 27–43.
- Williamson, I. O., Cable, D. M., & Aldrich, H. E. (2002). Smaller but not necessarily weaker: How small businesses can overcome barriers to recruitment. In J. A. Katz & T. M. Welbourne (Eds.), *Managing People in Entrepreneurial Organizations (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 5)* (pp. 83–106). Emerald Group Publishing Limited. [http://doi.org/10.1016/S1074-7540\(02\)05005-5](http://doi.org/10.1016/S1074-7540(02)05005-5)
- Wyatt, M. R. R., Pathak, S. B., & Zibarras, L. D. (2010). Advancing selection in an SME: Is best practice methodology applicable? *International Small Business Journal*, 28(3), 258–273. <http://doi.org/10.1177/0266242609350815>
- Yu, K. Y. T. (2009). Affective influences in person–environment fit theory: Exploring the role of affect as both cause and outcome of P-E fit. *Journal of Applied Psychology*, 94(5), 1210–1226. <http://doi.org/10.1037/a0016403>

Appendix

Appendix A (Reference for Chapter 2)

Published as: Moser, K., Tumasjan, A. & Welpel, I. M. (2017). Small but attractive: Dimensions of new venture employer attractiveness and the moderating role of applicants' entrepreneurial behaviors. *Journal of Business Venturing* 32 (5): 588–610.

Presented at: Academy Management Annual Meeting 2015 in Vancouver, Canada
77. Wissenschaftliche Jahrestagung des VHB 2015 in Vienna, Austria

Awards: *Best Empirical Paper Award* (Entrepreneurship Division) at the Academy of Management Annual Meeting 2015 in Vancouver, Canada
Best Paper Proceedings of the Academy Management Annual Meeting 2015 in Vancouver, Canada

Appendix B (Reference for Chapter 3)

Cite as: Moser, K., Tumasjan, A., & Welpel, I. M. (2017). *What is the right mix? Toward a compensatory theory of new ventures' employer attractiveness* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.

Presented at: Academy Management Annual Meeting 2016 in Anaheim, USA
78. Wissenschaftliche Jahrestagung des VHB 2015 in Munich, Germany
Academy Management Annual Meeting 2017 in Atlanta, USA

Appendix C (Reference for Chapter 4)

Cite as: Moser, K., Tumasjan, A., Cable, D, & Welpel, I. M. (2017). *Don't be so emotional: Employer image communication on social media* (Working Paper). Munich, Germany: Chair for Strategy and Organization, TUM School of Management.

Presented at: Academy Management Annual Meeting 2016 in Anaheim, USA
1st International Conference on Advanced Research Methods and Analytics 2016 in Valencia, Spain

Awards: *Best Paper Proceedings* of the Academy Management Annual Meeting 2016 in Anaheim, USA