An Investigation of Antecedents and Consequences of Career Choice and Career Advancement

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To my beloved family.

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List of abbreviations

ANOVA	One-way analysis of variance
BBG	Bundesbeamtengesetz
BFI	Big Five Inventory
CFI	Career Futures Inventory
G	Group Learning
GLOBE	Global Leadership and Organizational Behavior Effectiveness
H	Hypothesis
I	Individual Learning
LBG LSA	Landesbeamtengesetz, Beamtengesetz des Landes Sachsen-Anhalt
LMX	Leader-Member Exchange
LTO	Long-Term Orientation
LVO LSA	Laufbahnverordnung, Verordnung über die Laufbahnen der Beamtinnen und Beamten im Land Sachsen-Anhalt
O	Organizational Learning
P	Proposition
PSM	Public Service Motivation
PRWE	Prior Related Work Experience
rev.	Reversed item
RIASEC	Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (career interests)
SCCT	Social Cognitive Career Theory
SD	Standard Deviation
TV-L	Tarifvertrag für den öffentlichen Dienst der Länder
UAI	Uncertainty Avoidance
UK	United Kingdom
US	United States
VSM	Values Survey Module

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α	Krippendorff's alpha
df	Degrees of freedom
F	F-distribution
κ	Cohen's kappa
n	Sample size
N	Total number of respondents
%	Percent
p	Probability level
r	Pearson correlation coefficient
R^2	Coefficient of determination
ΔR^2	Change in coefficient of determination
β	Standardized beta coefficient
t	t-distribution
χ^2	Chi-square

1 The importance of career choice and career advancement: An introduction

The processes of career interests development, career decision making, and subsequent career progression during the whole work life until retirement are very crucial to an extensive number of stakeholders: potential job candidates who turn later into employees, employers, and external parties, such as political or legal institutions. During these processes, which address different career development stages (Greenhaus, Callanan, & Godshalk, 2010), (future) employees decide for potential occupations and industries first and further career paths subsequently as they seek to achieve intrinsic and extrinsic career success, covering career and job satisfaction, promotion, and increase in salaries (Ng, Eby, Sorensen, & Feldman, 2005). Employers benefit from paying attention to and supporting their employees' career decision making and career advancement prospects, as they are able to recruit and retain workers (George, 2015). Moreover, they will profit from satisfying individuals' career and work-related needs as they draw on enhanced job performance to gain and sustain competitive advantage (Inkson, 2008; Inkson & King, 2010). In addition, external parties, such as governments, are interested in individuals' career development in order to ensure a performing workforce that can build on equal working and payment conditions in both private and public sectors (e.g., European Commission, 2017; OECD, 2001).

As careers lie at the intersection of individual, organizational, and environmental levels (Mayrhofer, Meyer, & Steyrer, 2007), several factors affecting the course of individuals' career development can be identified at those levels. The study of antecedents and consequences of career decision making and career progression has sparked the interests of both researchers and practitioners for many years by now. Although there has been extensive research on factors affecting the development of career interests and career progression, most findings refer to individual-level factors, such as personality traits or motivation (e.g., Larson, Rottinghaus, & Borgen, 2002; Swanson & Woitke, 1997). Therefore, the career literature reveals some important gaps regarding the analysis of factors lying at organizational and environmental levels, such as the influence of the direct supervisor (e.g., Maume, 2011; Rohde, Vincent, & Janneck, 2012) or cultural factors (e.g., Kantamneni & Fouad, 2013; Sheu & Bordon, 2017). Moreover, there have been calls in the career literature for the examination of outcomes of careers unfolding during the work life at the organizational level (Lee, Felps, & Baruch, 2014; Rodrigues, Guest, Oliveira, & Alfes, 2015; Sullivan & Baruch,

2009), since prior research has preferably addressed individual-level outcomes, such as career success factors (e.g., Ng et al., 2005; Ng & Feldman, 2014; Seibert, Kraimer, & Liden, 2001).

This thesis aims at filling the mentioned gaps and responding to the calls in the career literature by studying important factors influencing the development of career interests and career progression and organizational outcomes of careers. Therefore, it takes a broader perspective on career development by addressing several career development stages, including the occupational and industry choice and early and midcareer stages, as determined by Greenhaus et al. (2010), within the following thesis chapters.

Within chapter 2, the thesis approaches the first career development stage of career choice that is concerned with the development of career-related interests in occupation, organizations, and industries (Greenhaus et al., 2010). Within this stage, (young) individuals draw on several learning experiences, including experiences gathered at school, university, and work, to develop a career-related self-awareness and decide for a certain career path which imply important consequences for later career development stages (Lent & Brown, 2006; 2013). With this part of the thesis, the thesis contributes to the career literature by examining the role of cultural context in shaping career-related interests and choice intentions which has been only little addressed before. By following the argumentation of the social cognitive career theory by Lent, Brown, and Hackett (1994, 2000), the thesis aims at enriching the prevailing understanding of the effects of cultural values together with prior work experience on career-related interests in industries. To provide empirical evidence for the suggested relations, the thesis examines the prior work experience and interests in diverse industries together with the cultural values of more than 1,700 economics and management students from eight countries worldwide. The study findings provide important implications to research and practice by highlighting the importance of prior related work experience and the moderating role of two cultural value dimensions in determining the interest in ten of the most favored industries.

Chapters 3 and 4 address the subsequent career development stages of early and midcareer after individuals have entered organizations and continue to proceed in their work lives. Continuous career-related learning and development within and across organizations typically characterize these stages (Greenhaus et al., 2010). Furthermore, employees develop, pursue, and (re)evaluate individual career goals and aim at achieving career success. In the recent career literature, there are ongoing discussions about two career concepts prevailing

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in diverse work settings. The literature refers to them as traditional and modern or new concepts (Greenhaus et al., 2010; Sullivan & Baruch, 2009). Traditional career concepts emphasize that careers typically progress along the predefined hierarchical organizational structures, accompanied by an increase in salary and prestige, of only few employing organizations throughout the overall work life (Super, 1957, 1980). In contrast, modern concepts, in particular the concepts of protean (Hall, 1976, 2002) and boundaryless careers (Arthur, 1994; Arthur & Rousseau, 1996), stress that career paths and career-related needs have changed due to changing environmental and organizational conditions. Protean and boundaryless careers do no longer follow linear career paths but rather show up and down as well as horizontal movements within and across organizations (Baruch, 2004; Sullivan & Baruch, 2009). Moreover, the responsibility for managing the career progress is said to be mainly shifted from the employing organization to the individual, which translates into the increasing importance of career and job-related learning in order to increase employability (e.g., Hall & Mirvis, 1995; Pang, Chua, & Chu, 2008). Whereas traditional careers were found to be still in place in the public sector (e.g., Biemann, Zacher, & Feldman, 2012; Hammerschmid, Görnitz, Oprisor, & Štimac, 2013), new career forms are increasingly studied in the private sector (e.g., Baruch, 2014; De Vos & Cambré, 2017).

In order to enrich the understanding of the development of both career forms, traditional and modern careers, the thesis studies the courses of traditional careers in chapter 3 and new careers in chapter 4. Within chapter 3, the thesis contributes to the career and public administration literatures by examining the impact of the immediate supervisor on the employee's career advancement which represents a relationship that has been only little addressed in both literature streams (Maume, 2011; Rohde et al., 2012). By building on research on leader-member exchange, transformational leadership, and mentoring, the thesis aims at analyzing several direct and indirect leadership behaviors with which superiors can affect employees' career development. As the study context of public administration is rather new to the career research field, the thesis reports on empirical findings, which were derived from an exploratory study conducted in a German state administration. Next to the analysis of quantitative data, the study findings were enriched by the analysis of comments on an open-ended question. Based on the results, the thesis can draw important conclusions relevant to research and business practice. However, as the empirical study was conducted in the specific setting of a German state administration, the findings need to be interpreted in light of the prevailing institutional conditions.

Finally, within chapter 4, the thesis responds to calls in the career literature for analyzing career outcomes relevant to organizations (e.g., Lee et al., 2014; Rodrigues et al., 2015). By building on previous research on the protean and boundaryless careers and the multiple level organizational learning framework by Crossan, Lane, and White (1999) and Vera and Crossan (2004), the thesis conceptualizes on the effects of these new career orientations on the different individual, group, and organizational learning levels and learning flows. The thesis contributes to the career literature by highlighting the association between new career forms and organizational learning as both share the elementary importance attached to continuous learning activities. Moreover, it contributes to the organizational learning literature by emphasizing the potential impact of individuals' career-related needs and goals on several learning processes, which are consequently translated into adapted organizational procedures and management activities.

Figure 1 presents the underlying *structure of the thesis*. Chapter 1 introduces the overall thesis aims and existing gaps in the literature, which are linked to the several career development stages mentioned before. Chapter 2 addresses the first career development stage of career choice by presenting a study on the role of cultural context in predicting career interests and choice intentions. Chapter 2.1 provides the underlying theoretical concepts of studying career choice and national culture in a multinational context. Chapters 2.2 and 2.3 present the method and results of the empirical study conducted in eight countries. Chapter 2.4 discusses implications of the study findings to theory and practice together with study limitations and suggestions for future research. Chapter 3 addresses the gaps in the literature linked to the later career stages of early and midcareer by examining the influence of the direct supervisor on employees' career progress with the help of an empirical study. Chapter 3.1 provides a theoretical background for studying leadership behavior and careers in public administration. Chapters 3.2 and 3.3 present the method and results of the exploratory empirical study conducted in a German state administration. In the following, the implications to theory and practice as well as limitations and directions for future research are discussed in chapter 3.4. In addition to chapter 3, chapter 4 is also linked to the later career stages but addresses a particular call in the literature for analyzing the association between careers and organizational outcomes with the help of a theoretical conceptualization. Therefore, chapter 4.1 provides the underlying theoretical background for examining career concepts and organizational learning processes. Chapter 4.2 presents the conceptual framework developed to explain the associations between careers and multiple level learning and learning flows.

Chapter 4.3 discusses theoretical and practical implications together with study limitations and suggestions for future research. Finally, chapter 5 concludes the overall thesis and summarizes the outcomes studied in the light of existing limitations and future research directions.

Figure 1: Structure of the thesis related to the career development process

Steps in the research process	Career development stage	Chapter	Contents
Problem definition and motivation		Chapter 1	The importance of career choice and career advancement: An introduction
Theoretical background Development of hypotheses / propositions Research method Sample and data collection procedure Data analysis and discussion	Occupational and organizational choice	Chapter 2	The association between cultural value dimensions and career choice: A multi-national study
	Early career and midcareer	Chapter 3	The effects of leadership behavior on employee careers in public administration: The case of a German administrative department
		Chapter 4	New career orientations and the organizational learning process: A conceptual framework
Summary of the thesis results		Chapter 5	Summary and conclusion

2 The association between cultural value dimensions and career choice: A multinational study

The development of career interests and choices presents a crucial process in individuals' lives, in particular for young adults in their transition from educational institutions into work life. During this process, which covers the first career development stage (Greenhaus et al., 2010), individuals learn about, evaluate, and decide upon potential occupations, industries, and their career-related selves. The decisions made in that stage result in important consequences for performance (e.g., Nye, Su, Rounds, & Drasgow, 2012; Patrick, Care, & Ainley, 2010) as well as satisfaction and well-being in later career stages (e.g., Lent & Brown, 2006, 2008, 2013).

The development of a better understanding of the factors that determine career-related interests has emerged as an important area of study for both practitioners and researchers. We build on Lent et al. (1994) and refer to career interests as individuals' attraction to career-related activities, occupations, and industries. Furthermore, we understand career choices as decisions about certain career trajectories that cover the choice of specific occupations and industries, like the decision to work in construction, trade, or tourism industries (e.g., Ericksen & Schultheiss, 2009; Song & Chon, 2012). Prior studies have primarily focused on the influence of personality traits on different occupational interests and choices (e.g., Larson et al., 2002; McKay & Tokar, 2012; Rogers, Creed, & Glendon, 2008; Schaub & Tokar, 2005). Moreover, several other personal and environmental contextual factors have been found to affect career interests and choices including social class (Flores, Navarro, & Ali, 2017) and family support (e.g., Ferry, Fouad, & Smith, 2000; Metheny & McWhirter, 2013). Further empirical evidence suggests that prior work experiences are beneficial to the development of career interests and choices as they provide opportunities to learn about the occupation, industry, and the career-related self (e.g., Creed, Patton, & Prideaux, 2007; Rothman & Sisman, 2016). Prior related work experience can be understood as occupation and industry-related knowledge and information gathered through various work activities including internships or voluntary work before the individual enters the specific job and industry (e.g., Carr, Pearson, Vest, & Boyar, 2008; Hall, 2010; Uppal, Mishra, & Vohra, 2014). Employers profit from and increasingly prefer such (temporary) employment relationships as they can evaluate and subsequently recruit potential job candidates with job and industry knowledge (Bennett, Eagle, Mousley, & Ali-Choudhury, 2008; Gault, Leach, & Duey, 2010).

While these streams of research have contributed to our understanding of potential determinants of career interests and choices, our knowledge about the influence of individuals' cultural norms and values on career interests is still limited. Although the role of cultural context in shaping career interests and choice has been widely recognized in the career development literature (Holland, 1959, 1997; Lent et al., 1994, 2000; Sheu & Bordon, 2017), empirical findings on these associations remained scarce with very few exceptions (Ott-Holland, Huang, Ryan, Elizondo, & Wadlington, 2013). Moreover, responses to calls for analyzing the moderating effect of cultural values on the development of career-related interests and choices by previous studies, have remained too few (Lent, Tracey, Brown, Soresi, & Nota, 2006; Sheu, Lent, Brown, Miller, Hennessy, & Duffy, 2010).

Few prior studies have emphasized the analysis of individuals' cultural value dimensions to study cross-country differences in career interests (e.g., Kantamneni & Fouad, 2013; Ott-Holland et al., 2013). A cultural value dimension represents a set of "broad tendencies to prefer certain states of affairs over others" (Hofstede, Hofstede, & Minkov, 2010: 9) that can range from positive to negative feelings, such as good versus bad or desirable versus undesirable, and are shared among society members. The present study aims to extend prior research on the association between cultural value dimensions and career interests in two major ways. First, instead of measuring individuals' cultural dimensions indirectly using secondary data, for example by the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study (House, Hanges, Javidan, Dorfman, & Gupta, 2004) as previous work did (see Table 2.1 for an overview of existing studies), we examine cultural values at the individual level using primary data as recommended by Taras, Kirkman, and Steel (2010). Second, we extend prior research by studying not only a single cultural value dimension but paying attention to their joint importance by considering all six cultural value dimensions (Littrell, 2012) as identified by Hofstede (2001) and Hofstede et al. (2010). As shown in Table 2.1, the majority of previous studies has focused on the effect of the individualism/collectivism dimension on individuals' career interests and choice (e.g., Jung, McCormick, Gregory, & Barnett, 2011; Ng, Gossett, Chinyoka, & Obasi, 2016).

Two prominent approaches to conceptualize on career interests, which are widely used in the career choice literature, stem from Holland (1959, 1997) and Lent et al. (1994, 2000). Holland's (1959, 1997) theory of vocational personalities is rather trait-oriented and identifies six occupational personalities and work environments which result in a career choice in case they match: realistic (R), investigative (I), artistic (A), social (S), enterprising (E), and

conventional (C) (RIASEC). The social cognitive career theory (SCCT) by Lent et al. (1994, 2000), on the other hand, is process-oriented and depicts the process of career decision making. By following the argumentation of the SCCT, we aim at achieving a better understanding of the role of cultural values and prior related work experiences in predicting career interests and career choice intentions. Therefore, our study examines work-related experiences and interests in ten different industries of more than 1,700 economics and management students from eight countries. We test the moderating roles of Hofstede's (2001) cultural value dimensions of long-term orientation and uncertainty avoidance in shaping interests in industries, as we think they are of particular importance when it comes to thinking and planning ahead, especially in terms of career decision making.

Our study contributes to the career choice and cross-cultural management literatures in two ways. First, we contribute to the cross-cultural management literature by shedding further light on the cross-cultural differences in career development. Moreover, the study responds to calls for research (Lent et al., 2006; Sheu et al., 2010) on examining the moderating effect of culture in career choices. Second, we extend the literature on the importance of work experience in predicting career interests by studying the association between prior related work experience and interest in the ten most preferred industries by the surveyed individuals. In addition, the present study provides important implications to business practice as it helps organizations and career counselors to increase their understanding of the role of individuals' work experiences and cultural context in shaping their career interests.

Table 2.1: Prior research on the relationship between cultural value dimensions and career interests and choice

| Study	Conceptualization of cultural value dimension	Operationalization of career interest/choice	Operationalization of culture/countries
Arévalo Avalos and Flores (2016)	Mexican orientation, Anglo orientation	SCCT, social career interests, nontraditional career choice	Cultural dimensions are measured with primary data, respondents are Mexican American men from Hispanic and white institutions
Auyeung and Sands (1997)	Individualism/collectivism	Choice of accounting career	Cultural dimensions are measured with primary data but not studied in context with career choice; respondents are major students from three countries (Australia, Hong Kong-China, and Taiwan)
Flores, Robitschek, Celebi, Andersen, and Hoang (2010)	Mexican orientation, Anglo orientation, familism	SCCT, six RIASEC interests	Cultural dimensions are measured with primary data, respondents are Mexican American from Hispanic and white institutions

Study	Conceptualization of cultural value dimension	Operationalization of career interest/choice	Operationalization of culture/countries
Garriott and Flores (2013)	Mexican orientation, Anglo orientation	SCCT, educational interests and goals	Cultural dimensions are measured with primary data, respondents are Mexican American high school students
Garriott, Raque-Bogdan, Zoma, Mackie-Hernandez, and Lavin (2017)	Familism	SCCT, math/science interests and goals	Cultural dimension is measured with primary data, respondents are Mexican American middle school students
Jung, McCormick, Gregory, and Barnett (2011)	Individualism/collectivism, Long-term orientation	Occupational interest/enjoyment	Cultural dimensions are measured with primary data, respondents are Grade 11 students from Australia
Kantamneni, Dharmalingam, Orley, and Kanagasingam (2017)	Asian cultural values	SCCT, interest in Asian American occupations, math and science goals and intentions	Cultural dimensions are measured with primary data, respondents are Asian American undergraduate students
Kantamneni and Fouad (2013)	Asian cultural values, Individualism/collectivism	Six RIASEC interests	Cultural dimensions are measured with primary data, respondents are South Asian American students
Malach-Pines and Kaspi-Baruch (2008)	Individualism, power distance, masculinity, uncertainty avoidance	Choice of management career	Cultural dimensions are not directly measured and not studied in context with career choice, but explained for countries studied; respondents are MBA students from seven countries (India, Israel, North Cyprus, Turkey, the United Kingdom and the United States)
Navarro, Flores, and Worthington (2007)	Mexican orientation, Anglo orientation	SCCT, math/science interests, intentions, goals	Cultural dimensions are measured with primary data, respondents are Mexican American middle school students
Ng, Burke, and Fiksenbaum (2008)	Individualism/collectivism	Choice of management career	Cultural dimensions are measured with primary data but not studied in context with career choice but other career outcomes; respondents are MBA students from the United States
Ng, Gossett, Chinyoka, and Obasi (2016)	Individualism/collectivism	Career choice in public vs. private sector	Cultural dimensions are measured with primary data; respondents are graduate management students from Botswana
Ott-Holland, Huang, Ryan, Elizondo, and Wadlington (2013)	In-group collectivism, gender egalitarianism by the GLOBE study	Five RIASEC interests: artistic, conventional, realistic, social, investigative	Cultural dimensions are measured with secondary data; respondents from 20 countries
Özbilgin, Küskü, and Erdoğmuş (2005)	Individualism/collectivism	Career choice	Cultural dimensions are not directly measured and not studied in context with career choice, but explained for countries studied; respondents are MBA students from three countries (Israel, Turkey, and the United Kingdom)
Tanova, Karataş-Özkan, and İnal (2008)	Individualism/collectivism	Choice of management career	Cultural dimensions are measured with primary data but not studied in context with career choice; respondents are MBA students from six countries (Israel, North Cyprus, Turkey, the United Kingdom and the United States)

2.1 Theoretical background and hypothesis development

One theoretical attempt to understand how individual characteristics together with contextual factors, such as culture, influence the processes through which individuals develop career-related interests and make occupational choices is the social cognitive career theory (SCCT) by Lent et al. (1994, 2000). SCCT stresses that career interests are influenced by self-efficacy and outcome expectations which represent individuals' beliefs in their ability to perform career-related behaviors and consequences resulting from that behavior. Self-efficacy and outcome beliefs are determined by learning experiences, such as work experience, performance experience, or observational learning experiences, which students gather through school, internships, or previous jobs (Lent & Brown, 2013; Miller et al., 2015). Moreover, personal (background) factors (e.g., gender, personality traits, educational background, role models) shape self-efficacy and outcome beliefs through learning experiences (Lent et al., 1994, 2000). Matching with their interests and depending on contextual supports and barriers, individuals develop career-related goals that represent, together with self-efficacy and outcome expectations, cognitive-person variables (Lent et al., 1994, 2000). In addition to career choice intentions (i.e., goals), subsequent career choice actions are influenced by cognitive-person variables and contextual supports and barriers (e.g., family members, friends, superiors) (Lent & Brown, 2013; Lent et al., 1994, 2000).

In the present study, we will follow the argumentation of SCCT, but focus primarily on the effect of prior industry-related experiences as a type of learning experiences and cultural value dimensions on career interests. Our general argument in this study is that prior related work experience has a positive effect on the development of career interests, which are operationalized as career-related interest in industry. However, this effect can change depending on individuals' different cultural values. We further argue that in particular for individuals with high long-term orientation and high uncertainty avoidance values, the association between prior work experience and industry interest is strengthened. Figure 2.1 presents our conceptual model which is explained in greater detail in the following sections.

Figure 2.1: Hypothesized conceptual model
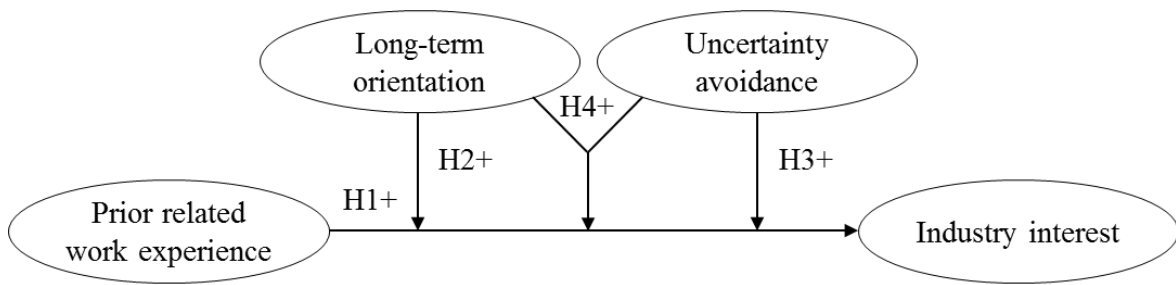
2.1.1 Prior work experience and career interests

According to SCCT, learning and work experiences play a crucial role in developing self-efficacy and outcome beliefs and consequently in the development of career interests and choices (Lent & Brown, 2013; Lent et al., 1994, 2000). SCCT stresses that individuals can obtain in particular four kinds of information from learning and work experiences: "personal performance accomplishments, observational learning (or modeling), social encouragement and persuasion, and physiological and affective states and reactions" (Lent & Brown, 2013: 563). Consequently, individuals' learning from (repeating) sense of achievement, interacting with others, and observing own feelings and others performing in specific work contexts directly feeds in occupation and industry-specific self-efficacy beliefs and outcome expectations. With the help of occupational and industry-related experiences gathered through work activities prior to employment, individuals can generate positive expectations about their abilities to perform various tasks (i.e., feeding in task-specific self-efficacy) and to cope with obstacles (i.e., feeding in coping efficacy) in a specific work context (Lent et al., 1994, 2000). In addition, individuals will receive information about potential (positive, negative, or neutral) responses to their or others' (i.e., modeling) work-related behaviors. Depending on the job and industry-specific self-efficacy beliefs and positive outcome expectations, individuals derive career-related interests, which subsequently result in career intentions and actions.

Previous research has identified work experience as an important predictor to several career outcomes including career interests and career decision making (e.g., Creed et al., 2007; Jackson, 2015; Maertz, Stoeberl, & Marks, 2014), or job performance (Uppal et al., 2014). In particular, research on the effects of internships has discovered a range of (career-related) benefits, such as increased self and work environmental awareness, problem-solving and communication skills, and employability (for reviews, see Knouse & Fontenot, 2008; Maertz

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et al., 2014, Narayanan, Olk, & Fukami, 2010). Moreover, a previous study on several work-integrated learning activities, such as work placement or internships, showed that work experience provides students with the opportunity to build career-related networks, learn and consult about, and refine the considered career path (Jackson, 2015). However, experience gathered from diverse work activities prior to graduation does not always have to be positive or even effective (Rothman & Sisman, 2016). Previous studies have shown that individuals, after gaining work experience, do not necessarily demonstrate higher levels of perceived person-job fit when compared to individuals without experience (Callanan & Benzing, 2004). Further empirical evidence suggests that (unsuccessful) work experience, which revealed a discrepancy between occupation and industry-specific expectations and actual perceived work characteristics, lead to revision of career interests and changes in career choice (Rothman & Sisman, 2016; Walmsley, Thomas, & Jameson, 2012). Nevertheless, the majority of the empirical studies considered gaining industry-specific insights through work activities like internships crucial in terms of learning about industry, occupation, and the career-related self. Moreover, employers increasingly require prior related work experiences from their potential job candidates as they benefit from the identified talent pool that already acquired industry and occupation-specific knowledge and will result in enhanced future job performance (Gault et al., 2010; Uppal et al., 2014). Consequently, in the present study we focus on the positive consequences of work experiences for the individual career trajectory. We hypothesize:

Hypothesis 1. Prior related work experience is positively associated with career-related interest in a specific industry.

2.1.2 The moderating role of cultural value dimensions

Although the impact of cultural values on the development of career interests and career choices presents an important topic, it has so far remained understudied (e.g., Kantamneni & Fouad, 2013; Sheu & Bordon, 2017). SCCT suggests that personal and environmental cultural contexts affect the development of career interests, career choice goals, and choice actions directly and indirectly through the experiential sources of self-efficacy and outcome expectations and moderation (Byars & Hackett, 1998; Lent et al., 1994, 2000). Consequently, we expect the association between prior related work experience and career interests to be moderated by cultural values.

Hofstede (2001) defines culture as "the collective programming of the mind that distinguishes the members of a group or category of people from another" (Hofstede, 2001: 9). According to this definition, culture shapes the values and norms of the individuals within a society. Hofstede and colleagues (e.g., Hofstede, 2001; Hofstede & Bond, 1988) present five cultural value dimensions with which national cultures can be compared with each other: individualism, uncertainty avoidance, power distance, masculinity, and long-term orientation.[1] This study especially focusses on the effects of uncertainty avoidance and long-term orientation due to their role, according to their definition by Hofstede (2001), in the individual's planning and decision-making process.

Long-term orientation refers to the degree to which past traditions and future goals are valued instead of focusing only on the present (i.e., short-term orientation) (Hofstede et al., 2010). Therefore, individuals in long-term orientation cultures show endurance, persistence, openness, and learning behavior while pursuing long-term plans. As career decision making, in particular prior to the transition from school or university to work life, requires thoughtful and intensive future planning, individuals with high long-term orientation may be more likely to engage in career planning (Gunkel, Schlaegel, Langella, Peluchette, & Reshetnyak, 2013). Moreover, long-term orientation is related to valuing hard work, learning, and looking for opportunities in order to decide upon and finally implement future goals (Hofstede et al., 2010). That would imply that individuals will be more likely to make a use of working activities prior to graduation in order to experience and decide upon future jobs. In contrast, individuals in short-term oriented societies will not put as much effort into planning activities as they strive for immediate results (Hofstede, 2001). Building on this reasoning, we suggest:

Hypothesis 2. Long-term orientation moderates the association between prior related work experience and career-related interest in a specific industry, such that the association is stronger for individuals with high long-term orientation.

Uncertainty avoidance refers to the extent to which individuals feel uncomfortable or threatened by ambiguous, unknown, or unstructured situations (Hofstede et al., 2010).

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[1] Proceeding from Hofstede's five major cultural value dimensions of individualism, uncertainty avoidance, power distance, masculinity, and long-term orientation (Hofstede 2001; Hofstede & Bond, 1988), later studies have identified and added a sixth dimension: indulgence (Hofstede et al., 2010). While a high score on this dimension (i.e., indulgence) represents "a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun", a low score (i.e., restraint) describes "a conviction that such gratification needs to be curbed and regulated by strict social norm" (Hofstede et al., 2010: 281).

Therefore, individuals with high uncertainty avoidance strive for reducing stress level, increasing structure, and stability, also related to career, which can be assured with the help of planning (Hofstede et al., 2010). Moreover, they are not reluctant to hard work to create situations they are comfortable with. In contrast, individuals low on uncertainty avoidance show no need for urgency in behavior and decision making and tolerance for ambiguity or risks, as they would come along with changing job situations (Hofstede, 2001; Hofstede et al., 2010).

Consequently, individuals from high uncertainty avoidance cultures are more likely to invest in career planning (Gunkel et al., 2013). As career planning implies looking for possibilities to increase knowledge about certain occupations and industries, for example with the help of internships or part-time employment in the case of graduating students, individuals high on uncertainty avoidance will be more likely to seek and employ these opportunities to finalize their career interests and goals. Rothman and Sisman (2016) emphasize that gaining prior work experience is in particular beneficial to decrease the level of uncertainty about the work situation and formulate realistic career interests. From these theoretical assumptions and previous findings, we expect that cultures with high uncertainty avoidance should invest more in work activities prior to employment as they can reduce the uncertainty and unknown about the occupation and industry and formulate realistic and stable career interests. In contrast, cultures with low uncertainty avoidance are expected to put less effort in prior work activities in order to gain occupation and industry-specific work experience but are rather comfortable with little-informed and uncertain career decision making. Therefore, we hypothesize:

Hypothesis 3. Uncertainty avoidance moderates the association between prior related work experience and career-related interest in a specific industry, such that the association is stronger for individuals with high uncertainty avoidance.

Finally, we expect a three-way interaction between long-term orientation, uncertainty avoidance, and prior related work experience in predicting industry interest. As individuals high on uncertainty avoidance and long-term orientation work hard and seek possibilities to learn and gain knowledge important to future planning and reduction of uncertainty, they will be more likely to utilize the benefits of prior work experience and develop career interests and choice intentions in the form of interest in industry. Consequently, we hypothesize:

Hypothesis 4. Prior related work experience, long-term orientation, and uncertainty avoidance will have a three-way interaction in association with career-related interest in a specific industry; prior related work experience will be most strongly and positively associated with career-related interest in a specific industry with higher long-term orientation and uncertainty avoidance.

2.2 Method

2.2.1 Sample and data collection procedure

To test our hypotheses, we used original survey data[2] of 1,705 economics and management students located in eight countries. The countries cover seven out of the eleven cultural clusters discussed by Ronen and Shenkar (2013): East Europe Cluster: Bulgaria ($n = 267$) and Ukraine ($n = 129$), Latin Europe Cluster: Spain ($n = 319$), Nordic Cluster: Finland ($n = 136$), Germanic Cluster: Germany ($n = 201$), Anglo Cluster: United States ($n = 208$), Confucian Asia Cluster: China ($n = 206$), and Latin America Cluster: Argentina ($n = 239$). Table 2.2 presents the descriptive statistics of the country samples and cultural clusters.

We followed recommendations on data collection regarding comparable sampling and timing (Leung, 2008; van De Vijver & Leung, 1997) as well as questionnaire translation (Harzing, 2005). To specifically focus on the effects of cultural value dimensions and prior related work experience on career interests, we studied rather homogeneous groups of university business students being enrolled in one university and being citizen of that particular country. Surveys were forwarded to students during lectures almost at the same time across countries. The original questionnaire was developed in English language. For the participating countries, other than the US, the questionnaire was translated into six languages (i.e., Bulgarian, Chinese, Finnish, German, Russian, Spanish) and back-translated into English to ensure linguistic and conceptual equivalence (Brislin, 1980; Hui & Triandis, 1985).

In the overall sample, 56% of the survey participants were female. The average age was 22 years (SD = 3.91). The university students were studying on average in their fifth semester. 35% of the respondents had gathered prior related work experience.

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[2] The datasets used in the present study are based on the datasets used in Gunkel et al. (2013). All variables used in Gunkel et al. (2013) are included as control variables in the present study to avoid a potential omitted variable bias. The findings in the present study have no effect on the findings reported in Gunkel et al. (2013).

Table 2.2: Sample descriptive characteristics

Cultural cluster country	Sample size	Females (%)	Mean age (SD)	Mean semester (SD)	Work experience (%)
Anglo					
United States	208	84 (40)	24 (6.08)	7 (3.48)	104 (50)
Confucian Asia					
China	206	112 (54)	25 (5.28)	5 (2.07)	72 (35)
East Europe					
Bulgaria	267	172 (64)	21 (2.97)	4 (2.70)	112 (42)
Ukraine	129	98 (76)	20 (2.04)	6 (1.68)	33 (26)
Germanic					
Germany	201	106 (53)	23 (1.95)	7 (2.37)	100 (50)
Latin America					
Argentina	239	119 (50)	22 (3.36)	5 (3.02)	84 (35)
Latin Europe					
Spain	319	201 (63)	21 (2.43)	6 (3.63)	47 (15)
Nordic					
Finland	136	65 (48)	22 (2.51)	2 (1.44)	51 (38)
Total	1,705	957 (56)	22 (3.91)	5 (3.08)	603 (35)

2.2.2 Measures

The original questionnaire consisted of five major parts (A-E) und comprised 111 items. Part A collected data on students career adaptability, career optimism, and perceived knowledge using the career futures inventory (CFI) by Rottinghaus, Day, and Borgen (2005) together with students' career decisiveness (Marcia, 1966). In Part B, the cultural value dimensions were assessed using the Values Survey Module 2008 (VSM 08) by Hofstede, Hofstede, Minkov, and Vinken (2008). The respondents indicated their career-related interests in industries (the dependent variable) and organizational functions together with the experiences gathered in those areas by themselves, relatives, or friends in Part C. In Part D, the participants' personality traits were measured by using the Big Five inventory (BFI) developed by John, Donahue, and Kentle (1991). Finally, Part E gathered demographic information of the survey participants. Initially, all items were measured on five-point Likert scales ranging from 1 (e.g., *strongly agree*) to 5 (e.g., *strongly disagree*). Moreover, the questionnaire comprised reverse-worded items. Before conducting further analysis, all relevant study items were recoded first, in terms of Likert scale ranging new from 1 (*strongly disagree*) to 5 (*strongly agree*) and second in terms of reverse-wording. Appendix 1 presents the original questionnaire of the study.

To measure **career-related industry interests**, the dependent variable, respondents were asked to choose and rank their top five out of a list of 47 industries or business areas (in the following referred to as "industries") for which they have the intention to work for after

graduation. Based on the students' ranking, the ten, most often mentioned industries within the top five could be identified and rated on a five-point scale from 1 (*little interesting as ranked fifth*) to 5 (*most interesting as ranked first*) and if not chosen being equal to zero. The ten most preferred industries included banking, marketing, trade, consulting, tourism, civil service, real estate, public relations, market research, and auditing industries.

Students indicated their **prior related work experience** (PRWE), the independent variable, regarding the industries they rated as their top five industries through number of months spent in various activities including internships or student jobs (Uppal et al., 2014).

The **cultural value dimensions** in our hypothesized model were measured with primary data as recommended by Taras et al. (2010). Using the VSM 08 (Hofstede et al., 2008) and following the approach by Holtbrügge and Mohr (2010), cultural values were calculated at the individual level. To pay attention to the joint importance of the cultural value dimensions (Littrell, 2012), no single but all six dimensions were assessed with long-term orientation and uncertainty avoidance representing the moderator variables, and power distance, masculinity, individualism, and indulgence being the control variables. Each of the six dimensions was measured with four items and rated on a five-point Likert scale from 1 (e.g., *of very little or no importance*) to 5 (e.g., *of utmost importance*). Sample items of long-term orientation (LTO) include "Persistent efforts are the surest way to results" and of uncertainty avoidance (UAI) include "One can be a good manager without having a precise answer to every question that a subordinate may raise about his or her work".

As mentioned above, we controlled for the four **cultural value dimensions** of power distance, masculinity, individualism, and indulgence. A sample item of power distance is "In choosing an ideal job, how important would it be to you to have a boss (direct supervisor) you can respect". Masculinity includes the following the sample item "In choosing an ideal job, how important would it be to you to get recognition for good performance". A sample item of individualism is "In choosing an ideal job, how important would it be to you to have sufficient time for your personal or home life" and of indulgence is "In your private life, how important is it to you to keeping time free for fun".

We also controlled for gender, age, the five factor model of personality traits, and the career futures inventory variables, covering career adaptability, optimism, and knowledge, in the analysis as they were shown to be associated with career interests (e.g., Larson et al., 2002; McKay & Tokar, 2012; Rottinghaus et al., 2005), career planning (e.g., Gunkel,

Schlaegel, Langella, & Peluchette, 2010; Rogers et al., 2008), and career choice (e.g., Brown & Hirschi, 2013; Lent & Brown, 2013). We assessed the **personality traits** by using the BFI developed by John et al. (1991). The BFI measures openness with ten items (e.g., "Is inventive"), conscientiousness with nine items (e.g., "Perseveres until the task is finished"), extraversion with eight items (e.g., "Generates a lot of enthusiasm"), agreeableness with ten items (e.g., "Has a forgiving nature"), and neuroticism with eight items (e.g., "Worries a lot"). Respondents rated all items on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach alphas in the current research were for openness .73, conscientiousness .77, extraversion .78, agreeableness .66, and neuroticism .80. Applying the **career futures inventory** (CFI) by Rottinghaus et al. (2005), the students indicated their career adaptability using eleven items (e.g., "I can adapt to change in my career plans"), career optimism using eleven items (e.g., "Thinking about my career inspires me"), and perceived knowledge using three items (e.g., "I am good at understanding job market trends"). Items were rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach alphas in the current research were for career adaptability .71, career optimism .83, and perceived knowledge .68.

2.3 Results

Table 2.3 shows the descriptive statistics of the study variables including means, standard deviations, and correlations for all top ten industries. For all ten industries, correlations between prior related work experience (independent variable) and career-related interest in the respective industry (dependent variable) were positive and significant. On average, the correlation between prior work experience and industry interest was $r = .18$. To examine the hypothesized conceptual model, we conducted moderated multiple regression analyses. We followed the recommendations in the literature (Aiken & West, 1991; Dawson, 2014; Dawson & Richter, 2006), to test for two-way and three-way interactions between the two cultural value dimensions and prior related work experience in predicting the interest in a certain industry. All variables were standardized before performing regression analyses. Results of hypotheses tests for interest in banking and marketing are presented in Table 2.4, for interest in trade and consulting in Table 2.5, for interest in tourism and civil service in Table 2.6, for interest in real estate and public relations in Table 2.7, and for interest in market research and auditing in Table 2.8.

Table 2.3: Descriptive statistics and correlations of study variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
1. Gender	.56	.50																																				
2. Age	22.13	3.91	-.12																																			
3. Openness	3.53	.52	.02	.03																																		
4. Conscientiousness	3.66	.56	.14	.11	.20																																	
5. Extraversion	3.43	.62	.09	-.05	.35	.28																																
6. Agreeableness	3.54	.52	.11	.16	.05	.28	.04																															
7. Neuroticism	2.79	.66	.20	-.14	-.14	-.26	-.24	-.33																														
8. Career adaptability	3.92	.38	-.04	.11	.34	.44	.38	.14	-.34																													
9. Career optimism	3.57	.57	.07	.01	.33	.50	.37	.06	-.23	.53																												
10. Perceived knowledge	3.24	.64	-.06	.06.	.30	.26	.24	.00	-.22	.38	.45																											
11. Power distance	3.34	.49	.09	.10	.13	.07	.07	.12	.02	.10	.10	.09																										
12. Masculinity	4.10	.49	.03	-.08	.10	.15	.17	.05	.05	.16	.19	.10	.28																									
13. Individualism	4.07	.47	.08	-.11	.08	.08	.12	.04	.13	.11	.14	.09	.20	.58																								
14. Indulgence	3.42	.39	.01	-.03	.06	-.09	.05	.02	.05	-.08	-.02	.01	.13	.13	.25																							
15. Long-term orientation	3.84	.50	.06	-.07	.10	.19	.15	.21	-.11	.16	.22	.09	.12	.14	.17	.04																						
16. Uncertainty avoidance	3.43	.42	-.03	.07	-.03	.06	.02	.03	.10	.03	.02	.03	.12	.05	.10	.07	.05																					
17. Banking PRWE	1.36	9.86	-.06	.23	-.02	.06	.01	.06	-.04	.02	.02	.02	.01	.01	.00	.03	-.03	.04																				
18. Banking industry interest	1.90	2.13	.00	-.04	-.07	.08	-.07	.05	-.01	-.03	.10	.06	-.03	.05	.02	.07	.02	.02	.15																			
19. Marketing PRWE	.79	7.25	-.03	.19	.05	.03	.04	.07	-.07	.05	.05	.04	-.01	-.01	-.02	.01	-.02	-.03	.16	-.04																		
20. Marketing industry interest	1.23	1.79	.05	-.11	.04	.01	.08	-.01	.00	.03	-.01	.01	-.06	.02	.03	-.02	.02	.00	-.05	-.08	.16																	
21. Trade PRWE	.92	6.29	-.02	.07	.00	.04	.05	.00	.00	.06	.06	.04	-.02	.02	.02	.02	-.01	.03	.14	-.03	.21	.02																
22. Trade industry interest	.69	1.46	-.08	-.06	-.03	-.04	-.01	-.06	-.01	.00	.02	.00	-.01	.00	-.03	.01	-.04	.00	-.01	-.05	.01	.02	.28															
23. Consulting PRWE	.37	4.50	-.04	.15	.05	.07	-.02	.03	-.01	.04	.02	.04	.00	-.03	-.03	.01	-.01	.04	.01	-.04	.02	-.04	.08	.01														
24. Consulting industry interest	.67	1.40	-.09	.15	-.02	.04	-.02	-.01	-.06	.03	.03	-.02	-.03	-.02	-.11	-.08	-.06	.05	.03	.02	-.02	-.08	-.01	-.07	.18													
25. Tourism PRWE	.21	2.68	.04	.02	.03	.04	.06	.04	-.03	.05	.03	-.02	.01	-.01	.05	.03	.00	-.03	.01	-.05	.00	.00	.02	.04	.00	-.03												
26. Tourism industry interest	.57	1.25	.15	-.06	-.02	-.02	.05	.06	.01	-.03	-.04	-.05	.05	.03	.02	.03	.03	-.04	-.04	-.15	-.03	-.03	-.02	-.01	-.04	-.12	.17											
27. Civil service PRWE	.20	2.81	.01	.20	.04	.04	.01	.03	-.04	.04	.04	.02	.01	-.03	.00	-.03	.01	-.02	-.01	-.03	.00	-.02	-.01	-.02	.00	.00	.00	-.02										
28. Civil service industry interest	.60	1.36	.10	-.02	-.12	.04	-.07	-.02	.04	-.08	-.06	-.07	-.05	-.04	.03	-.03	-.05	-.04	-.01	.08	-.03	-.07	-.03	-.08	-.03	-.02	-.03	-.09	.16									
29. Real estate PRWE	.21	4.62	-.02	.09	.04	.04	.02	.02	-.04	.02	.03	.07	.03	-.01	.00	.05	.00	-.01	.00	-.02	.00	-.02	-.01	-.01	.01	-.01	.00	.04	.00	.00								
30. Real estate industry interest	.52	1.19	-.01	-.04	-.07	.04	.00	.02	-.02	.02	.05	.05	-.04	.02	.03	.01	-.01	.03	.00	.19	-.02	-.03	-.03	-.03	-.02	-.03	-.02	-.06	-.03	.02	.15							
31. Public relations PRWE	.11	1.70	-.03	.11	.07	.04	.01	.03	-.06	.07	.02	.08	.05	.03	.03	.01	-.03	-.02	.01	-.03	.02	.02	.04	.00	.00	-.02	.00	-.03	.00	-.03	.01	.02						
32. Public relations industry interest	.49	1.17	.10	-.05	.06	-.01	.16	.05	-.05	.04	.00	.00	.04	.01	.02	.00	.02	-.01	.01	-.14	-.02	.14	-.05	-.07	-.02	-.05	.03	.06	.03	-.02	-.01	-.08	.10					
33. Market research PRWE	.09	1.22	-.01	.06	.04	.00	.05	.02	.00	.03	.03	.06	.02	.02	.03	.01	-.02	-.03	.03	-.03	.23	.11	-.01	-.03	-.01	.00	-.01	-.02	-.01	-.03	.00	-.03	.00	-.02				
34. Market research industry interest	.42	1.07	.02	-.01	-.02	.04	.02	.01	.03	-.04	-.04	.01	-.05	-.02	.01	-.03	.01	-.02	.00	-.02	.04	.24	-.01	-.04	-.01	.01	-.02	-.08	-.03	-.03	-.02	-.07	-.02	-.05	.25			
35. Auditing PRWE	.28	3.06	.03	.12	-.01	.01	-.03	.01	-.03	-.01	.03	-.04	-.01	-.02	-.01	.00	.01	.04	.06	.00	-.01	-.06	-.01	-.02	.07	.02	-.01	-.04	-.01	-.03	.00	-.03	-.01	-.04	-.01	-.03		
36. Auditing industry interest	.53	1.32	.07	.00	-.08	.07	-.02	-.01	-.01	.02	.09	.04	-.03	.01	.00	-.02	.04	-.01	.04	.18	-.04	-.14	-.04	-.08	.01	.09	-.02	-.10	-.03	.07	-.01	.06	.00	-.12	-.03	-.04	.23	

Note. *N*'s are ranging from 1692 to 1705; All correlations above |.05| are significant at $p < .05$ (two-tailed); PRWE = Prior related work experience.

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Table 2.4: Regression results with interest in banking and marketing as dependent variables

Variables	Banking industry interest					Marketing industry interest				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables										
Gender	-.02	-.01	-.01	-.01	-.00	.04	.04	.04	.04	.04
Age	-.05	-.08***	-.08***	-.09***	-.09***	-.10***	-.13***	-.13***	-.13***	-.13***
Personality traits										
Openness	-.09**	-.08**	-.08**	-.08**	-.07**	.04	.04	.04	.04	.03
Conscientiousness	.08**	.07*	.07*	.07*	.07*	.01	.01	.01	.00	.00
Extraversion	-.11***	-.11***	-.11***	-.11***	-.11***	.07*	.06*	.06*	.06*	.06*
Agreeableness	.06*	.05	.05	.05*	.06*	-.00	-.01	-.01	-.01	-.02
Neuroticism	.00	-.00	-.00	-.01	-.01	.00	.01	.00	.00	-.00
Career futures inventory										
Career adaptability	-.10**	-.10**	-.10**	-.10**	-.10***	.03	.03	.03	.03	.03
Career optimism	.15***	.14***	.14***	.14***	.14***	-.08*	-.08**	-.09**	-.08**	-.08**
Perceived knowledge	.07*	.07*	.07*	.07*	.07*	.01	.01	.01	.01	.01
Cultural value dimensions										
Power distance	-.05	-.05	-.05	-.05	-.05	-.07**	-.06*	-.07*	-.07*	-.07**
Masculinity	.05	.05	.05	.05	.05	.02	.02	.02	.02	.03
Individualism	-.03	-.03	-.03	-.03	-.03	.02	.02	.01	.01	.01
Indulgence	.09***	.08***	.08***	.08***	.08***	-.02	-.02	-.02	-.02	-.02
Independent variable										
Banking PRWE		.16***	.16***	.20***	.25***					
Marketing PRWE							.18***	.19***	.29***	.34***
Moderators										
Long-term orientation			.00	.00	.01			.01	.02	.02
Uncertainty avoidance			.01	.01	.01			.02	.03	.03
Hypothesized two-way interaction terms										
Banking PRWE x long-term orientation				.09**	.11**					
Banking PRWE x uncertainty avoidance				.02	.01					
Marketing PRWE x long-term orientation									.09**	.14***
Marketing PRWE x uncertainty avoidance									.16***	.07
Additional two-way interaction term										
Long-term orientation x uncertainty avoidance					-.01					.00
Three-way interaction term										
Banking PRWE x long-term orientation x uncertainty avoidance					-.08**					
Marketing PRWE x long-term orientation x uncertainty avoidance										.18***
F-value	7.07***	9.70***	8.55***	8.33***	7.93***	3.31***	7.01***	6.24***	6.30***	6.35***
R²	.06	.08	.08	.09	.09	.03	.06	.06	.07	.07
Adjusted R²	.05	.07	.07	.08	.08	.02	.05	.05	.06	.06
ΔR²	.06***	.02***	.00	.01**	.00*	.03***	.03***	.00	.01**	.01**

Note. N = 1691; Standardized coefficients are shown; *p < .05, **p < .01, ***p < .001 (two-tailed); PRWE = Prior related work experience.

Table 2.5: Regression results with interest in trade and consulting as dependent variables

Variables	Trade industry interest					Consulting industry interest				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Control variables										
Gender	-.08**	-.07**	-.07**	-.07**	-.07**	-.07**	-.06*	-.06*	-.06*	-.06*
Age	-.06*	-.09***	-.09***	-.09***	-.09***	.13***	.11***	.10***	.10***	.10***
Personality traits										
Openness	-.04	-.03	-.03	-.03	-.03	-.02	-.03	-.02	-.02	-.02
Conscientiousness	-.03	-.03	-.02	-.02	-.03	.03	.01	.01	.01	.02
Extraversion	.00	-.01	-.01	-.01	-.01	-.02	-.01	-.01	-.01	-.01
Agreeableness	-.04	-.04	-.03	-.03	-.03	-.04	-.04	-.04	-.04	-.04
Neuroticism	-.01	-.03	-.03	-.03	-.03	-.02	-.03	-.04	-.04	-.04
Career futures inventory										
Career adaptability	.00	-.00	-.00	-.01	-.00	.00	.00	-.00	-.00	-.00
Career optimism	.05	.03	.04	.04	.04	.07*	.07*	.08*	.07*	.07*
Perceived knowledge	-.01	-.01	-.01	-.01	-.01	-.06*	-.06*	-.06*	-.07*	-.07*
Cultural value dimensions										
Power distance	.02	.03	.03	.03	.03	-.02	-.01	-.02	-.02	-.01
Masculinity	.02	.02	.02	.02	.02	.06	.06	.06*	.06*	.06
Individualism	-.05	-.05	-.05	-.05	-.05	-.10***	-.10***	-.10***	-.10***	-.10***
Indulgence	.02	.01	.01	.02	.02	-.05	-.05*	-.06*	-.06*	-.06*
Independent variable										
Trade PRWE		.29***	.29***	.30***	.30***					
Consulting PRWE							.16***	.16***	.22***	.22***
Moderators										
Long-term orientation			-.03	-.03	-.03			-.04	-.04	-.05
Uncertainty avoidance			-.00	-.00	-.00			.06*	.05*	.05*
Hypothesized two-way interaction terms										
Trade PRWE x long-term orientation				.05*	.05*					
Trade PRWE x uncertainty avoidance				-.02	-.03					
Consulting PRWE x long-term orientation									.05	-.01
Consulting PRWE x uncertainty avoidance									-.05	-.07
Additional two-way interaction term										
Long-term orientation x uncertainty avoidance					-.06*					.05*
Three-way interaction term										
Trade PRWE x long-term orientation x uncertainty avoidance					.01					
Consulting PRWE x long-term orientation x uncertainty avoidance										.10***
F-value	1.99*	11.96***	10.65***	9.82***	9.21***	5.75***	8.50***	7.99***	7.37***	7.44***
R²	.02	.10	.10	.10	.10	.05	.07	.08	.08	.09
Adjusted R²	.01	.09	.09	.09	.09	.04	.06	.07	.07	.07
ΔR²	.02*	.08***	.00	.00	.00*	.05***	.03***	.00*	.00	.01***

Note. $N = 1691$; Standardized coefficients are shown; *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed); PRWE = Prior related work experience.

Table 2.6: Regression results with interest in tourism and civil service as dependent variables

| Variables	Tourism industry interest					Civil service industry interest				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Control variables										
Gender	.14***	.13***	.13***	.13***	.13***	.12***	.11***	.11***	.11***	.11***
Age	-.05	-.05*	-.05	-.05	-.05	.01	-.02	-.03	-.02	-.02
Personality traits										
Openness	-.02	-.02	-.03	-.03	-.03	-.09***	-.10***	-.10***	-.10***	-.10***
Conscientiousness	-.04	-.04	-.04	-.04	-.04	-.02	-.02	-.01	-.01	-.01
Extraversion	.07*	.06*	.06*	.06*	.06*	-.03	-.03	-.03	-.03	-.03
Agreeableness	.05	.05	.05	.05	.05	-.04	-.03	-.03	-.02	-.02
Neuroticism	-.03	-.03	-.02	-.02	-.02	-.04	-.04	-.03	-.03	-.03
Career futures inventory										
Career adaptability	-.01	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02
Career optimism	-.05	-.05	-.05	-.05	-.05	-.01	-.02	-.01	-.01	-.01
Perceived knowledge	-.03	-.02	-.02	-.02	-.02	-.02	-.01	-.01	-.01	-.01
Cultural value dimensions										
Power distance	.04	.04	.04	.04	.04	-.03	-.03	-.03	-.03	-.03
Masculinity	.02	.03	.03	.03	.03	-.06	-.06	-.06	-.06	-.06
Individualism	-.00	-.02	-.02	-.02	-.02	.10**	.09**	.10**	.10**	.09**
Indulgence	.01	.01	.01	.01	.01	-.03	-.03	-.02	-.02	-.03
Independent variable										
Tourism PRWE		.16***	.16***	.27***	.33***					
Civil service PRWE							.17***	.17***	.17***	.19***
Moderators										
Long-term orientation			.01	.01	.01			-.04	-.04	-.05
Uncertainty avoidance			-.03	-.02	-.01			-.03	-.03	-.03
Hypothesized two-way interaction terms										
Tourism PRWE x long-term orientation				.05	.01					
Tourism PRWE x uncertainty avoidance				.14***	.23**					
Civil service PRWE x long-term orientation									-.08**	-.14**
Civil service PRWE x uncertainty avoidance									-.05	-.05
Additional two-way interaction term										
Long-term orientation x uncertainty avoidance					-.02					.04
Three-way interaction term										
Tourism PRWE x long-term orientation x uncertainty avoidance					-.09					
Civil service PRWE x long-term orientation x uncertainty avoidance										-.07
F-value	4.66***	7.46***	6.66***	6.80***	6.25***	4.39***	7.39***	6.72***	6.63***	6.31***
R^2	.04	.06	.06	.07	.07	.04	.06	.06	.07	.07
Adjusted R^2	.03	.05	.05	.06	.06	.03	.05	.05	.06	.06
ΔR^2	.04***	.03***	.00	.01***	.00	.04***	.03***	.00	.01**	.00*

Note. $N = 1691$; Standardized coefficients are shown; *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed); PRWE = Prior related work experience.

Table 2.7: Regression results with interest in real estate and public relations as dependent variables

Variables	Real estate industry interest					Public relations industry interest				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables										
Gender	-.02	-.01	-.01	-.01	-.02	.09***	.09***	.09***	.08**	.08**
Age	-.05	-.06*	-.06*	-.06*	-.06*	-.05	-.06*	-.06*	-.06*	-.06*
Personality traits										
Openness	-.10***	-.10***	-.10***	-.09***	-.09***	.01	.01	.01	.01	.01
Conscientiousness	.03	.02	.02	.02	.01	-.06*	-.07*	-.07*	-.06*	-.06*
Extraversion	-.01	-.01	-.01	-.02	-.02	.17***	.17***	.17***	.17***	.17***
Agreeableness	.03	.03	.03	.04	.04	.04	.04	.04	.05	.05
Neuroticism	.00	.00	-.00	-.00	.00	-.04	-.03	-.03	-.03	-.03
Career futures inventory										
Career adaptability	-.00	.00	.00	-.00	.00	.03*	.03	.03	.03	.03
Career optimism	.05	.05	.06	.06	.06	-.06	-.06	-.06	-.06	-.06
Perceived knowledge	.05	.04	.04	.03	.03	-.02	-.02	-.02	-.02	-.02
Cultural value dimensions										
Power distance	-.04	-.04	-.04	-.04	-.04	.03	.03	.03	.03	.03
Masculinity	.01	.01	.01	.02	.02	-.03	-.03	-.03	-.03	-.03
Individualism	.01	.01	.02	.01	.01	.02	.02	.02	.01	.01
Indulgence	.03	.02	.02	.02	.02	-.02	-.02	-.02	-.02	-.02
Independent variable										
Real estate PRWE		.16***	.16***	.33***	.36***					
Public relations PRWE							.11***	.11***	.17***	.17***
Moderators										
Long-term orientation			-.04	-.04	-.03			-.01	-.01	-.01
Uncertainty avoidance			.03	.03	.03			.01	.01	.01
Hypothesized two-way interaction terms										
Real estate PRWE x long-term orientation				-.03	.09					
Real estate PRWE x uncertainty avoidance				.23***	.16**					
Public relations PRWE x long-term orientation									.01	.01
Public relations PRWE x uncertainty avoidance									.08*	.07
Additional two-way interaction term										
Long-term orientation x uncertainty avoidance					-.06*					-.02
Three-way interaction term										
Real estate PRWE x long-term orientation x uncertainty avoidance					-.14*					
Public relations PRWE x long-term orientation x uncertainty avoidance										-.01
F-value	2.08*	4.79***	4.45***	5.58***	5.56***	5.69***	6.68***	5.90***	5.60***	5.09***
R²	.02	.04	.04	.06	.07	.05	.06	.06	.06	.06
Adjusted R²	.01	.03	.03	.05	.05	.04	.05	.05	.05	.05
ΔR²	.02*	.02***	.00	.02***	.01**	.05***	.01***	.00	.00	.00

Note. $N = 1691$; Standardized coefficients are shown; $*p < .05$, $**p < .01$, $***p < .001$ (two-tailed); PRWE = Prior related work experience.

Table 2.8: Regression results with interest in market research and auditing as dependent variables

Variables	Market research industry interest					Auditing industry interest				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables										
Gender	.01	.01	.01	.01	.01	.08**	.06*	.06*	.07**	.07**
Age	-.00	-.02	-.02	-.02	-.02	.00	-.03	-.03	-.02	-.02
Personality traits										
Openness	-.02	-.02	-.02	-.02	-.02	-.11***	-.11***	-.11***	-.11***	-.11***
Conscientiousness	.07*	.08**	.08**	.09**	.08**	.05	.05	.05	.05	.06
Extraversion	.06*	.05	.04	.04	.04	-.05	-.04	-.04	-.04	-.04
Agreeableness	.01	.01	.00	.01	.01	-.03	-.02	-.03	-.03	-.03
Neuroticism	.05	.04	.04	.04	.04	-.02	-.01	-.01	-.01	-.01
Career futures inventory										
Career adaptability	-.05	-.05	-.05	-.05	-.05	-.02	-.01	-.01	-.01	-.01
Career optimism	-.07*	-.07*	-.08*	-.07*	-.07*	.10**	.08**	.08*	.07*	.07*
Perceived knowledge	.05	.03	.03	.04	.04	.04	.06*	.06*	.06*	.06*
Cultural value dimensions										
Power distance	-.05	-.04	-.04	-.04	-.04	-.03	-.03	-.03	-.02	-.02
Masculinity	-.03	-.03	-.03	-.03	-.03	.02	.02	.02	.02	.02
Individualism	.04	.03	.03	.03	.03	-.01	-.01	-.02	-.02	-.02
Indulgence	-.03	-.03	-.03	-.03	-.03	.00	.00	.00	.00	.01
Independent variable										
Market research PRWE		.26***	.26***	.21***	.21***					
Auditing PRWE							.23***	.23***	.31***	.31***
Moderators										
Long-term orientation			.02	.02	.02			.03	.03	.03
Uncertainty avoidance			-.02	-.02	-.02			-.02	-.02	-.03
Hypothesized two-way interaction terms										
Market research PRWE x long-term orientation				-.02	-.02					
Market research PRWE x uncertainty avoidance				-.08**	-.06					
Auditing PRWE x long-term orientation									.00	.02
Auditing PRWE x uncertainty avoidance									-.11**	-.10**
Additional two-way interaction term										
Long-term orientation x uncertainty avoidance					-.02					.05*
Three-way interaction term										
Market research PRWE x long-term orientation x uncertainty avoidance					-.03					
Auditing PRWE x long-term orientation x uncertainty avoidance										-.04
F-value	1.85*	9.65***	8.57***	8.08***	7.39***	3.75***	10.16***	9.06***	8.75***	8.24***
R²	.02	.08	.08	.08	.09	.03	.08	.08	.09	.09
Adjusted R²	.01	.07	.07	.07	.07	.02	.08	.08	.08	.08
ΔR²	.02*	.06***	.00	.00*	.00	.03***	.05***	.00	.01**	.00*

Note. $N = 1691$; Standardized coefficients are shown; *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed); PRWE = Prior related work experience.

Hypothesis 1 states that prior related work experience is positively associated with career-related interest in a specific industry. Results of regression Model 2 for all ten industries provide support for Hypothesis 1 by showing a significant positive association between prior work experience in banking and banking industry interest (β = .16, p = .00), prior work experience in marketing and marketing industry interest (β = .18, p = .00), prior work experience in trade and trade industry interest (β = .29, p = .00), prior work experience in consulting and consulting industry interest (β = .16, p = .00), prior work experience in tourism and tourism industry interest (β = .16, p = .00), prior work experience in civil service and civil service industry interest (β = .17, p = .00), prior work experience in real estate and real estate industry interest (β = .16, p = .00), prior work experience in public relations and public relations industry interest (β = .11, p = .00), prior work experience in market research and market research industry interest (β = .26, p = .00), and prior work experience in auditing and auditing industry interest (β = .23, p = .00).

Hypothesis 2 predicts a two-way interaction of long-term orientation and prior related work experience on industry interest. Model 4 of Tables 2.4 and 2.5 show that Hypothesis 2 was supported in three out of ten industries by a significant positive relationship between long-term orientation and prior work experience in banking in predicting banking industry interest (β = .09, p = .01; ΔR^2 = .01, p = .00), prior work experience in marketing in predicting marketing industry interest (β = .09, p = .01; ΔR^2 = .01, p = .00), and prior work experience in trade in predicting trade industry interest (β = .05, p = .04; ΔR^2 = .00, p = .08) (see Figures 2.2a, b, c). For civil service, regression results in Model 4 of Table 2.6 suggest that long-term orientation significantly moderates the association between prior work experience and industry interest in a way, other than expected, that the association is stronger for individuals with low long-term orientation (β = -.08, p = .00; ΔR^2 = .01, p = .00; see Figure 2.2d). For all other industries, results did not provide further evidence for a moderation by long-term orientation.

Figure 2.2: Two-way interactions between LTO and PRWE

a) Two-way interaction between LTO and banking PRWE
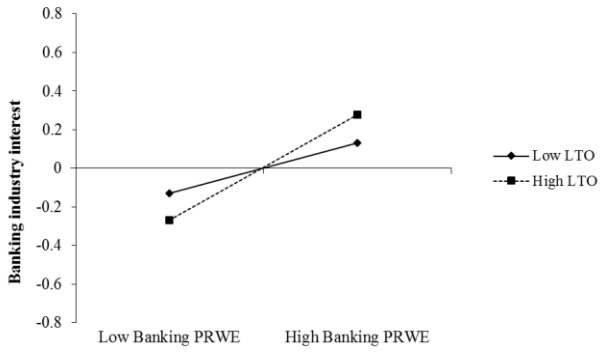
b) Two-way interaction between LTO and marketing PRWE
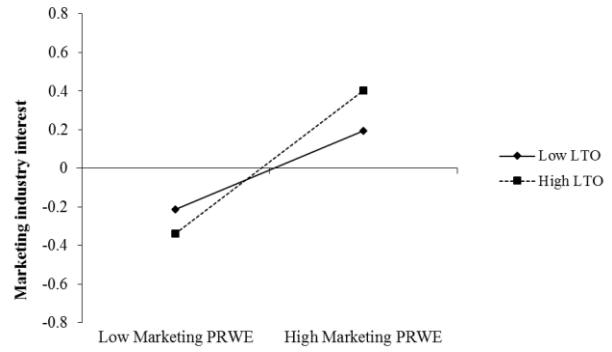
c) Two-way interaction between LTO and trade PRWE
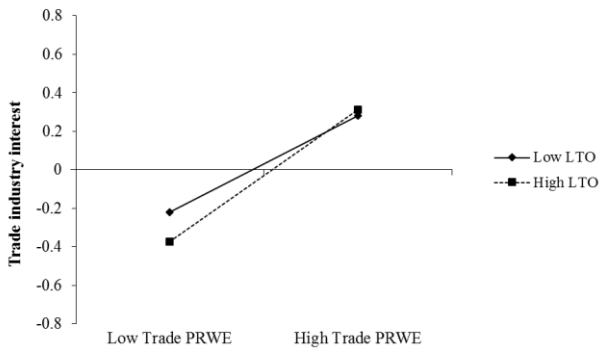
d) Two-way interaction between LTO and civil service PRWE
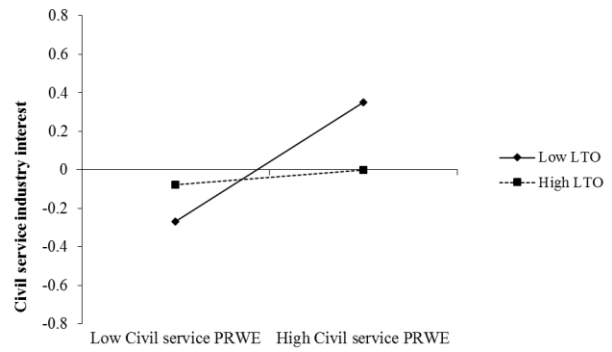
Figure 2.3: Two-way interactions between UAI and PRWE

a) Two-way interaction between UAI and marketing PRWE
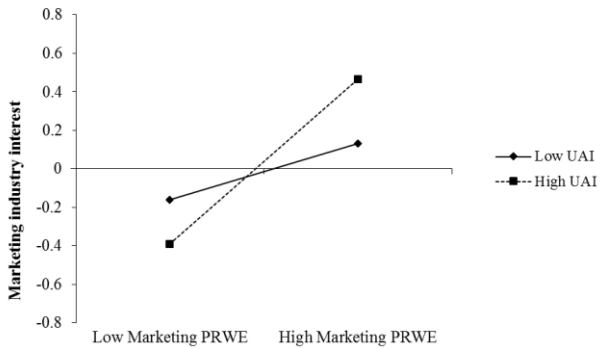
b) Two-way interaction between UAI and tourism PRWE
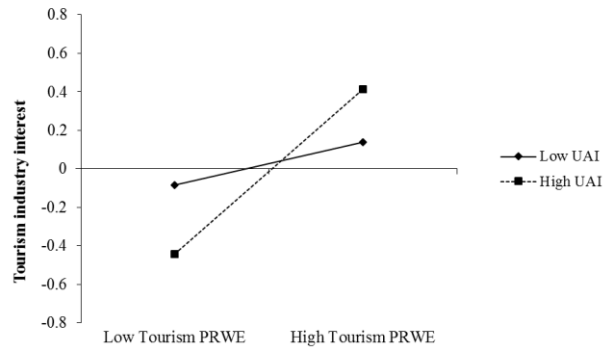
c) Two-way interaction between UAI and real estate PRWE
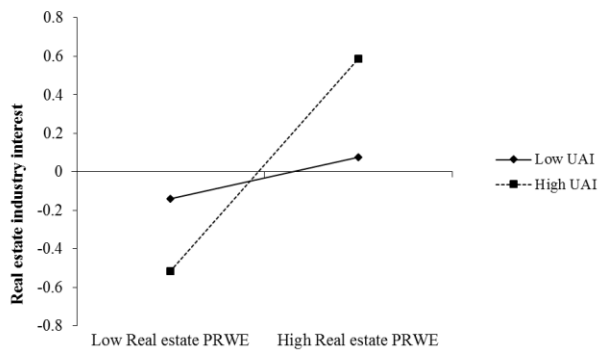
d) Two-way interaction between UAI and public relations PRWE
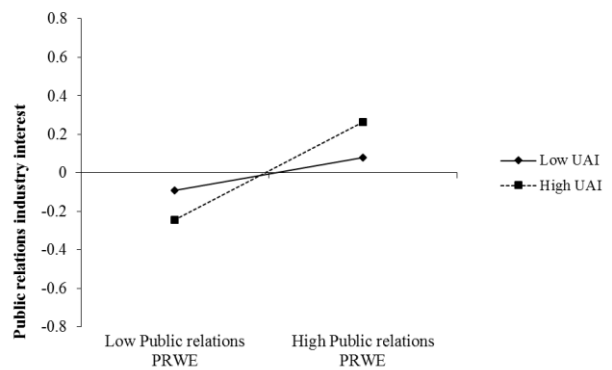
e) Two-way interaction between UAI and market research PRWE
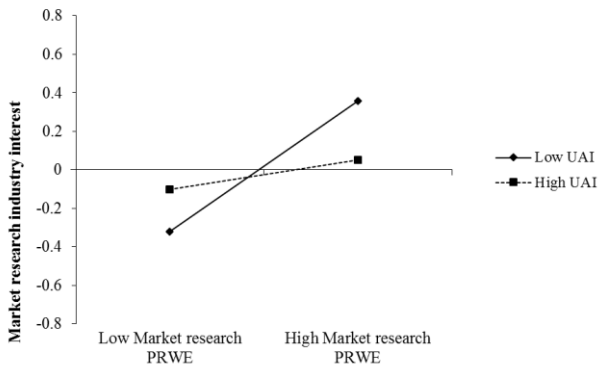
f) Two-way interaction between UAI and auditing PRWE
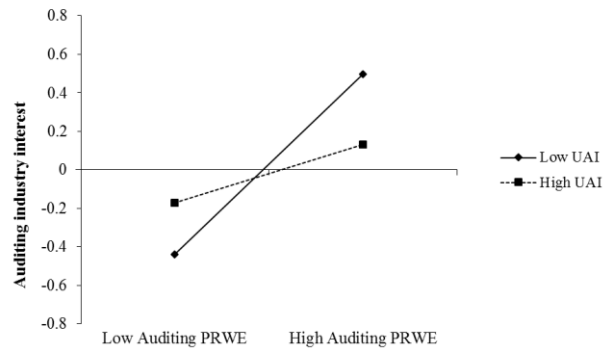
Figure 2.4: Three-way interactions between LTO, UAI, and PRWE

a) Three-way interaction between LTO, UAI, and banking PRWE
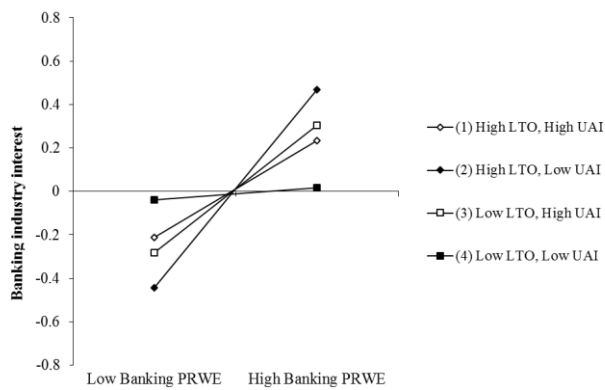
b) Three-way interaction between LTO, UAI, and marketing PRWE
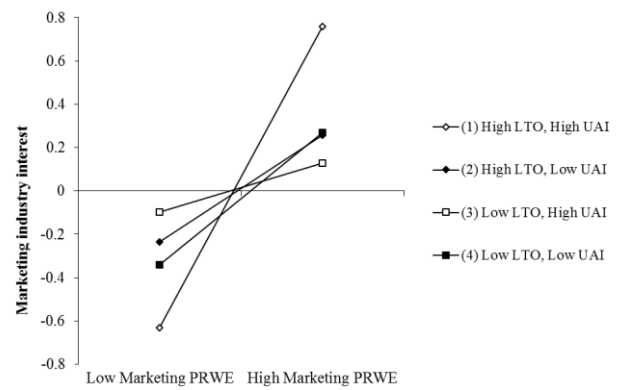
c) Three-way interaction between LTO, UAI, and consulting PRWE
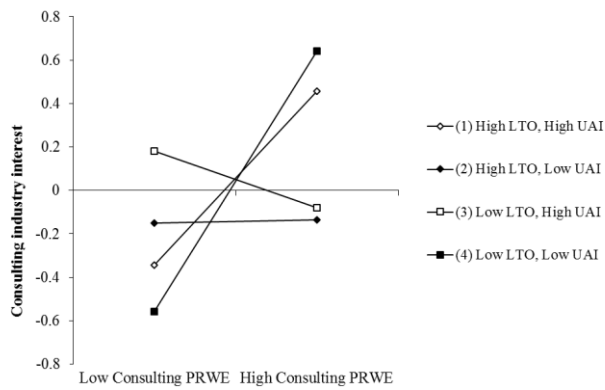
d) Three-way interaction between LTO, UAI, and real estate PRWE
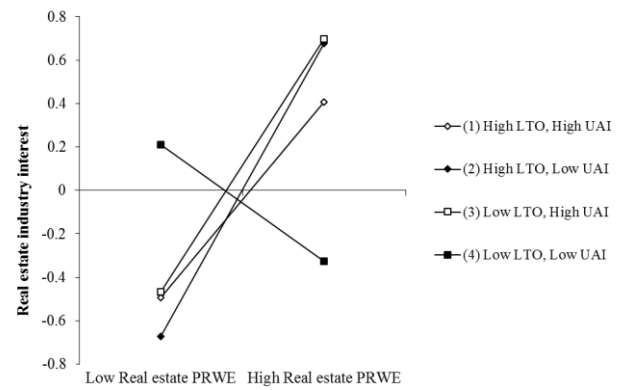
Third, Hypothesis 3, which predicts a two-way interaction of uncertainty avoidance and prior related work experience on industry interest, was supported for four out of ten industries. Uncertainty avoidance significantly, positively moderated the association between prior work experience and interest in marketing ($\beta = .16$, $p = .00$; $\Delta R^2 = .01$, $p = .00$) as presented in Model 4 of Table 2.4 and Figure 2.3a, in tourism ($\beta = .14$, $p = .00$; $\Delta R^2 = .01$, $p = .00$) shown in Model 4 of Table 2.6 and Figure 2.3b, in real estate ($\beta = .23$, $p = .00$; $\Delta R^2 = .02$, $p = .00$), and public relations ($\beta = .08$, $p = .02$; $\Delta R^2 = .00$, $p = .06$) shown in Model 4 of Table 2.7 and Figures 2.3c and 2.3d respectively. For market research ($\beta = -.08$, $p = .01$; $\Delta R^2 = .00$, $p = .03$) and auditing ($\beta = -.11$, $p = .00$; $\Delta R^2 = .01$, $p = .00$), the association between prior work experience and industry interest was moderated by uncertainty avoidance significantly, negatively - other than expected - shown in Model 4 of Table 2.8 and Figures 2.3e and 2.3f respectively. For all other industries, results did not provide further evidence for a moderation by uncertainty avoidance.

Finally, the analysis of three-way interactions between prior work experience, long-term orientation, and uncertainty avoidance in order to test for Hypothesis 4 revealed a significant result, consistent with our suggestion, for marketing where the relationship between prior related work experience and industry interest was most strongly and positively associated with higher long-term orientation and uncertainty avoidance ($\beta = .18$, $p = .00$; $\Delta R^2 = .01$, $p = .00$; see Table 2.4, Model 5, Figure 2.4b). Moreover, slope difference tests (Dawson & Richter, 2006) revealed that the slope of the high long-term orientation and high uncertainty avoidance curve was significantly different from the other slopes ($t_{(1) \text{ and } (2)} = 4.92$, $p = .00$; $t_{(1) \text{ and } (3)} = 4.39$, $p = .00$; $t_{(1) \text{ and } (4)} = 2.96$, $p = .00$; see Table 2.9), while the other three were not. As shown in Figure 2.4, further significant three-way interactions, however in other forms than predicted, were found for banking, consulting, and real estate industries.

For banking, results indicated that the relationship between prior work experience and interest in banking industry was most strongly associated with high long-term orientation and low uncertainty avoidance ($\beta = -.08$, $p = .01$; $\Delta R^2 = .00$, $p = .02$; see Table 2.4, Model 5, Figure 2.4a). However, slope difference tests indicated that the slope was not significantly different from the originally predicted curve with high long-term orientation and high uncertainty avoidance ($t_{(1) \text{ and } (2)} = -1.82$, $p = .07$; see Table 2.9). For the three-way interaction analysis in predicting banking industry interest, only the slope of the low long-term orientation and low uncertainty avoidance curve differed significantly from the other slopes ($t_{(1) \text{ and } (4)} = 2.81$, $p = .01$; $t_{(2) \text{ and } (4)} = 3.67$, $p = .00$; $t_{(3) \text{ and } (4)} = 2.40$, $p = .02$).

Table 2.9: Slope difference tests for three-way interaction in predicting industry interest in banking, marketing, consulting, and real estate

Pair of slopes	Banking industry interest	Marketing industry interest	Consulting industry interest	Real estate industry interest
	t-value for slope difference	t-value for slope difference	t-value for slope difference	t-value for slope difference
(1) High long-term orientation, high uncertainty avoidance AND (2) High long-term orientation, low uncertainty avoidance	-1.82	4.92***	2.24*	-.82
(1) High long-term orientation, high uncertainty avoidance AND (3) Low long-term orientation, high uncertainty avoidance	-.77	4.39***	3.73***	-1.16
(1) High long-term orientation, high uncertainty avoidance AND (4) Low long-term orientation, low uncertainty avoidance	2.81**	2.96**	-1.47	3.60***
(2) High long-term orientation, low uncertainty avoidance AND (3) Low long-term orientation, high uncertainty avoidance	1.39	1.49	.81	.30
(2) High long-term orientation, low uncertainty avoidance AND (4) Low long-term orientation, low uncertainty avoidance	3.67***	-.67	-2.48*	2.15*
(3) Low long-term orientation, high uncertainty avoidance AND (4) Low long-term orientation, high uncertainty avoidance	2.40*	-1.25	-3.80***	4.66***

Note. *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed).

For consulting, the relationship between prior work experience and industry interest was most strongly associated with low long-term orientation and low uncertainty avoidance (β = .10, ΔR^2 = .01, p = .00; see Table 2.5, Model 5, Figure 2.4c). Similar to the analysis of banking industry interest, testing for slope differences showed that the highlighted slope was not significantly different from the originally predicted curve with high long-term orientation and high uncertainty avoidance ($t_{(1) \text{ and } (4)}$ = -1.47, p = .14; see Table 2.9). However, the slopes of the low long-term orientation and low uncertainty avoidance and high long-term orientation and high uncertainty avoidance curves differed significantly from the other two remaining slopes ($t_{(1) \text{ and } (2)}$ = 2.24, p = .03; $t_{(1) \text{ and } (3)}$ = 3.73, p = .00; $t_{(2) \text{ and } (4)}$ = -2.48, p = .01; $t_{(3) \text{ and } (4)}$ = -3.80, p = .00).

Even though the relationship between prior work experience and industry interest in real estate was most strongly associated with low long-term orientation and high uncertainty avoidance (β = -.14, p = .01; ΔR^2 = .01, p = .01; see Table 2.7, Model 5, Figure 2.4d), this curve's slope did not, like in the previously discussed cases, differ significantly from that of the originally suggested curve ($t_{(1) \text{ and } (3)}$ = -1.16, p = .25; see Table 2.9). Slopes differed only significantly when compared with the slope of the low long-term orientation and low uncertainty avoidance curve ($t_{(1) \text{ and } (4)}$ = 3.60, p = .00; $t_{(2) \text{ and } (4)}$ = 2.15, p = .03; $t_{(3) \text{ and } (4)}$ = 4.66, p = .00).

For all other industries, results did not show further significant three-way interactions between prior related work experience, long-term orientation, and uncertainty avoidance in predicting industry interest.

2.4 Discussion

In the present study, we examined the moderating roles of two cultural value dimensions in the association between prior related work experience and career-related interest in a certain industry. As hypothesized, prior related work experiences showed positive, significant associations with career-related interest for each of the top ten industries. Moreover, the hypotheses on the suggested moderating effects of long-term orientation and uncertainty avoidance, such that the association between work experience and industry interest was stronger for individuals with high long-term orientation and high uncertainty avoidance respectively, was

partly supported. We can derive important implications to career choice research and practice from these findings. The theoretical and practical implications together with the limitations of the study will be discussed in the following.

2.4.1 Implications for theory

The findings of this study contribute to the career choice and cross-cultural management literatures by enriching the understanding of the influence of cultural context in the development of career-related interests and choice goals. Moreover, this study replies to calls in the career choice literature to assess the role of cultural norms and values in the formation of occupational interest (Lent et al., 2006; Sheu et al., 2010).

Our results provide empirical evidence that the two cultural value dimensions of long-term orientation and uncertainty avoidance play an important moderating role in the association between prior related work experience and industry interest for three (long-term orientation: banking, marketing, and trade industries) and four (uncertainty avoidance: marketing, tourism, real estate, and public relations industries) out of the ten most favored industries by the survey participants respectively. The analysis of the interests in the banking, marketing, and trade industries showed that the association between prior work experience and career-related industry interest was indeed moderated by long-term orientation in such a way that the association was stronger for individuals with high long-term orientation. Contrary to our expectation, long-term orientation moderated the experience-interest association for civil service in such a way that the association was stronger for individuals with low long-term orientation. We argued that individuals from high long-term orientation cultures will be more likely to engage in career planning and career interest development as they value planning and hard work including learning to achieve future goals (Hofstede et al., 2010). A potential explanation for the result for civil service might be that due to specific industry characteristics or industry culture individuals from short-term orientation cultures approach this sector as they expect to achieve immediate career-related results with no long planning. As the public sector's work environment is typically characterized by stable and long-term employment relationships and employee motives directed towards serving the public (Pollitt & Bouckaert, 2011), referred to as public service motivation (Perry & Wise, 1990), potential job candidates who know about those characteristics might think of having immediate access to the sector after graduation. Consequently, we could think of an overlap between several

levels of culture - that of individual and industry consistent with Taras, Steel, and Kirkman (2016), who suggest that "even though nationality still has relevance in cross-cultural studies, … we should not be focusing exclusively on cultures of countries, but rather exploring and comparing cultures of socioeconomic classes, professions, age cohorts, historic time periods, geographic or social environments characterized by certain level of wealth, freedom, equality, instability, and globalization" (Taras et al., 2016: 481-482).

For the analysis of the moderating role of uncertainty avoidance, we empirically confirm that the association between prior related work experience and industry interest is stronger for individuals with high uncertainty avoidance for marketing, tourism, real estate, and public relations industries in particular. However, contrary to our expectation, for the industries of market research and auditing results indicated that the experience-interest association was stronger for individuals with low uncertainty avoidance. From our hypothesizing, we expected that especially individuals from high uncertainty avoidance cultures seek to avoid uncertainty and little structure in their career paths (Hofstede, 2001) with the help of career planning and learning about occupation, industry, and the career-related self through several work activities (Maertz et al., 2014; Rothman & Sisman, 2016). An alternative suggestion for the unpredicted results might be that due to specific characteristics of market research and auditing industries, the experience-interest association is even stronger for individuals from low uncertainty avoidance cultures as they do not feel threatened by career instability or uncertainty and are willing to take some risks. As both industries belong to the knowledge-intensive business service sector, which is characterized by continuous change, development and innovation in products and technology (Czarnitzki & Spielkamp, 2003), certain values and behaviors of individuals working in this business are required including frequent knowledge creation, dealing with uncertainty, and risk taking (Love, Roper, & Bryson, 2011).

In addition to the two-way interactions studied, we found a three-way interaction effect of prior related work experience, long-term orientation, and uncertainty avoidance in predicting career-related interests in banking, marketing, consulting, and real estate industries. Initially, we had suggested that prior work experience will lead to interest in a certain industry for individuals from high long-term orientation and high uncertainty avoidance cultures which could be only identified for interest in marketing. However, for all other industries, where we were able to find three-way interaction effects, findings deviated from our prediction. After testing for significant slope differences, however, we found that the respective

prevailing combination of long-term orientation and uncertainty avoidance for the strongest experience-interest association did not differ significantly from the predicted high long-term orientation and high uncertainty avoidance curve in any case. A possible explanation for the occurring findings might be that individuals from certain cultures are more attracted to those industries due to specific industry characteristics. For example, interest in the banking industry might be most appealing to individuals from high long-term orientation and low uncertainty avoidance cultures because of the industry environment that is characterized by high uncertainty and risk-taking behaviors but also long-term planning of trusted (investment) relationships (Nienaber, Hofeditz, & Searle, 2014). Moreover, real estate activities, which are part of the non knowledge-intensive business services sector (Czarnitzki & Spielkamp, 2003) and very sensitive to international financial developments, might be more attractive to potential job candidates from low long-term orientation and high uncertainty avoidance cultures as they value immediate results, but are threatened by uncertain, risky situations.

Finally, our study extends research on the importance of prior work experience in predicting career interests. Consistent with previous findings, our results highlight that occupation and industry-specific knowledge gained through various activities, such as internships or (part-time) employment, has significant, positive effect on the development of career-related interests in the particular industry (e.g., Creed et al., 2007; Jackson, 2015).

2.4.2 Implications for practice

Building on the study findings, we can derive important practical implications. First, our results will help organizations and career counselors to reinforce their understanding of the importance of prior related work experience to individuals, who are in their first career development stage where they transition from school into work (Greenhaus et al., 2010). Organizations across countries might benefit from investing in and offering work activities, including internships and (part-time) employment, as these activities will help individuals to learn about the occupation and industry, and thus to develop their career interests. Second, our study will help international human resource managers to understand how the cultural values of long-term orientation and uncertainty avoidance can influence students' career interests and choice goals development. In certain cultures, human resource managers and ca-

reer counselors need to approach potential job candidates with different recruitment strategies than in other cultures. As work activities prior to graduation, such as internships or student jobs, provide an appropriate occupation and industry-specific learning tool, those activities need to be well arranged in order to communicate industry characteristics that fit with the individual's cultural background.

2.4.3 Limitations and directions for future research

This study addresses a known gap in the career choice literature by providing important insights on the role of cultural context in the development of career interests and choice goals. Moreover, it approaches the examination of career-related interests in a novel way by studying individuals' interests in a broad range of industries. The present study is not without limitations.

First, even though the study surveys students from eight different countries and covers seven of the eleven cultural clusters identified by Ronen and Shenkar (2013), the generalizability of the study findings to further countries, other universities in the respective country, and other educational fields than management and economics, such as engineering, math, or politics, is rather limited. Following Ronen and Shenkar (2013), the present sample does not cover the cultural clusters of Arab, African, Far East, and Near East. Future research should enrich the existing knowledge about the influence of cultural context in the development of career interests and choice goals by studying more countries, especially from the unconsidered cultural clusters, more samples from more institutions, and varying academic majors. Second, while the present study analyzes the direct effects of (positive) prior work experiences on career-related interests, SCCT stresses the role of self-efficacy beliefs and outcome expectations as variables mediating the influence of learning and work experiences on the formulation of career interests (Lent et al., 1994, 2000). Consequently, future studies should include the variables of self-efficacy and outcome expectations in the research model and examine their mediating effects. Moreover, future research should address the ongoing discussions about the impact of negative work experiences in the form of unsuccessful performance, negative role models, or negative feelings about the occupation and industry (e.g., Rothman & Sisman, 2016; Walmsley et al., 2012) by studying both positive and negative experiences in the context of career interest and career choice development. Third, as career decision making represents an ongoing process, that also takes place in later career stages

(Lent & Brown, 2013), the analysis of cultural values affecting choice making by the working population should be another direction to future research. In addition, proceeding from the present cross-sectional study future research should address the process of developing career interests and making career choices with the help of longitudinal studies. The recent study extends previous findings on individuals' career-related interests in industries by studying ten industries instead of single disciplines, such as computing (Lent, Lopez, Lopez, & Sheu, 2008), engineering (Miller et al., 2015), or tourism (Song & Chon, 2012). However, our results indicate that certain industry-specific characteristics might overlap with individual cultural values in predicting career interest development, which requires furthers elaboration. Therefore, we can join the call for future studies examining multiple levels of culture, next to the national level, including industry and organizational levels (Gelfand, Aycan, Erez, & Leung, 2017).

3 The effects of leadership behavior on employee careers in public administration: The case of a German administrative department

As careers are not only influenced by individuals themselves but are also embedded in an organizational and environmental context, they are a crucial subject to various stakeholders: employers, employees, and external parties, such as political or legal institutions. As such, employers support career advancement to benefit from satisfying employees' needs and rewarding and retaining talented workers (George, 2015). Further, employees engage in their work and careers to achieve intrinsic and extrinsic career success in the form of self-fulfillment, job and career satisfaction, continuous learning, and pay improvement (Hall, 2002; Ng et al., 2005). Finally, governments are concerned about ensuring equal working conditions and pay for men and women in the public as well as private sectors (European Commission, 2017).

Consequently, factors, which influence individuals' careers, can be identified at three levels: individual, organization, and environment (Mayrhofer et al., 2007). While a number of (organizational-level) career-enhancing factors, such as participation in mentoring and networking (e.g., Fehre, Lindstädt, & Picard, 2014; Tharenou, 1997), as well as career barriers, such as gender stereotypes (e.g., Heilman, 2001; Swanson & Woitke, 1997), have been studied, findings on the influence of the immediate supervisor on the employee's career advancement have remained scarce (Maume, 2011; Rohde et al., 2012; Thurasamy, Lo, Amri, & Noor, 2011). As the direct supervisor is located at the interface between employees and organizational systems and strategies, the supervisor plays a crucial role not only in realizing organizational goals with the help of a motivated staff but also in facilitating an employee's work life (Litano & Major, 2016). Previous research has acknowledged the role of supervisor support in various work-related outcomes, including employee engagement (Jin & McDonald, 2017) and affective organizational commitment (Ng & Sorensen, 2008), as well as career-related outcomes, including career commitment (Kidd & Smewing, 2001) and career satisfaction (e.g., Biemann, Kearney, & Marggraf, 2015; Wickramasinghe & Jayaweera, 2010). Appendix 2 provides an overview of empirical studies on the relation between supervisory behavior and career outcomes.

Few prior studies have highlighted the impact of supervisory behavior on employee's career advancement (e.g., Byrne, Dik, & Chiaburu, 2008; Restubog, Bordia, & Bordia, 2011; Wayne, Liden, Kraimer, & Graf, 1999). The present study aims to address two shortcomings

of prior research. First, prior studies have taken a rather narrow perspective on supervisory behavior by drawing on single theoretical concepts, such as the leader-member exchange theory or the mentoring literature. So far, there is one (review) paper by Rohde et al. (2012) that provides a comprehensive summary of qualitative and quantitative findings on direct (i.e., through leader-follower contact) and indirect (i.e., through job and task design) behaviors with which a supervisor can exert influence on the subordinate's career and skill development. However, there is no further thorough empirical analysis subsequent to the authors' literature review. The present study extends prior research by developing a comprehensive conceptual framework that builds on the leader-member exchange (LMX) and transformational leadership theories and mentoring research in order to understand the potential impact of the immediate supervisor on the development of their employees. The framework is then tested in an exploratory way. Second, the majority of prior studies (and so did the literature review by Rohde et al. (2012)) has examined the association between supervisor support and subordinate's career outcomes for the private sector. The present study extends prior research by analyzing the supervisor-employee relationship in the public sector as we expect careers and leadership behavior in the public sector to differ from those in the private sector due to the public sector's specific structure, which is characterized by bureaucracy or obedience to norms and regulations (e.g., Bogumil & Jann, 2009; Derlien, 2008). In comparison to careers in the private sector, public sector careers were found to develop along hierarchical organizational structures together with an increase in pay and status instead of taking upward and downward paths within and across multiple organizations (e.g., Biemann et al., 2012; McDonald, Brown, & Bradley, 2005). In addition, individuals' careers and leadership behavior in the public sector are rather constrained in their freedom to develop due to restrictive legal norms and regulations (e.g., Czerwick, 2011; Feeney & Rainey, 2010).

As the public sector typically covers the largest number of employees within a nation (Czerwick, 2011), the study of career values and factors affecting career paths of individuals working in that sector is worthwhile. In Germany, for example, there were 5.9 million individuals working in the public sector in total (Destatis, 2017b) and 2.9 million individuals in the public administration in particular in 2016 (Destatis, 2017a). Moreover, research on the public sector calls for further empirical clarification of the role and function of public sector leaders in general, especially in light of the recent public sector modernization in various countries including the United States or Germany (Vandenabeele, 2014; van Wart, 2003; Vogel & Masal, 2012).

This study aims at addressing the above-mentioned gaps in the literature by exploring the influence of the leader's behavior on the followers' careers in the context of a German state administration. To test our comprehensive conceptual framework and gain a deeper insight into public sector career-related supervisor-employee relationships, we respond to calls in the career, psychology, and public administration literatures (Cameron, 2010; Groeneveld, Tummers, Bronkhorst, Ashikali, & van Thiel, 2014; Hanson, Creswell, Clark, Petska, & Creswell, 2005) and take a mixed methods approach. Our study design can be characterized as a concurrent triangulation design (Hansen et al., 2005) and includes the quantitative analysis of survey questions administered to employees working in a German ministry and the qualitative analysis of comments to an open-ended question by using content analysis. The analysis of the survey comments helps us to identify additional supervisor's behaviors that could affect employees' careers. Therefore, two research questions are addressed

Research question 1. How does the immediate supervisor affect the careers of his or her subordinates in a state administration?

Research question 2. How can the behavior of the immediate supervisor in a state administration be characterized compared to what is known from the existing literature?

The present study contributes to the career and public administration literatures and business practice in three ways: First, it deepens the understanding of LMX and transformational leadership in both research streams by evaluating and extending previous findings on the linkages between leadership behavior and employee's careers progress. Second, it responds to calls in the public administration literature (e.g., Vandenabeele, 2014) and provides researchers and practitioners with more important information about the meaning and the role that a public sector leader plays in the development of an employee working in the public sector. Consequently, the findings of this study will help the public sector human resource managers to understand which leadership behavior is desired when it comes to recruiting and training public sector leaders. Moreover, the study contributes to the understanding of practitioners, in particular that of public sector managers in a supervising role, on how to behave in order to support and invest in employees' careers. Third, the study responds to calls in career and public administration research for applying mixed study methods (e.g., Cameron, 2010; Groeneveld et al., 2014) to gain a deeper understanding of the supervisor-employee relationship in the German state administration.

3.1 Theoretical background

3.1.1 The relationship between careers and leadership

Careers in the public administration typically progress along its bureaucratic and hierarchical structures (e.g., Biemann et al., 2012; Hammerschmid et al., 2013) which is addressed by traditional career conceptualizations (e.g., Super, 1957, 1980) rather than by more recent conceptualizations such as the boundaryless (Arthur, 1994; Arthur & Rousseau, 1996) or the protean career concepts (Hall, 1976, 2002). Therefore, careers can be defined as a "succession of related jobs, arranged in a hierarchy of prestige, through which persons move in an ordered (more-or-less) predictable sequence" (Wilensky, 1961: 523). According to this definition, careers (in the public sector) are related to (successful) career advancement, organizational responsibility for career management, and objective career success measures, such as increase in salary or number of promotions (Biemann et al., 2012; Ng et al., 2005).

As careers are driven by individual, environmental, and organizational factors, one aspect that certainly should not be underestimated is the influence of the immediate supervisor on the career of his or her subordinates (e.g., Rohde et al., 2012; Sturges, Conway, & Liefooghe, 2010; Thurasamy et al., 2011). The question of how the immediate supervisor's behavior can influence an employee's career advancement has so far mainly been examined based on LMX theory (e.g., Byrne et al., 2008; Wakabayashi & Graen, 1984), transformational leadership (Priyabhashini & Krishnan, 2005), and mentoring literatures (e.g., van Vianen, Rosenauer, Homan, Horstmeier, & Voelpel, 2017; Vinnicombe & Singh, 2011; Wayne et al., 1999).

LMX theory is concerned with the quality of exchange relationships between leaders and members and their consequences for organizations and individuals (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Graen & Uhl-Bien, 1995). Especially high-quality exchange relationships, which are characterized by mutual obligations, trust, sympathy, respect, and loyalty, come along with favorable outcomes including increased employee motivation, commitment, performance, and job satisfaction (Dulebohn et al., 2012; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2015). Moreover, high LMX quality was found to be linked to the facilitation of employees' careers (Graen, Dharwadkar, Grewal, & Wakabayashi, 2006; Wakabayashi & Graen, 1984). In contrast, low-quality relationships are rather characterized by superiors and subordinates fulfilling their formal work obligations and roles specified in the employment contract.

Compared to LMX theory, which takes a relationship-based approach to leadership, the transformational leadership theory is directly focused on behaviors of the leader which have an effect on the subordinates. In leadership literature, both theories are often integrated (e.g., Wang, Law, Hackett, Wang, & Chen, 2005) as the leader's behavior and the follower's reaction to it are part of the leader-member-relationship and transformational leadership can best unfold in high-quality exchange relationships. According to the transformational leadership theory, typical behaviors of transformational leaders include inspiring and motivating followers, showing sincere interest in the individual's development, and stimulating them intellectually as well as through their role modeling behavior (Bass, 1990; Cole, Bruch, & Shamir, 2009; Felfe, 2006). Consequently, transformational leaders play a crucial role in shaping their worker's values, attitudes, and beliefs as well as in the professional development of their workers. In contrast, transactional leaders rather focus on goal and task achievement, and therefore, control, reward, and correct (in case of underperformance) their employees based on their performance.

Within the mentoring literature, relationships between mentors and mentees or protégés are addressed where several types of functions practiced by mentors have positive effects on the organization, the mentee, and the mentor (e.g., Eby, Allen, Evans, Ng, & DuBois, 2008; Scandura & Pellegrini, 2007). In particular career mentoring functions (i.e., coaching, sponsorship, exposure, visibility, protection, challenging assignments) are found to be related to the mentees' career progress (e.g., Allen, Eby, Poteet, Lentz, & Lima, 2004; Dobrow, Chandler, Murphy, & Kram, 2012). Further mentoring functions include psychosocial mentoring (i.e., functions, such as counseling, confirmation, and friendship fostering a sense of competency and identity of the mentee) and role modeling functions (Scandura & Pellegrini, 2007). However, although the direct supervisor has often been designated as the mentor for the examination of mentoring relationships (Kao, Rogers, Spitzmueller, Lin, & Lin, 2014), it is no exclusion criterion. A mentor is generally understood as a (senior) person with greater knowledge and experience compared to the mentee and can also be represented by higher-level managers or executives (Haggard, Dougherty, Turban, & Wilbanks, 2011). Therefore, the study of mentoring provides a good basis for drafting career-enhancing behaviors but it does not give an overall insight into a leader's behavior.

Based on a comprehensive literature review on the impact of the immediate supervisor on the subordinate's career and skills development, Rohde et al. (2012) conclude that a supervisor could exert influence either directly through leader-follower contact or indirectly

through job and task design. Here, direct influence through contact is represented by the superior providing feedback, recommending career-related training and developmental activities, promoting the subordinate, showing trust and positive expectations about the subordinate's abilities and capabilities, agreeing on career-related objectives and career goals, providing social support, and acting as a role model. In addition to direct influences, supervisors can foster the employee's career advancement indirectly through delegating challenging tasks, extending the scope of action and decision making as well as optimizing person-job fit.

As *feedback* by the immediate supervisor provides subordinates with information about the quality of their job performance, work results, and work approach, many empirical studies have demonstrated a positive impact of (specific or constructive) feedback on job performance (Adams, 2005; Greenhaus et al., 2010), which is key to career progress (Igbaria & Baroudi, 1995). In addition, previous research indicates that employees seeking feedback from their direct supervisors perceive higher extrinsic career success (Cheramie, 2013), which emphasizes the importance of feedback-giving as well as feedback-seeking behavior.

Moreover, the immediate supervisor can play an important role when it comes to offering or informing about *career-related training or developmental activities* which were found to be positively linked to extrinsic career success, especially to an increase in salary and promotions (Ng et al., 2005). According to Tharenou (2001), supervisor support fostered the employees' motivation and participation in training and developmental activities such as technical/skill courses, coaching, mentoring programs, and continuing education courses. Especially, mentoring programs including sponsorship and coaching were found to have positive effects on career advancement (e.g., Allen et al., 2004; Burke & McKeen, 1994; Eby et al., 2008), which indicate the importance of concrete developmental relationships between sponsor and the sponsored individual. Contradictory to positive findings for the relationship between training and developmental activities and career progress, other studies identified no direct influence of activities such as technical training or leadership development programs on career progress but rather a positive impact on individual's learning and professional development (Burke & McKeen, 1994; Clarke, 2011). Furthermore, while the meta-analytical review on the linkage between mentoring and various outcomes by Eby et al. (2008) indicated positive relations between mentoring and career outcomes (i.e., career recognition and success as well as skill or competence development), these were characterized by relatively small effect sizes. Consequently, studies have identified the importance of

multiple developmental relationships next to a single relationship between mentor and mentee (Higgins & Kram, 2001; Dobrow et al., 2012).

Career promotion includes supervisor activities, such as recommending employees for promotion to decision-makers, informing about career opportunities, sharing knowledge and experience regarding leadership functions as well as helping to set up developmental relationships with persons in key positions (Kidd & Smewing, 2001; Rohde et al., 2012). In particular multiple developmental relationships with various individuals (e.g., senior managers, peers, family members), who are perceived as being important to the individual's career progress (Higgins & Kram, 2001), foster career advancement and success (Gentry & Sosik, 2010; Murphy & Kram, 2010). However, not only developmental relationships but also social contacts and networks (i.e., social capital) have been identified as important predictors to career advancement (e.g., Seibert et al., 2001; Tharenou, 1997). Especially leaders, who are engaged in high-quality relationships with their employees, seem to be more likely to help them to establish contacts with important people inside or outside of the organization (Sparrowe & Liden, 1997).

As highlighted within the LMX, transformational leadership and mentoring literatures, supervisors, who show *trust and positive expectations* about their subordinate's abilities, capabilities, and competences, do not only strengthen their followers' confidence and empowerment (Hakimi, van Knippenberg, & Giessner, 2010) but also their job performance (e.g., Brower, Lester, Korsgaard, & Dineen, 2009; Kierein & Gold, 2000; Wakabayashi & Graen, 1984) contributing to career advancement. For the specific relationship between the leader's expectations about their subordinates and career progress, Greenhaus and Parasuraman (1993), for instance, find that employees' career advancement opportunities were enriched through the supervisor's ability and performance expectations. In addition, Priyabhashini and Krishnan (2005) show that subordinates who perceived high expectations by their superiors were more likely to advance in their careers.

Together with constructive feedback on an employee's job performance, the immediate supervisor can facilitate career advancement by regularly discussing the subordinate's *career-related objectives and career goals*. As the career goals lead to the determination of career strategies, they serve as subjects of feedback and control mechanisms in order to verify actual career progress (Greenhaus et al., 2010). Moreover, seeking guidance from the supervisor for planning career goals has been found to be helpful for career progress (Lau & Pang, 2000; Noe, Noe, & Bachhuber, 1990).

Another possibility for the immediate supervisor to foster their followers' career progress through direct contact is to provide *social support* (Rohde et al., 2012; Rooney & Gottlieb, 2007). Four types of social support are discussed in the literature: instrumental support, informational support, emotional support, and appraisal support (Greenhaus et al., 2010). Whereas instrumental support covers direct help or facilities provided to solve a problem, informational support involves the provision of information, suggestions or advice to a person so that he or she can cope with a problem. Emotional support addresses how much the superior conveys care, trust, liking, or listens sympathetically to the subordinate. Finally, appraisal support refers to the provision of information and feedback that is relevant to the individual's self-evaluation. Social support has been mainly examined in relation to mentoring within management or career studies (e.g., Allen et al., 2004; Higgins & Thomas, 2001). While career-related mentoring functions refer to instrumental and informational support, psychosocial mentoring, and role modeling functions correspond to emotional and appraisal support. Empirical findings demonstrate the importance of the four social support types for individuals to cope with work stress and consequently to advance in their careers (Higgins & Thomas, 2001).

Moreover, Rohde et al. (2012) emphasize the importance of *role modeling* by the immediate supervisor as another direct way to influence the individual's career progress. The positive effects of superiors, who set an example in terms of certain (strategic) behaviors, have been extensively addressed in the mentoring (e.g., Murphy & Kram, 2010; Vinnicombe & Singh, 2011) and transformational leadership literatures (e.g., Cole et al., 2009; Felfe, 2006). However, not only mentors can be perceived as role models but also other individuals, such as parents as non-work developers or upper-level managers as work developers (Gibson, 2004; Singh, Vinnicombe, & James, 2006). Based on both role identification and social learning theories, Gibson (2004) emphasizes that especially role models who possess similar attitudes, behaviors, goals, or desirable status and who could help to learn new skills, tasks, and norms are more appealing. In their study on male and female directors, Vinnicombe and Singh (2011) show that observing role models is a critical success factor, particularly for studying their management styles, strategies in decision making and politics, and boardroom etiquette. Research on effects of transformational leadership behavior demonstrates that rather socially close transformational leaders foster their followers' leadership development while acting as role models (Cole et al., 2009). In addition, several studies emphasize that a

lack of role models is often perceived as a barrier to career advancement by (primarily female) employees (e.g., Bierema, 2005; Clarke, 2011).

The immediate supervisor also has the possibility to affect the subordinate's career progress indirectly through delegating challenging tasks, broadening the scope of action and decision making, and considering person-job-fit. With *delegation of challenging tasks*, the superior provides the subordinates with a possibility to acquire new skills, visibility, and preparation for future leadership positions, which may be helpful for career progression (Rohde et al., 2012; Tharenou, 2005). Furthermore, challenging tasks may foster career motivation (Hoobler, Lemmon, & Wayne, 2014). The impact of challenging assignments has been extensively discussed in the mentoring literature. In their study, De Pater, van Vianen, Bechtoldt, and Klehe (2009) find that especially employees' challenging job experiences contributed to positive promotability assessments by their supervisors. However, De Pater, van Vianen, and Bechtoldt (2010) indicate that women have less experience with challenging tasks than men because their superiors do not delegate the demanding assignments to them resulting in less promotion opportunities.

Next to the delegation of challenging assignments, the direct supervisor may extend the employee's *scope of action and decision making* so that the latter has the option to decide when and how to deal with different tasks autonomously (Rohde et al., 2012). As highlighted in the work design literature, job autonomy, which covers the employee's freedom in scheduling, deciding on, and carrying out his or her tasks, is positively associated with job satisfaction, job performance as well as work and growth motivation (Humphrey, Nahrgang, & Morgeson, 2007; Morgeson & Humphrey, 2006). However, the concrete linkages between job design and careers still need to be explored in detail (Hall & Heras, 2010).

Finally, the immediate supervisor can foster the career advancement of the subordinates indirectly by ensuring the *person-job fit* (Rohde et al., 2012). As individual's characteristics and abilities are found to be of relevance for managerial career advancement (Tharenou, 1997), the supervisor as well as the individual need to consider whether the employee's skills and needs match with the job's characteristics and requirements (Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005). In addition, upward career movements are often linked to a better person-job fit resulting in higher career satisfaction (Rigotti, Korek, & Otto, 2014) or career success (Ballout, 2007). Figure 3.1 summarizes the literature findings on the effects of the immediate supervisor's behaviors on a subordinate's career progress.

Figure 3.1: Overview of theoretical basis for the study of the immediate supervisor's behavior
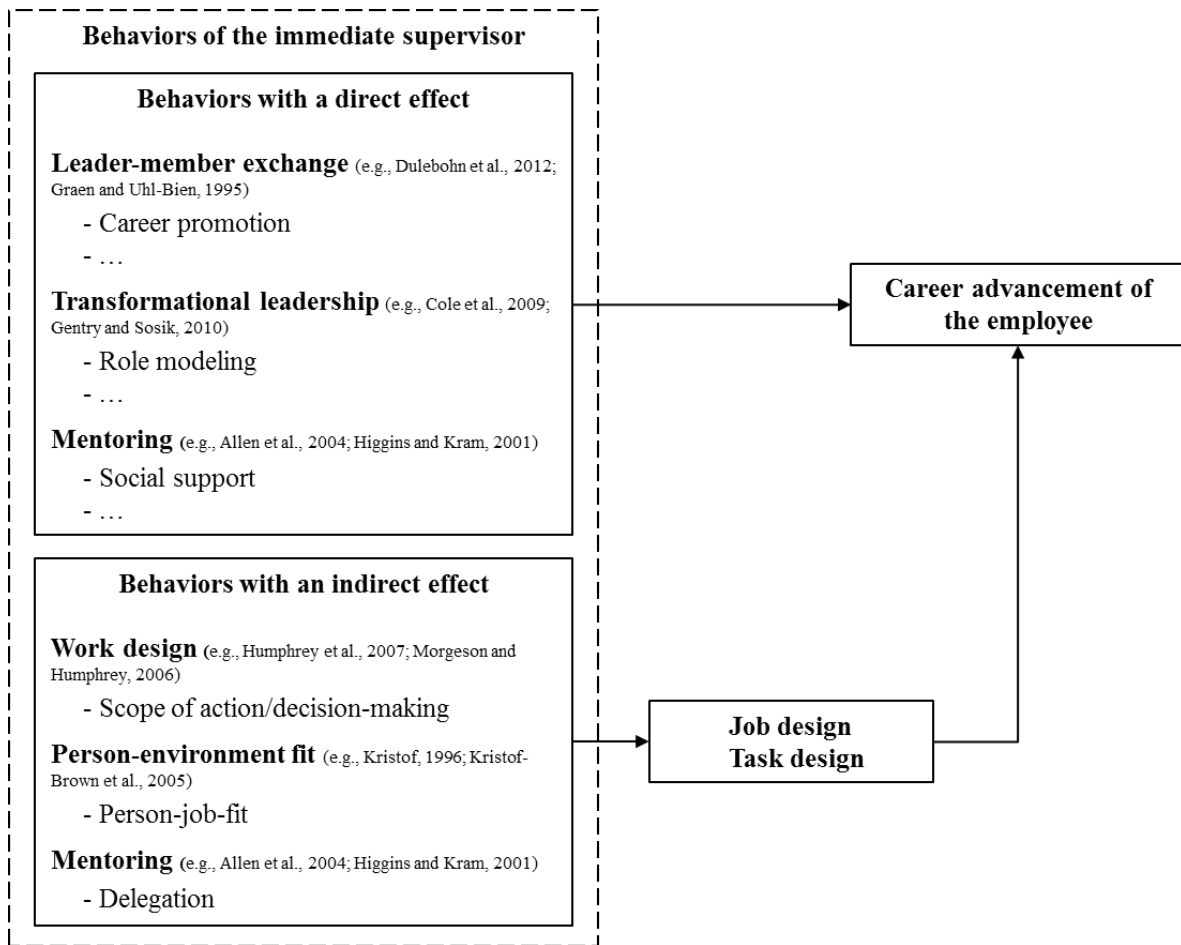
Note. Some behaviors of the immediate supervisor with a direct effect are enrooted in more than one theory, e.g., behavior of 'trust and positive expectations' is enrooted in leader-member exchange, transformational leadership, and mentoring theories.

As the specific organizational context with its financial, economic, and personnel structures plays a crucial role for studying the effectiveness of the superior's behavior (Rohde et al., 2012), the characteristics of the public administration relevant for shaping leadership behavior will be addressed in the following section.

3.1.2 Careers and leadership in the public administration

Whereas the public sectors in countries such as the United Kingdom (UK) or the United States (US) are subjects of restructuring and modernization since the 1980s, reform processes started to change the public administration in Germany in the 1990s (Hammerschmid & Geissler, 2010; Vogel, 2012). Although a number of practices and concepts applied in the US and UK public sectors (e.g., privatization of state-owned companies, budgeting, and cost

and performance measurements) have been adopted in Germany as well, the German public administration system is still very different compared to those of the other nations (Bogumil & Jann, 2009; Pollitt & Bouckaert, 2011). Most prevalent changes regarding the adoption of new management systems and thinking can be identified at the level of municipalities (*Kommunen*), some at the state level (*Bundesländer*), and least of all at the federal level (*Bund*) (Bogumil & Jann, 2009; Kuhlmann, Bogumil, & Grohs, 2008). However, the structure of the public administration in terms of personnel and financing has mainly remained the same. Especially traditional structures and practices, such as lifelong employment relationships and "classical" Weberian bureaucracy including hierarchical structures or boundedness to laws and regulations, are still in place in the German public administration (e.g., Bogumil & Jann, 2009; Derlien, 2008; Kuhlmann et al., 2008). In addition, the dual employment structure covering civil servants (*Beamte*) and public employees (*Angestellte*) with relatively rigid career systems, linked to formal qualification requirements and strongly determined by legal regulations, is another very traditional feature of the public administration in Germany (Czerwick, 2011; Derlien, 2008; Kuhlmann & Röber, 2006). Whereas the legal regulations for employment and career progression of public employees are fixed within the collective agreement (*Tarifvertrag für den öffentlichen Dienst der Länder* - TV-L), the regulations for civil servants are determined by the law on civil servants on federal or state levels (i.e., *Bundesbeamtengesetz* - BBG, *Landesbeamtengesetz* - LBG, *Laufbahnverordnung* - LVO). Individuals striving for an employment in the higher service (*Höherer Dienst*), for instance in the functions of department (*Abteilungsleiter*) or division heads (*Referatsleiter*) in a state administration, need to have at least a university master's degree. For the next lower level, the so-called higher intermediate service (*Gehobener Dienst*), degrees of a university of applied sciences, bachelor, or senior high school degrees are required. To hold the position of a desk officer (*Sachbearbeiter*) in the intermediate service (*Mittlerer Dienst*), employees need to have acquired at least an intermediate school degree. Further, they could also hold a secondary school degree but would then need to have completed apprenticeships. For the lower service (*Einfacher Dienst*), which covers functions such as staff or office clerks (*Bürosachbearbeiter*), a secondary school degree is required.

Formal regulations regarding the career advancement of both public employees and civil servants are quite restrictive. Regulations determine that both types of employees are grouped into a specific career path when they enter the public administration which they can or need to move up in a step-wise process linked to a steady increase in salary during the

following years (§12 TV-L; §22 LBG LSA; §3 LVO LSA). However, in order to become upgraded or promoted to advanced career paths, employees need to meet further formal requirements including applying to an employment advertisement or providing proof that the recent occupational tasks can be characterized as highly demanding (§9 LBG LSA; §17 Abs. 4 TV-L). Consequently, the legal or formal environment of the German public administration provides a specific and relatively restrictive context to the study of public sector careers even though researchers on public sector modernization expect the renewal of the rigid systems to come in the future (e.g., Czerwick, 2011; Kuhlmann et al., 2008). In order to satisfy employees' work-related needs, recent studies have found an increasing trend towards offering the employees other work-related opportunities including part time jobs, flexible working time arrangements, employee mobility, and several training activities (Czerwick, 2011; Kuhlmann & Röber, 2006).

The discussion on the public sector reform and modernization has also raised the awareness to the issue of 'public sector leadership' since leaders are affected by the improvements and serve as change agents at the same time (e.g., Hammerschmid & Geissler, 2010; OECD, 2001; Vogel & Masal, 2012). In this context, public sector leadership covers not only the top level of the administration but also lower levels (Leslie & Canwell, 2010; OECD, 2001). As van Wart (2003) summarizes, public sector leadership is concerned with the process of providing results and, more importantly, services in accordance with the present legal framework. Therefore, administrative leadership can be further defined as "the process of developing/supporting followers who provide the results" (van Wart, 2003: 221).

Along with the debate on public sector modernization, general leadership theories such as transformational leadership and LMX theories, which can be basically found in the private sector, have entered the public sector research (e.g., Orazi, Turrini, & Valotti, 2013; Vandenabeele, 2014; Wright & Pandey, 2010). In consequence of the public sector reform, leadership behaviors are valued which are rather based on trust than on control and focus on transforming followers' behaviors towards achieving the new performance goals (Kuhlmann & Röber, 2006; Wright & Pandey, 2010). In return, studies on public sector executives' views and experiences regarding the public sector reform, in particular in the German public administration, demonstrate that although executives still identify themselves with Weberian values and structures, they have become increasingly aware of the need to manage and lead their subordinates, which highlights the ongoing change in the minds of the protagonists in public administration (e.g., Hammerschmid & Geissler, 2010; Hammerschmid et al., 2013).

Especially two features differentiate public from private administration and affect the effectiveness of new (private) leadership behaviors, namely bureaucratic structures and 'Public Service Motivation' (PSM) (Orazi et al., 2013; Vandenabeele, 2007; Vandenabeele, Scheepers, & Hondeghem, 2006). As the structures in public administrations and organizations in many countries are still shaped by hierarchy, bureaucracy, and formalization, leaders might have only limited autonomy and authority over their subordinates (e.g., Boyne, 2002; Knies & Leisink, 2014). In addition, public executives need to consider their employees' PSM which was initially defined as the "individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations" (Perry & Wise, 1990: 368). A more recent definition by Vandenabeele (2007) specifies PSM as "the belief, values and attitudes that go beyond self-interest and organizational interest, that concern the interest of a larger political entity and that motivate individuals to act accordingly whenever appropriate" (Vandenabeele, 2007: 547). In particular, the four motives of attraction to public policymaking, commitment to the public interest and civic duty, compassion, and self-sacrifice have been found to characterize PSM (Perry, 1996). Vandenabeele et al. (2006) as well as Meyer, Egger-Peitler, Höllerer, and Hammerschmid (2014) found that civil servants and public employees are rather driven by their commitment to the public interest and civic duty than by compassion, public policy making, or self-sacrifice. Therefore, public interest is represented by the employees' endeavor to implement and defend the rule of law and social rights, and thereby, to adopt an objective and impartial position which stands for the traditional values and ideals emphasized by the Weberian bureaucracy (Vandenabeele et al., 2006). Consequently, research findings indicate that leaders in the public administration need to carefully address the motives driving their employees' behaviors.

3.2 Method

To examine factors affecting individual careers in the German public administration, a mixed-method study was conducted in a state-level ministry using an online questionnaire including both items on a Likert scale and open-ended items. The survey was part of a research project run by the ministry aimed at deriving career-related personnel development practices matching the needs of the employees. The goal of the present study is to particularly investigate the effects of an immediate supervisor's behavior on his or her subordinates' careers as this relationship represents a currently understudied topic in the literature (Rohde

et al., 2012; Thurasamy et al., 2011). For this purpose, not only items on a Likert scale on the employees' perceptions of their direct supervisor's behavior but also comments on an open-ended question were analyzed. The use of the open-ended survey question allowed the participants to express their (positively and/or negatively shaped) perceptions of their superior's leadership behavior freely and in detail. Based on the content of the survey responses, categories were identified (inductive approach) and in a following step compared and discussed in the light of the set of (direct and indirect) behaviors which have been revealed by the previous literature review (see Figure 3.1). The use of the survey data met with the research ethics guidelines. The original survey was conducted in German language.

3.2.1 Sample and data collection procedure

Survey invitations were sent by email to 240 female and male employees at all organizational levels except for individuals on top level (i.e., minister or state secretary). Of the 240 employees who received a link to the online questionnaire, 108 took part in the survey (45% response rate) and finally 98 participants (41% response rate) fully completed the questionnaire. The information on gender, age, highest education level, and next higher job position after a prospective promotion of the survey respondents is presented in Table 3.1. Most of the employees participating in the survey belonged to the age group of 46 to 55 years (49%) and achieved a university degree as the highest education level (73%). Typical job positions, which the survey respondents could fill after a prospective promotion or upgrading, were personal advisor (34%), desk officer (27%), or division head (25%).

3.2.2 Measures

The basic online questionnaire consisted of six major parts (A-F) und comprised 177 items. Part A collected data on the employee's career motivation (Abele, Hausmann, & Weich, 1994), career path targeted (Fischer, 2004; Schneider, 2007), participation in and importance of informal networks (Bieber, 2009), and perception of their direct superior's leadership style and quality. Parts B and C of the questionnaire gathered information about employees' career-related training activities attended and perception of work-life balance (Bieber, 2009; Erfolgsfaktor Familie, 2008; Schneider, 2007). Part D assessed the respondents' perception of career-related barriers at individual, organizational, and environmental levels. Part E col-

lected information about the importance of career support factors, especially at organizational and environmental levels (Bieber, 2009; Holzbecher, Küllchen, & Löther, 2002; Schneider, 2007). Finally, Part F gathered the employees' demographic information. Appendix 3 presents the original survey questionnaire. The questionnaire comprised reverse-worded items which were recoded before conducting the subsequent analysis.

Table 3.1: Sample descriptive characteristics

Characteristics	Frequency	%
Gender		
Male	46	47
Female	52	53
Age		
25-35 years	13	13
36-45 years	21	22
46-55 years	48	49
> 56 years	16	16
Highest education level		
High school	2	2
Apprenticeship	11	11
Technical college	4	4
University of applied sciences degree	3	3
University degree	71	73
PhD	7	7
Next higher job position after promotion or upgrade in pay grade		
Staff or office clerk	7	7
Desk officer	26	27
Personal advisor	33	34
Head of division	24	25
Head of department	5	5
Other (deputy head of division, expert with specific functions)	2	2

Note. N = 98.

To measure employees' (perceived) **career advancement prospects**, the dependent variable, we followed the example of Greenhaus, Parasuraman, and Wormley (1990) and operationalized the variable with a single item ("How likely is a promotion or upgrade for you within the next five years"). Respondents rated the item on a five-point Likert scale ranging from 1 (*very unlikely*) to 5 (*very likely*).

Respondents rated several **leadership behaviors**, the independent variables, with the help of seven single items that were adapted from Bieber (2009), Cianni and Romberger (1995), Greenhaus et al. (1990), Holzbecher et al. (2002). The items gathered insights on the leadership quality of the immediate supervisor ("How do you rate your immediate supervisor's leadership quality"), the supervisor being a source of information (2 items, e.g., "How well informed do you feel by your immediate supervisor about work-related issues"), and being a barrier to employees' career advancement (4 items, e.g., "Preference of the other sex by supervisors" or "Missing role models/mentors/male or female leaders"). All items were

measured on a five-point Likert scale ranging from 1 (e.g., *strongly disagree*) to 5 (e.g., *strongly agree*).

According with previous studies on employees' careers, the present findings were controlled for employee **gender** as women and men are supposed to evaluate career-related factors (i.e., career barriers, support factors) differently (e.g., Watts, Frame, Moffett, van Hein, & Hein, 2015; Swanson & Woitke, 1997). Further control variables were **age** and **importance** attached to career advancement (single item: "How important would the promotion or upgrade be to you?") as previous research suggests that employees' motivation and attitudes towards work and career weaken with increasing age (e.g., Kooij, De Lange, Jansen, & Dikkers, 2008). Moreover, the study findings were controlled for **career motivation** using the inventory developed by Abele et al. (1994), since prior research on career barriers suggest that the individual's career-related motivation is a basic driver for considering and consequently pursuing career goals (e.g., Day & Allen, 2004; London, 1993). The inventory by Abele et al. (1994) measures in particular the three types of intrinsic and extrinsic career motivation and extraprofessional concerns. The survey participants indicated their intrinsic motivation (e.g., "I like to work with other people professionally"), extrinsic motivation (e.g., "I would feel bad, if I do not reach my career goals"), and extraprofessional concerns (e.g., "I do not like to work with time pressure") using eight items each. Cronbach alphas in the present study were for intrinsic motivation .83, extrinsic motivation .74, and extraprofessional concerns .74.

As the present study aims to explore the impact of superiors' leadership behavior on employees' careers, we included the following open-ended question to the questionnaire in order to allow the survey participants to write about their perceptions freely: "What do you appreciate or miss in particular at the leadership style of your male/female immediate supervisor?"

3.3 Results of the exploratory study

For the analysis of the quantitative as well as qualitative data on the influence of leadership behavior on employees' careers, different methods were applied. For the quantitative analysis, a multiple regression analysis was conducted to understand the association between the employee's career advancement prospects and several leadership behaviors. As the data of the dependent and independent variables did not meet the criteria of normal distribution,

they have been transformed with the help of square transformation, square root transformation, and inverse transformation.

Moreover, in order to get a deeper understanding of the respondents' rating on their supervisor's leadership behavior in relation to their perceived advancement prospects and to explore differences among them, group wise comparisons were conducted using one-way analysis of variance (ANOVA). Therefore, for each of the independent variables, three groups were formed with consolidating scores 1-low and 2-medium low to group 1 "low scores" as well as consolidating scores 4-medium high and 5-high to group 3 "high scores" and keeping score 3-neutral as group 2.

Data resulting from the open-ended question were analyzed using the method of content analysis as it is recommended in the literature (Krippendorff, 2013; Mayring, 2010). The author and two research assistants, after giving them basic instructions, coded the comments provided by 55 respondents (56%) independently. Here, each comment (one unit of analysis) from each of the survey participants may have comprised more than one unit of meaning. Therefore, one unit of meaning is represented by one statement in the form of a sentence, a group of words, or a single word regarding the superior's leadership behavior as expressed by each respondent.

All three coders coded open-ended survey responses in two separate ways. On the one hand, each (overall) comment was coded on its general tone into the categories 'positive', 'mixed' (i.e., comments that include both positive and negative statements), 'negative', and 'neutral' as survey participants were asked to provide detailed information about what they appreciate or alternatively miss in the leadership style of their immediate supervisor. This categorization helped to examine the general attitudes of the employees towards the executives' behaviors in relation to their perceived effectiveness for supporting the individual to progress in the German ministry. Examples of positive comments are "I appreciate his honesty and support for his employees" or "I appreciate the team-oriented leadership style". Examples of negative comments, on the other hand, are "lack of communication, rather topic-related interest than interest in the employees' tasks, lack of information, lack of work meetings". Comments with a mixed tone include statements like "positive: freedom to make own decisions; negative: sometimes there is no exchange of information". Neutral comments were provided, for instance, in the form of "No comment!" or "I cannot make a statement since I currently have no immediate supervisor". To check for coding consistency among the two research assistants without the author as well as among all three coders, Cohen's

kappa $\kappa = .92$ (for the two research assistants) (Cohen, 1960) as well as Krippendorff's alpha $\alpha = .93$ (for all three coders) (Krippendorff, 2013) were calculated. Both intercoder-reliability measures indicated satisfactory levels (Krippendorff, 2013; Landis & Koch, 1977).

Moreover, the statement contents regarding specific desired leadership behaviors by each of the 55 survey comments were coded into mutually exclusive and exhaustive categories. For the development of the categories an inductive procedure, in which categories are immediately derived from the text, was applied in order to grasp all relevant information. After following the recommendations on summarizing the contents of the open comments through a step-wise process of reducing, bundling, and integrating the provided statements (Mayring, 2010), the final category system comprising ten categories on influential leadership behaviors was derived. Appendix 4 shows the final category scheme with detailed descriptions and corresponding examples of statements, which also served as the manual for all coders to run the final main coding. Within the final coding run, each statement (i.e., unit of meaning) was coded according to the appropriate category. Again, the coding schemes were checked for consistency among the research assistants and the author. Next Cohen's kappa $\kappa = .82$ that indicated a relatively high coding consistency among the two research assistants, also Krippendorff's alpha $\alpha = .86$ showed an acceptable intercoder-reliability among all three coders (Krippendorff, 2013; Landis & Koch, 1977).

Finally, the results of the coded open-ended survey comments were quantified with the help of frequency distributions and cross-tabulations. Moreover, they were controlled for gender differences. For this purpose, Mann-Whitney U and chi-squared tests were performed in order to compare evaluations by female and male respondents.

3.3.1 Results of the quantitative data analysis

In order to address the first research question that is concerned with the ways with which superiors in the German ministry affect their subordinates' careers, the information provided on the survey items were analyzed using multiple regression analysis and group wise comparisons. Table 3.2 presents the descriptive statistics including the means, standard deviations, and correlations of the variables studied.

Table 3.2: Means, standard deviations, and correlations of study variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	.53	.50													
2. Age group: older than 46 years	.65	.48	.00												
3. Career advancement important to employee	3.86	1.08	-.01	-.30											
4. Intrinsic career motivation	4.14	.46	.08	-.12	.29										
5. Extrinsic career motivation	3.02	.65	-.09	-.26	.34	.35									
6. Other interests in life	3.04	.64	.11	-.04	-.16	-.42	-.15								
7. Leadership quality	3.28	1.30	-.28	-.07	-.03	-.11	.00	-.01							
8. Supervisor informs employees	3.33	1.24	-.18	-.08	.13	.04	-.03	-.07	.81						
9. Staff appraisal with supervisor	2.51	1.37	-.02	-.11	.26	.25	.28	-.08	.28	.36					
10. Support by supervisor and colleagues [rev.]	3.31	1.44	.14	.13	-.31	-.14	-.26	.09	.31	.20	.12				
11. No favoritism of the other sex by supervisor [rev.]	3.56	1.50	.03	-.03	-.18	-.10	-.10	.15	.23	.21	-.08	.50			
12. Supervisor or colleagues are not prejudiced against men/women [rev.]	4.00	1.37	-.17	-.00	-.10	-.20	-.05	.18	.14	.03	-.12	.18	.70		
13. Present role models/mentors/male or female leaders [rev.]	3.62	1.47	-.15	-.03	-.25	-.25	-.36	.11	.07	.03	-.09	.36	.31	.31	
14. Career advancement prospects	2.34	1.31	-.12	-.47	.46	.11	.24	-.12	.16	.14	.29	-.20	-.18	-.05	-.10

Note. N's are ranging from 91 to 98; All correlations above |.20| are significant at $p < .05$ (two-tailed); [rev.] items were reverse coded.

To explore the association between specific leadership behaviors, including providing support in general, providing career-related information, and role modeling, and employees' careers, the variables were regressed on the employees' career advancement prospects controlling for the effects of gender, age, career motivation variables, and general importance attached to career progression. Table 3.3 presents the estimated regression models. Except for the two the significant control variables of age group and importance of career, regression results revealed only for staff appraisal ($\beta = .24$, $p = .03$) and no favoritism ($\beta = -.31$, $p = .05$) significant positive and negative effects on career advancement prospects.

Table 3.3: Regression results with career advancement prospects as dependent variable

Variables	Model 1	Model 2
Control variables		
Gender	-.05	.06
Age group: older than 46 years	-.38***	-.38***
Career advancement important to employee	.33**	.25*
Intrinsic career motivation	-.06	-.05
Extrinsic career motivation	.02	-.06
Other interests in life	-.09	-.11
Independent variables		
Leadership quality		.07
Supervisor informs employees		-.00
Staff appraisal with supervisor		.24*
Support by supervisor and colleagues rev.		-.09
No favoritism of the other sex by supervisor rev.		-.31*
Supervisor or colleagues are not prejudiced against men/women rev.		.25
Present role models/mentors/male or female leaders rev.		.05
F-value	6.96***	4.71***
R^2	.33	.45
Adjusted R^2	.28	.35
N	93	89

Note. Standardized coefficients are shown; *$p < .05$, **$p < .01$, ***$p < .001$; [rev.] items were reverse coded.

For the group wise comparisons of employees' rating on the leadership behaviors measured (i.e., three groups: low scores, neutral, and high scores) using one-way ANOVA, results indicated significant differences for five out of seven variables. As summarized in Table 3.4, significant differences among groups are prevalent for the two variables on supervisors being a source of information, i.e., supervisor informs employees ($F(2, 94) = 3.61^*$, $p = .03$), staff appraisal with employees ($F(2, 95) = 5.14^{**}$, $p = .01$). Moreover, we find further significant differences for three out of the four variables on supervisors being no barrier to the employee's career advancement, i.e., support by supervisor or colleagues ($F(2, 95) = 4.88^{**}$, $p = .01$), no favoritism of the other sex by supervisor ($F(2, 95) = 6.67^{**}$, $p = .00$), and present role models/mentors/male or female leaders ($F(2, 91) = 3.89^*$, $p = .02$).

Table 3.4: Results of one-way ANOVA on career advancement prospects and leadership behaviors

Measure of leadership behavior related to career advancement prospects	N	Mean	Mean difference	p	F (df), p
Leadership quality					$F(2, 95) = 0.70, p = .50$
High (vs. neutral)	48	7.96	1.05	1.00	
Neutral (vs. low)	22	6.91	.94	1.00	
Low (vs. high)	28	5.96	- 1.99	.74	
Supervisor informs employees					$F(2, 94) = 3.61^*, p = .03$
High (vs. neutral)	50	7.54	- 2.46	.56	
Neutral (vs. low)	20	10.00	5.44*	.03	
Low (vs. high)	27	4.56	- 2.98	.23	
Staff appraisal with supervisor					$F(2, 95) = 5.14^{**}, p = .01$
High (vs. neutral)	34	9.74	.90	1.00	
Neutral (vs. low)	12	8.83	3.76	.27	
Low (vs. high)	52	5.08	- 4.66**	.01	
Support by supervisor and colleagues rev.					$F(2, 95) = 4.88^{**}, p = .01$
High (vs. neutral)	43	5.47	- 5.49**	.01	
Neutral (vs. low)	23	10.96	4.27	.08	
Low (vs. high)	32	6.69	1.22	1.00	
No favoritism of the other sex by supervisor rev.					$F(2, 95) = 6.67^{**}, p = .00$
High (vs. neutral)	52	5.35	- 6.89**	.00	
Neutral (vs. low)	17	12.24	4.82	.07	
Low (vs. high)	29	7.41	2.07	.57	
Supervisor or colleagues are not prejudiced against men/women rev.					$F(2, 94) = 0.02, p = .98$
High (vs. neutral)	66	7.20	- .40	1.00	
Neutral (vs. low)	10	7.60	.50	1.00	
Low (vs. high)	21	7.10	- .10	1.00	
Present role models/mentors/male or female leaders rev.					$F(2, 91) = 3.89^*, p = .02$
High (vs. neutral)	51	6.37	- 5.27*	.03	
Neutral (vs. low)	17	11.65	5.19	.06	
Low (vs. high)	26	6.46	.09	1.00	

Note. rev. items were reverse coded; $*p < .05$, $**p < .01$.

The t-test analysis conducted to control for gender differences for all dependent and independent variables revealed that especially leadership quality of the immediate supervisor was perceived significantly differently ($t = -2.74$, $p < .01$) by women (mean = 1.67, SD = .39) in comparison to men (mean = 1.88, SD = .37). Whereas male employees rated the leadership behavior of their immediate supervisor to be of rather good quality, their female counter parts rated the leadership behavior to be of poorer quality. For the other variables, results did not provide further evidence for differences between women and men.

Next to the analysis of survey variables, the quantitative study of the statements on an open-ended question discovered important findings on the nature of the prevailing supervisor-employee-relationships in the state administration. The analysis of the tone (i.e., positive, mixed, negative, and neutral) of the open comments ($n = 55$) showed that 45% ($n = 25$) of

them were positive while 29% ($n = 16$) had a negative tone, 20% ($n = 11$) entailed both positive as well as negative statements, and 6% ($n = 3$) were of a neutral character. As shown in Table 3.5, comparisons of the tone of comments, after excluding neutral comments due to their small number, by gender using chi-squared tests indicated that there were no gender differences for mixed and negative comments but for positive comments ($\chi^2 = 6.36$, $df = 1$, $p = .012$). Whereas male employees in the German ministry seemed to be more positive about their immediate supervisor's leadership behavior related to their career progress, their female counter parts appeared to be more critical.

Table 3.5: Tone of comments by gender

Tone of comments	Women		Men		Total	
	n	*%*	*n*	*%*	*n*	*%*
Positive	9	33	16	64	25	48
Mixed	8	30	3	12	11	21
Negative	10	37	6	24	16	31
Total	27	100	25	100	52	100

Note. n indicates observed counts; Percentages (%) are column percentages. Chi-squared comparisons by gender: comments tone overall: $\chi^2 = 5.16$, $df = 2$, $p = .076$; positive comments: $\chi^2 = 6.36^*$, $df = 1$, $p = .012$; mixed comments: $\chi^2 = 1.83$, $df = 1$, $p = .176$; negative comments: $\chi^2 = .58$, $df = 1$, $p = .448$. $^*p > .05$.

Overall, the higher number of positive comments in comparison to negative comments provided by the employees in the state administration was quite surprising as previous studies on the commenting behavior of respondents in employee surveys highlighted the rather negative tone prevailing for write-in comments (e.g., Borg & Zuell, 2012; Poncheri, Lindberg, Thompson, & Surface, 2008).

3.3.2 Results of the qualitative data analysis

With the help of a qualitative data analysis of the open responses, ten behavioral styles of the immediate supervisor were identified that seemed to be of high importance to the employees in the German state administration. The ten behavioral styles included 'demonstrates abilities and competences of a good leader', 'shows interest', 'fosters open, honest discussion culture', 'straightforward cooperation with the supervisor', 'communicates with employees', 'informs employees', 'sponsors and challenges employees', 'protective and emotional support for employees', '(reasoned) delegation', and 'being given freedom'. Table 3.6 lists the observed counts of the effective leadership behaviors identified together with the column percentages. The comparison of the statement contents across and for each of the ten categories by gender using chi-squared tests revealed no significant differences.

Table 3.6: Frequency-of-mention of effective leadership behaviors

Categories of leadership behaviors	Women		Men		Total	
	n	*%*	*n*	*%*	*n*	*%*
Demonstrates abilities and competences of a good leader	16	25	16	26	32	26
Protective and emotional support for employees	12	18	7	12	19	15
Straightforward cooperation with the supervisor	7	11	9	15	16	13
Fosters open, honest discussion culture	7	11	7	12	14	11
Informs employees	9	14	4	7	13	11
Being given freedom	3	5	6	10	9	7
Communicates with employees	3	5	4	7	7	6
Shows interest	3	5	3	5	6	5
Sponsors and challenges employees	2	3	2	3	4	3
(Reasoned) Delegation	2	3	2	3	4	3
Total	64	100	60	100	124	100

Note. n indicates observed counts; Percentages (%) are column percentages. Chi-squared comparisons by gender: categories overall after consolidating the categories of 'Demonstrates abilities and competences of a good leader' with 'Shows interest'; 'Fosters open, honest discussion culture', 'Straightforward cooperation with the supervisor', and 'Communicates with employees'; 'Informs employees' with 'Sponsors and challenges employees'; '(Reasoned) Delegation' with 'Being given freedom': $\chi^2 = 3.6$, *df* = 4, *p* = .46.
No significant differences for comparisons by gender.

As the second research question is concerned with the comparability between literature findings and actual study findings on the supervisor's behavior, the comparison showed a relatively high number of common features. Similar to previous literature findings, also the influential leadership behaviors mentioned by the survey respondents can be grouped into behaviors with a direct effect (through subordinate-superior-contact) and behaviors with an indirect effect (through the job or the tasks) on employees' careers (for review, see Rohde et al., 2012). Moreover, most of the categories derived from the open comments reflect the leadership behaviors discussed in leadership and mentoring research such as providing feedback, informing about or offering training and developmental activities, or acting as a role model. In contrast to previously published findings, the comments on effective leadership behaviors in the German ministry provide a rather detailed or extended insight into some categories, which emphasizes the importance that was attached to these leadership behaviors by the survey respondents.

In particular, the category of *demonstrates abilities and competences of a good leader* highlights a range of required abilities and skills in dealing with employees and tasks by a

superior who serves as a role model. As one of the most frequently mentioned categories ($n = 32$), it covers abilities and competences such as ability to make decisions, ability to deal with conflicts or to demonstrate goal orientation as well as social and functional competences. For example, one employee stated:

"I appreciate my supervisor's functional competence, decision-making ability […] ability to deal with conflicts, […] ability to motivate […]."

(female, 46-55 years old, next higher position: personal advisor).

The second most commonly mentioned leadership behavior refers to the superior's *protective and emotional support for employees* ($n = 19$) which includes the supervisor's engagement in protecting subordinates, showing appreciation to them and their work, building on a trust-based and loyal relationship as well as being sympathetic to personal issues. Similar to findings in mentoring research (e.g., Allen et al., 2004; Higgins & Thomas, 2001), the analyzed data emphasizes the importance attached to social support in order to unfold and progress in the career as an employee states:

"[I appreciate …] trusted relationship, [I] become more motivated because of the superior's appreciation of the employees' work […]."

(female, 46-55 years old, next higher position: head of division).

Furthermore, the employees in the German ministry valued quite frequently when their immediate supervisor engages in *straightforward cooperation with the supervisor* ($n = 16$) or *fosters open, honest discussion culture* ($n = 14$). In addition, when the superior *informs employees* ($n = 13$) or *communicates with employees* ($n = 7$) were notably appreciated as another survey participant expresses it:

"[I do not appreciate it when] the communication is limited to a minimum, [when] there is no team spirit at the department, [when] work-related information is filtered and only important information is passed on to subordinates […]."

(female, older than 55 years, next higher position: desk officer).

Another employee mentioned:

"I appreciate the openness of my supervisor to take feedback and suggestions for improvement into account as well as the good working environment […] with extensive mutual support as well as humor at meetings."

(male, 46-55 years old, next higher position: head of division).

Leadership behaviors, which have been mentioned less frequently, include *shows interest* (*n* = 6), *sponsors and challenges employees* (*n* = 4), *(reasoned) delegation* (*n* = 4), and *being given freedom* (*n* = 9). The latter two categories address the relevance of challenging assignments or autonomy in dealing with assignments, which can be transferred to the subordinates by their superior, as it is highlighted in the mentoring and work design literatures (e.g., Humphrey et al., 2007; Tharenou, 2005) and stated by an employee:

> "[I do not appreciate …] unreasoned or random delegation of tasks, [that] it is not possible to work independently, [I appreciate the] possibility of flexible working hours […]."

(male, 46-55 years old, next higher position: head of division).

Categories, which have been addressed in the existing literature but not in the present study, are 'agreement on career-related objectives and career goals' as a leadership behavior that exerts direct influence or 'person-job-fit' which represents a behavior that exerts indirect influence on subordinates' careers.

3.4 Discussion

3.4.1 Implications for theory

In this study, we investigated several ways with which superiors can influence the employees' careers in the context of a German state administration. The findings of this study contribute to the career literature by enriching the understanding of the role of leaders in the career development of their subordinates. Moreover, by providing important insights on careers unfolding in the public sector, the thesis extends the prevailing research focus in the career literature to new, unexplored work settings - other than the private sector. Furthermore, the thesis contributes to the public administration literature by enriching the research on public sector leadership and by exploring public sector careers together with career-related needs, which have been only little addressed before.

Our findings of the quantitative and qualitative data analysis provide evidence that in particular the direct leadership behaviors of communicating and providing information and emotional support have a valuable effect on employees' career. Results of the regression analysis reveal a positive association for staff appraisals with the supervisor and a negative association for no favoritism of the other sex by the supervisor together with employees'

career advancement prospects. A possible explanation for this negative association could be that employees particularly expected some form of favoritism by the supervisor as favoritism might be related to specific exclusive communication and information flows. Research on career barriers has highlighted the role of micro-political processes and informal support systems in supporting most likely the career progress of male employees (e.g., Schneider, 2007; Tharenou, 1997). Moreover, with the help of the regression analysis we discovered the significant, negative association between the age group of individuals being older than 46, which represents the dominant age group in the German public administration, and career advancement prospects. With this result, we emphasize, similar to previous findings (Keller, 2013; Kooij et al., 2008), that career prospects are weakened with increasing age. In addition, the result suggests important avenues for future research. As this particular age group of employees will continue to work in the public sector for at least 10 more years, further investigations would be necessary to understand how the immediate supervisor and the human resource department can motivate those employees to engage in their work and careers. Although some studies have examined how demographic change affects fiscal or recruitment strategies of the public sector (e.g., Wolf & Amirkhanyan, 2010; Keller, 2013), only few have addressed the challenge of motivating the aging workforce.

The findings of the group comparisons of employees' ratings on perceived leadership behaviors discovered that the most significant differences were between employees who were neutral on leadership behaviors in relation to their career advancement prospects and those who were positive. Only for the variable of staff appraisal, the mean difference was significant among the groups of employees with high scores and low scores. We explain those findings that also group comparisons, similar to the multiple regression analysis, highlight that staff appraisal is an important predictor for stronger career advancement prospects. For the other leadership behaviors, employees seem to perceive no effect of those behaviors as if they were not existent.

With the help of the qualitative analysis of the open survey comments, we investigated how superiors in a German ministry may exert direct and indirect influence on their employees' careers in greater detail. As a first step, the open survey responses were examined based on their tone. The study of the comment tone improved our understanding of the generally prevailing employees' attitudes toward their superiors and thus, of differences between the attitudes of women and men working in the ministry. The analysis revealed that, while re-

spondents were in general more positive about their supervisors' behaviors, women responded significantly less positively than their male counter parts. Consequently, our findings support previous research showing that women perceive factors influencing their careers differently than men (e.g., Watts et al., 2015; Swanson & Woitke, 1997). Furthermore, the present study results suggest that superiors in the German state administration might think about to strengthen their relationship with their female subordinates.

The detailed examination of the open comments, as the second step, through an inductive approach discovered a range of leadership behaviors perceived to be of relevance by the employees in the German public administration. In comparison to the existing literature on supervisors' behaviors with direct and indirect effects on employees' careers (Rohde et al., 2012), our findings indeed confirm most of the previously identified behaviors such as 'career-related training and developmental activities' (Tharenou, 2001) and 'trust and positive expectations' (Hakimi et al., 2010). Moreover, the present results extend previous findings by providing detailed insights into specific behaviors. Based on the data analysis, we found that it has been in particular valued when immediate supervisors demonstrate a certain range of task- and people-related abilities and competences and, thus acted as a role model on a functional as well as social basis. Moreover, in support of transformational leadership, leader-member-exchange theories, and mentoring research, the present findings indicate that direct supervisors are frequently asked to provide protective and emotional support and to engage in cooperation, open discussion, information provision, and communication. Consequently, by referring to leaders' behaviors with direct effects on employees' careers, our study results demonstrate that greater emphasis is put on supervisors' role modeling and protective and emotional support as well as verbal and personal interaction at the workplace than on sponsoring or showing interest in employees and their work. To sum up, we propose:

Proposition 1. Determinants of leader-member exchange theory (P1a), transformational leadership theory (P1b), and mentoring research (P1c) in the form of role modeling, social support, trust and positive expectations, feedback, career promotion, and career-related training and developmental activities have a direct impact on the career advancement of employees in the public administration.

When discussing leadership behaviors with indirect effects on employees' careers, our findings provide only few insights. A few survey respondents mentioned that they desire freedom or autonomy to work independently and flexibly. Moreover, the reasonable delegation of (challenging) tasks has been found to be of relevance. Therefore, in support of work

design theory (Humphrey et al., 2007) and mentoring research (De Pater et al., 2009; Scandura & Pellegrini, 2007), the present results suggest that employees' freedom in working on (delegated challenging) assignments can have a positive effect on employees' career progress and can improve performance. Consequently, the following is proposed:

Proposition 2. Determinants of work design theory (P2a) and mentoring research (P2b) in the form of scope of action and decision making and delegation have an indirect impact on the career advancement of employees in the public administration.

3.4.2 Implications for practice

Overall, the data analysis showed a number of findings that are relevant for practitioners. Our study results highlight not only a range of ten behavioral styles with which immediate supervisors can influence their subordinates' careers in the German public administration but also stress the relevance of specific behaviors (e.g., role modeling, support) for further consideration by supervisors and human resource managers. Consequently, both supervisors and human resource managers could engage in training the beneficial leadership behaviors. In the light of the present German public sector reform (e.g., Bogumil & Jann, 2009; Derlien, 2008), there are a number of leadership behaviors which might be very beneficial for enhancing the modernization process. Especially supervisors who are engaging in straightforward cooperation and fostering an open and honest discussion culture could be helpful in enabling public sector employees to participate in decision making as well as strategy formulation and implementation. Consequently, with the help of these leadership behaviors employees would assist their superiors in being change agents (Hammerschmid & Geissler, 2010) for the public sector reform.

3.4.3 Limitations and directions for future research

Although our study offers a number of practical and theoretical contributions, these have to be understood in the context of the present study's limitations.

First, as the present study is based on a rather small sample from a single source (i.e., a German state administration), the generalizability of our findings to other administrations in the German public sector (or that of other nations) may be questionable. Future research

should examine potential ways of the immediate supervisor to drive their subordinates' career advancement in a broader - national and international - setting.

Second, given the cross-sectional nature of the present study, future research would need to study the factual effectiveness of all those leadership behaviors suggested by the survey respondents on career advancement and other career outcomes, such as career success, within longitudinal studies. As career development in the public administration is greatly determined and restricted by formal regulations, direct supervisors might have only limited opportunities to actually contribute to (objective) career success in the form of promotion or salary increase but rather to subjective career success, measured by career and job satisfaction and self-fulfillment (Ng et al., 2005).

Third, the present study measures the dependent (i.e., career advancement prospects) and independent variables (i.e., seven leadership behaviors), based on previous research (e.g., Greenhaus et al., 1990, Cianni & Romberger, 1995), with the help of single-item questions, which is rather typical for studies with an exploratory nature and relatively small sample sizes (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012). However, future studies should consider another approach by developing and applying multi-item measures due to their higher predictive validity (Sarstedt, Diamantopoulos, Salzberger, & Baumgartner, 2016). Based on the findings of the content analysis of the open-ended survey comments in addition to previous findings in literature (Rohde et al., 2012), we would encourage future research to improve the study design and derive appropriate measures to examine influential leadership behaviors. Furthermore, we suggest that future research tests the derived proposition with the help of a quantitative empirical study. Despite these limitations, the results of the present study provide some initial insights into influential behaviors of the immediate supervisor on employees' careers, which represents an understudied topic in career and public administration research, and encourage further research on superior-subordinate relationships.

4 New career orientations and the organizational learning process: A conceptual framework

The change of career concepts during the past six decades has received growing attention in the career literature (e.g., Baruch, 2006; Gubler, Arnold, & Coombs, 2014; Sullivan & Baruch, 2009). In contrast to recent views on careers, traditional career concepts, like that of Super (1957, 1980), emphasize the importance of lifelong employer-employee-relationships where companies mainly account for managing their employees' career advancements along organizational hierarchical structures (e.g., Baruch, 2004; Greenhaus et al., 2010; Sullivan & Baruch, 2009). More recent concepts, such as the boundaryless career concept (Arthur, 1994; Arthur & Rousseau, 1996) and the protean career concept (Hall, 1976, 1996, 2002) state that careers do no longer follow a linear path up the organizational hierarchy, but take several directions within and across companies. Due to changes in the socio-economic environment, such as internationalization of companies, technological progress, uncertainty and competition in the labor market, and new types of employment relationships, company environments and structures have become more dynamic and unpredictable than before and so have career paths (Baruch, 2006; Daft, 2013; Greenhaus et al., 2010; Sullivan & Baruch, 2009).

Moreover, recent career concepts stress that not only employers benefit from employees' careers, as the employees contribute to gaining and sustaining competitive advantages while working for the organization, but also individuals can make use of organizational resources (Baruch, 2004; Greenhaus et al., 2010; Inkson, 2008; Inkson & King, 2010). The employees can, for example gain from trainings, networks, and supervisor support to reach personal goals. Consequently, effective career management seems to be important to both individuals and organizations. However, to run effective human resource management, employers need to understand their employees' career needs and need to provide support to individuals managing their careers (e.g., Clarke, 2013; De Vos, Dewettinck, & Buyens, 2009; Sturges et al., 2010). In addition, organizations need to learn about this change in career concepts and individuals' career orientations to keep their best employees within the company and to attract potential candidates for future employment (Baruch, 2014; De Vos & Meganck, 2009). Conversely, individuals can make use of career-related management and training practices implemented by their employers, which will allow them to continue to learn about their job and further career opportunities.

Both practitioners and researchers are increasingly interested in improving the understanding of consequences of careers. So far, most research on career effects has been conducted at the individual level by studying career success (e.g., Ng et al., 2005; Ng & Feldman, 2014; Seibert et al., 2001) or career self-management behavior (e.g., Hermann, Hirschi, & Baruch, 2015; Sturges et al., 2010). However, studies on the consequences of careers at the organizational level remained scarce, although there have been calls in the career literature for analyzing the role of careers in the organizational context (De Vos & Cambré, 2017; Lee et al., 2014; Rodrigues et al., 2015). Only recently, studies have begun to examine the relationships between protean and boundaryless careers and organizational career management and organizational commitment (e.g., Briscoe & Finkelstein, 2009; De Vos & Cambré, 2017; Rodrigues et al., 2015) and state that although individuals show greater responsibility for managing their careers organizations are still required to support their employees.

To address these calls in the literature, this study proposes a conceptual framework to explain the effects of the change from traditional to new career orientations on organizations, in particular on organizational learning processes. As organizational learning directly feeds in the development of organizational procedures, structures, and systems, the study of the association between new career forms and organizational learning seems to be timely and worthwhile. By building on traditional and modern career concepts and on the organizational learning framework by Crossan et al. (1999) in connection with the detailed illustration by Vera and Crossan (2004), a conceptual framework and research propositions are developed to address this study aim. This study especially refers to the framework by Crossan et al. (1999) as it allows to study learning on multiple organizational levels (i.e., individual, group, organization) and to consider learning processes which connect the various levels of learning. The dynamic nature of the learning processes makes it possible to analyze the effects of individuals' career perceptions on the shared understanding by their group members and the learning at the organizational level. In addition, feedback effects (from the organizational level to the individual level) can be studied. Although previous research has acknowledged the relationship between new career orientations and individual-level learning and even calls for further research on that matter (e.g., Lin, 2015; Pang et al., 2008), the linkages between individuals' career orientations and learning at group- and organizational levels remain still unexplored.

This study contributes to the career literature in three ways. First, it deepens the understanding of the relationship between the change in individuals' career-related attitudes and

orientations and learning drive (Lin, 2015). Second, with the framework developed we respond to calls for research on organizational-level career outcomes (e.g., Lee et al., 2014). By building on the organizational learning framework (Crossan et al., 1999; Vera & Crossan, 2004), the present study is able to draw on the comprehensive conceptualization of the organizational learning processes and explain the consequences of careers on multiple learning levels including individual, group, and organizational levels. In addition, it enriches the understanding of the (moderating) roles of environmental dynamism and organizational structure in the ways in which careers and learning processes are unfolding (Jansen, Vera, & Crossan, 2009; Mayrhofer et al., 2007). Third, the study contributes to the organizational learning and career literatures by emphasizing the connection between career orientation and organizational learning which provides grounds for theory building.

4.1 Theoretical background

4.1.1 From traditional to new career orientations

Next to the change in career concepts, definitions of the term career have altered accordingly. Within traditional concepts, which have dominated the career literature from the 1950s until the mid 1980s (Arthur & Rousseau, 1996; Sullivan, 1999), careers are predominantly defined as a "professional advancement within one or two firms" (Sullivan, 1999: 458) or a "succession of related jobs, arranged in a hierarchy of prestige, through which persons move in an ordered (more-or-less) predictable sequence" (Wilensky, 1961: 523). Both of these definitions express the central ideas of career advancement, organizational responsibility, and objective career success measures. However, when researchers started to realize the changing nature of work contexts and careers, new definitions have been developed. Subsequent career studies emphasize a broader understanding of career, in which careers are rather related to work history in general than to advancement or profession (Hall, 2002; Greenhaus et al., 2010; Sullivan & Baruch, 2009). One of the most prominent definitions that evolved within new career concepts is the one by Arthur, Hall, and Lawrence (1989), who define career "as the evolving sequence of a person's work experiences over time" (Arthur et al., 1989: 8). Furthermore, Hall (2002) defines career as "the individually perceived sequence of attitudes and behaviors associated with work-related experiences and activities over the span of the person's life" (Hall, 2002: 12). In contrast to the traditional understanding of career, all of

these new definitions acknowledge objective as well as subjective career facets. Consequently, these definitions highlight observable work-related choices and physical movements in multiple directions, such as the decision to accept or decline a job offer and movements between job positions or employers. At the same time, they also emphasize the individual's interpretation (his or her orientation, values, experiences, and feelings) of these work-related developments. However, the most apparent difference between recent and traditional perspectives on careers can be found in the importance of the key role which is attached to the individual. Not only individuals' perceptions and feelings about their careers and career opportunities but also their responsibility for their own careers are central to the new understanding. The term career orientation, therefore, depicts the individuals' attitudes towards their careers, their perception of career success and the thereof resulting career-related decisions (Gubler et al., 2014; Gerber, Wittekind, Grote, Conway, & Guest, 2009).

Two notions, which seem to dominate today's career research, are those of boundaryless and protean careers (Sullivan & Baruch, 2009). The notion of a "boundaryless career" has been introduced by Arthur (1994) and Arthur and Rousseau (1996) who aimed at providing a clear distinction between traditional and new career forms. DeFillippi and Arthur (1996) define a boundaryless career as "career paths [that] may involve sequences of job opportunities that go beyond the boundaries of single employment setting" (DeFillippi & Arthur, 1996: 116). The authors, however, claim that a boundaryless career does not refer to a single career form, but rather to a range of career forms which are different to traditional careers. Arthur (1994) and Arthur and Rousseau (1996) present six different meanings of a boundaryless career, including careers (1) like the stereotypical Silicon Valley career (i.e., proceeds across boundaries of several employing companies), (2) like those of academics or carpenters (i.e., receives validation and marketability from external environment), (3) like those of real-estate agents (i.e., is supported by external networks or information), (4) that break traditional work arrangements including bounded career advancement along the hierarchy, (5) that address individuals refusing present career opportunities for personal or family reasons, (6) that result from the interpretation of the individual of a boundaryless work future regardless of structural constraints (Arthur, 1994; Arthur & Rousseau, 1996; Sullivan & Arthur, 2006). One key aspect, which is addressed by all of these different meanings, is the fact that individuals are not bound by traditional organizational boundaries and may arrange their careers as they perceive to be the best way. Sullivan and Arthur (2006) highlight that individuals will cross these boundaries with the help of physical and psychological movements.

Another notion, which has been introduced within modern career concepts, is the one of a "protean career" (Hall, 1976, 1996, 2002). Inspired by the Greek god Proteus, who could alter his appearance at will, Hall (1996) defines the protean career as a career "that is driven by the person, not the organization, and that will be reinvented by the person from time to time, as the person and the environment change" (Hall, 1996: 8). With work contexts becoming less stable and predictable and individuals striving for psychological success, individuals have taken responsibility for managing their own careers (Hall, 1976, 1996, 2002; Sullivan & Baruch, 2009). Based on recent research on protean careers, Briscoe and Hall (2006) have revised the initial definition and state that protean career is a career "in which the person is (1) values driven in the sense that the person's internal values provide the guidance and measure of success for the individual's career; and (2) self-directed in personal career management - having the ability to be adaptive in terms of performance and learning demands" (Briscoe & Hall, 2006: 8). Furthermore, Briscoe and Hall (2006) argue that, depending on the two main dimensions of protean careers (i.e., values-driven and self-directed attitudes), an individual's degree of a protean career orientation can be examined. Although both the boundaryless and the protean career concepts differ in their focal points (Gubler et al., 2014; Briscoe & Hall, 2006) - the boundaryless career concept focuses on various ways of individual's mobility, the protean career concept studies the person's values related to his or her own career - they were shown to have similarities. Both concepts emphasize the importance of subjective facets of the individual's career and promote the power of individuals to manage and shape their own careers. Based on these essential similarities, both contemporary career concepts should be addressed by using the term of new career orientations.

Other than the career definitions, there are further criteria introduced in the career literature, in which traditional and new careers differ. Table 4.1 summarizes and compares the main attributes of traditional (hierarchical) versus new (protean and boundaryless) careers. As highlighted in Table 4.1, recent careers seem to unfold very differently in comparison to traditional careers. Whereas traditional careers stress the advancement of employees according to tenure along the hierarchy of typically one or two companies, new career forms emphasize the importance of freedom and growth of each individual according to knowledge and work performance in multiple directions and within multiple companies (Baruch, 2004; Hall, 2004). Moreover, the progress of traditional careers is measured by chronological age and life stages (Hall, 1996; Sullivan, 1999). New careers, however, are measured by continuous learning and learning stages (Hall & Mirvis, 1995). Consequently, employees perceive

traditional careers to be successful when they get promotions, higher salaries, and reach higher position levels (objective career success measures). Recent careers are considered successful when individuals feel inner achievement, satisfaction, and work-life-balance (Baruch, 2004; Hall, 1976; Sullivan, 1999). Thus, recent career concepts show a shift from objective career success indicators (e.g., promotions and compensation) to subjective career success indicators (e.g., inner achievement and career satisfaction) (e.g., Ng et al., 2005; Ng & Feldman, 2014).

Table 4.1: Changes in career concepts and career orientations

Criteria	Traditional careers	New careers
Core values	Advancement	Freedom, growth
Career direction	Linear	Multidirectional
Degree of mobility	Lower	High
Employment relationship	Job security for loyalty	Employability for performance and flexibility
Environment characteristic	Stability	Dynamism
Boundaries, career horizon (workplace, *time*)	One or two firms, *long time*	Multiple firms, *short time*
Training	Formal programs	On-the-job
Success criteria	Position level (status), salary, promotion	Psychological success
Career management by	Organization	Person
Skills	Firm specific	Transferable
Key attitudes	Organizational commitment	Work satisfaction, professional commitment
Milestones	Age-related, advance according to tenure	Learning-related, advance according to results and knowledge

Note. Based on Baruch (2004: 66), Hall (1976: 202, 2004: 4), and Sullivan (1999: 458).

The psychological contract, which refers to the mutually obligations perceived by employees and employers (Robinson, 1996; Rousseau, 1989), has altered evidently. Traditionally, companies provided their employees with long-term employments associated with job security and, in return, received employee loyalty and strong organizational commitment. In contrast, under recent psychological employment contracts, which typically address multiple short-term relationships with several employers, workers exchange performance for continuous learning and investments in their employability (Hall, 1996; Sullivan, 1999). Furthermore, individuals put greater emphasis on their work satisfaction and professional commitment under new psychological contracts (Sullivan, 1999). In order to gain employability, employees seek on-the-job trainings. Through learning about job skills, requirements, and tasks, employees derive specific competencies which might be required on the labor market. Consequently, responsibility for career management has shifted from the organization to the individual. As illustrated in Table 4.1, another difference between traditional and new career

orientations can be found in the importance of lifelong learning which represent the driving force of individuals' career unfolding throughout their working lives (Hall, 2002).

In order to make predictions about how new career orientations, such as protean or boundaryless career orientations, influence the organizational learning process, it is necessary to understand the different learning levels (i.e., individual, group, organization). The following section will point out the framework for studying the organizational learning process.

4.1.2 The organizational learning process

Similar to the changes in career concepts and career definitions, the framework and terminology of organizational learning have altered intensely during the past decades (e.g., Crossan et al., 1999; Easterby-Smith & Lyles, 2011; Vera & Crossan, 2004). Bontis, Crossan, and Hulland (2002) provide a comprehensive overview of different definitions of organizational learning by several researchers in that field. Corresponding with Fiol and Lyles (1985), who state that "organizational learning means the process of improving actions through better knowledge and understanding" (Fiol & Lyles, 1985: 803), further researchers emphasize the link between organizational learning and enhancing organizational performance (e.g., Edmondson, 2002; Kim, 1993). Stata (1989), on the other hand, highlights the importance of organizational learning as an essential part of innovativeness and gaining sustainable competitive advantage. He indicates, "I see organizational learning as the principal process by which management innovation occurs. In fact, I would argue that the rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries" (Stata, 1989: 64). Consequently, organizational learning needs to be considered as an element of a firm's strategy to gain and sustain competitive advantage. While stressing the strategic role of organizational learning for companies, this study further draws on the definition provided by Crossan et al. (1999) who see it as "a dynamic process. Not only does learning occur over time and across levels, but it also creates a tension between assimilating new learning (feed forward) and exploiting or using what has already been learned (feedback)" (Crossan et al., 1999: 532). In contrast to the previously mentioned definitions, the one by Crossan et al. (1999) stresses that organizational learning takes place continuously at different organizational levels and involves a mutual relationship between the comprehension of new learning and making use of what has been learned.

With their framework, Crossan et al. (1999) developed an approach to a comprehensive and cumulative conceptualization of the organizational learning process. Their conceptualization builds on four key premises which also represent its main strengths. First, organizational learning is associated with a tension between feed-forward learning (exploration) and feedback learning (exploitation). Second, organizational learning occurs at multiple levels, i.e., individual, group, and organizational levels. Third, these three learning levels are connected by four social and psychological processes, i.e., intuiting, interpreting, integrating, and institutionalization (4Is). Finally, cognition and action interact. Figure 4.1 presents the organizational learning process based on the examples of Crossan et al. (1999) and Vera and Crossan (2004).

Figure 4.1: Framework of organizational learning process
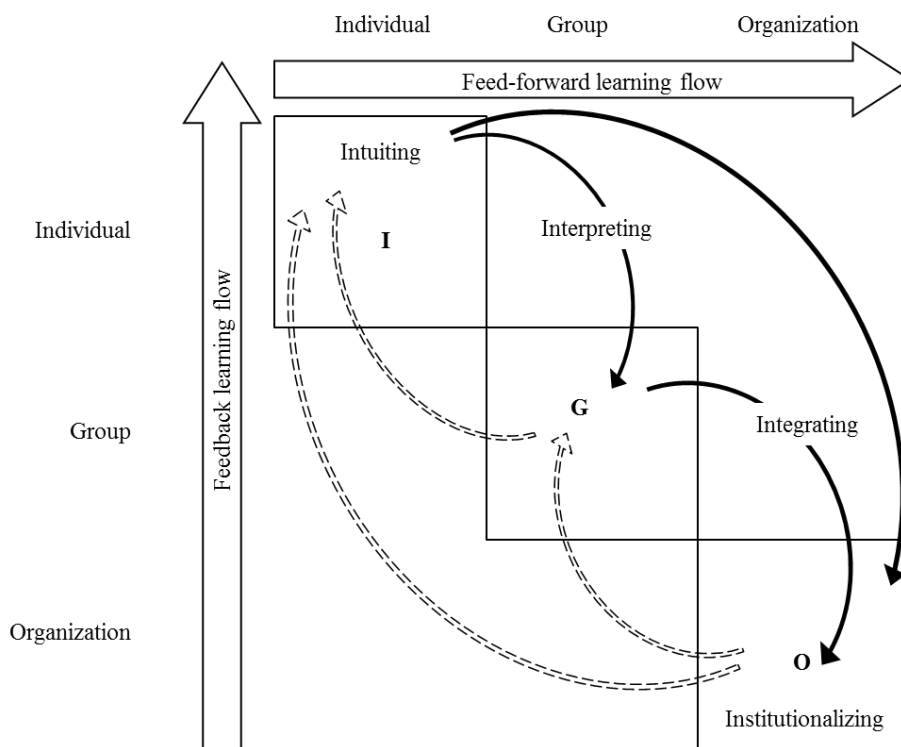
Note. Adapted from Crossan et al. (1999: 532) and Vera and Crossan (2004: 225).

As illustrated in Figure 4.1, the four sub-processes – intuiting, interpreting, integrating, and institutionalization – emerge at individual, group, and organizational levels and link them. In particular, intuiting and interpreting occur at the individual level, interpreting and integrating emerge at the group level, and integrating and institutionalization arise at the organizational level (Crossan et al., 1999). Through intuiting, which is a subconscious individual process, individuals recognize patterns and develop new insights and ideas (Bontis et al., 2002; Crossan et al., 1999). Based on gained experiences, individuals learn about specific

coherences and possibilities to react, which result in tacit knowledge and consequently drive action. However, individuals may find it difficult to express their insights and their intentional actions in words, but use imagery and metaphors to interpret their insights and to translate them to other people (Crossan et al., 1999). Interpreting builds upon conscious elements of the individual learning process. Language helps individuals not only to name and explain their new insights but also to contribute to a shared understanding at the group level (Crossan et al., 1999). Thus, interpreting is initiated at the individual level and proceeds to the group level through integrating people into dialogs and conversations. In contrast to the two previous processes, in which individuals' understanding and acting are central, the integrating process focuses on common and coherent performing within a group and eventually within the whole organization (Crossan et al., 1999). Through ongoing discussions among group members in connection with collective action, a shared understanding together with a harmonization of views and actions, not only within groups but also within the whole organization, occur. Next to the integrating process, also institutionalizing takes place at the organizational level. Institutionalizing implies that what has been learned by individuals and groups will be incorporated into organizational systems, structures, strategy, routines, practices, and products (Bontis et al., 2002; Crossan et al., 1999). Through this final process, the new insights of individuals and groups are institutionalized and, in consequence, are made available to all organizational members in the long run.

All four sub-processes are connected through the feed-forward (solid arrows in Figure 4.1) and the feedback (dashed arrows in Figure 4.1) learning flows. The feed-forward learning flow shifts new ideas and actions from the individual to the group to the organizational levels: intuiting-interpreting, interpreting-integrating, integrating-institutionalizing, and intuiting-institutionalizing (Bontis et al., 2002; Crossan et al., 1999; Vera & Crossan, 2004). In contrast to the feed-forward learning flow, the feedback learning flow moves what has been learned within the organization back from the organizational level to the group to the individual levels: institutionalizing-integrating, integrating-interpreting, interpreting-intuiting, and institutionalizing-intuiting (Bontis et al., 2002; Crossan et al., 1999; Vera & Crossan, 2004).

Next to the learning across levels, which is depicted by the processes and flows, learning also occurs within each level (Bontis et al., 2002). The so-called learning stocks address the dynamic learning within each level: i.e., individual learning (I), group learning (G), and organizational learning (O) stocks. Each learning stock builds on the inputs and outputs of the

incoming and outgoing learning processes (Vera & Crossan, 2004). Acquired knowledge and competencies represent the inputs and outputs of the individual learning stock (Bontis et al., 2002). Depending on the individual's motivation and learning capability, further learning processes and flows are fueled. The group-level learning stock is represented by the emergence of a common understanding among group members and can be reinforced by group work, meetings, suitable people raising the topics, and dialogs that are characterized by free exchange of (even conflictive) opinions and conflict management (Bontis et al., 2002). Finally, the organizational learning stock addresses whether organizational systems, structure, strategy, procedures, and culture, which have been shaped based on what has been learned, are directed towards the overall strategic and competitive aims (Bontis et al., 2002).

4.2 The relationship between new career orientations and the organizational learning process: A conceptual framework and propositions

While previous research has suggested that new career orientations are inevitably linked to continuous individual and organizational learning (Arthur, 1994; Hall, 1996, 2002; Hall & Mirvis, 1995; Park, 2009; Pang et al., 2008), most of these studies explain little about how the organizational learning process is shaped by new forms of career orientation. Consequently, this section will focus on analyzing the impact of new career orientations on the three learning stocks (individual-, group-, and organization-level learning) and the learning flows (feed-forward and feedback learning flow). Furthermore, since environmental and organizational conditions play a crucial role in determining career paths, their impact on the organizational learning process is considered as well.

4.2.1 New career orientations and learning stocks

Individual-level learning. At the individual level, studies emphasize the link between new career orientations, in particular boundaryless or protean career orientations, and continuous learning (Pang et al., 2008). The need for employees to learn steadily in order to stay competitive and meet the multi-faceted job requirements is reflected by the positive links which were found between employability or job performance and individuals' engagements in learning activities (e.g., Rowold, Hochholdinger, & Schilling, 2008; van der Klink, van der Heijden, Boon, & Williams van Rooij, 2014). Therefore, it can be assumed that intuiting and

interpreting processes at the individual level of the organizational learning process are constantly triggered because of the ongoing job and organization-specific learning. In addition, as new career orientations come along with a greater focus on individual career management and development, individuals' insights on these new responsibilities are supposed to further promote intuiting and interpreting (Patton & McMahon, 2014). Through expressions regarding their career attitudes, needs, and aims, individuals voice new insights not only to themselves but also to further group members, superiors, and partners in their social networks. Based on these previous arguments, the following is proposed.

Proposition 1. New career orientations are positively associated with individual-level learning.

Group-level learning. As researchers on the organizational learning process emphasize, the sharing of a common understanding among group members can be enhanced by conversations and collective actions (Bontis et al., 2002; Vera & Crossan, 2004). How individuals' new career orientations, however, can enforce collective actions does not appear to be that obvious. In contrast to leaders, who can encourage group work, meetings, dialogs, and trainings in order to support the development of a common understanding among group members (Berson, Nemanich, Waldman, Galvin, & Keller, 2006; Vera & Crossan, 2004), individuals with new career orientations might simply participate in such activities without enforcing them. Therefore, it is argued that the group level rather provides a platform for internal communication where individuals can spread and discuss their interpretations about their careers with others. In support of this argument, research on individual career management, which is linked to new career orientations, highlighted the importance of networking behavior among further career management behaviors (e.g., McCallum, Forret, & Wolff, 2014; Sturges, Guest, Conway, & Davey, 2002; Sturges et al., 2010). Networking behavior is represented by individuals' engagement in career-targeted conversations or contact seeking with people who might provide career-related help or feedback. Hence, a direct impact of individuals' new career orientations on group-level learning does not seem to be conclusive which leads to the following proposition.

Proposition 2. New career orientations are not associated with group-level learning.

Organizational-level learning. Since new careers reveal very different features in contrast to traditional careers, such as individuals managing their careers themselves, crossing various boundaries physically or psychologically, and aiming to enhance their employability

within each employing firm (Baruch, 2006; Hall, 2004; Sullivan & Baruch, 2009), organizations need to address this new orientation in order to manage their human resources effectively. In order to retain and motivate their best employees, and to attract potential future employees, organizations could rethink their structure, strategies, and processes in terms of reward schemes, training and development opportunities, work-life-balance, as well as job enrichment activities and challenging job assignments (De Vos & Meganck, 2009; Hall, 2004; Rodrigues et al., 2015). Moreover, organizational support seems to be expected by employees. In addition, several studies found that individuals rely greatly on the organizations' contribution to learning activities (e.g., Mallon & Walton, 2005; Park, 2010). Park (2010) revealed the positive effect of (expected) organizational support for creating continuous learning opportunities as well as learning climate on individuals' perceived career success.

In consequence, it is predicted that new career orientations do not only trigger individual-level learning but also organizational-level learning.

Proposition 3. New career orientations are positively associated with organizational-level learning.

4.2.2 New career orientations and learning flows

Feed-forward learning flow. Within the organizational learning framework by Crossan et al. (1999), the feed-forward learning flow emphasizes how what has been learned and interpreted by individuals moves forward to group and organizational levels through the sub-processes of intuiting, interpreting, integrating, and institutionalizing (Bontis et al., 2002; Crossan et al., 1999). The previous analysis of the impact of new career orientations on the learning stocks has shown that contemporary career orientations are expected to drive individuals to develop and interpret new insights on their novel employee-employer-relationships as well as to partly share and discuss them among group members. Furthermore, new career orientations are said to lead organizations to embed individuals' new insights into organizational structures, strategies, processes, practices, and routines. Based on these perceptions, it seems to be rational that individual learning through new career orientations feeds forward into organizational learning. Therefore, the following relation is suggested.

Proposition 4. New career orientations are positively associated with feed-forward learning.

Feedback learning flow. In contrast to the feed-forward learning flow, the feedback learning flow is concerned with ensuring that groups and individuals consider renewed organizational systems, structures, strategies, and routines (Bontis et al., 2002; Crossan et al., 1999; Vera & Crossan, 2004). Organizations, which learned about new career orientations and thus, employed certain routines and practices, such as training and development activities, will affect group- and individual-level learning. Through training and development activities, individuals can get support and guidance to their career self-management and consequently enhance their employability (Clarke, 2008; Kelly, Brannick, Hulpke, Levine, & To, 2003). Many studies have pointed out that organizational support and career management activities show positive effects not only on the employees' commitment to the employer but also on their career self-management (e.g., De Vos et al., 2009; Lips-Wiersma & Hall, 2007; Sturges et al., 2002). Moreover, individuals and groups can learn about their career and mobility opportunities within the company, which aims at retaining and attracting its best suitable employees (De Vos & Meganck, 2009). To emphasize the importance of feedback effects, which organizational structures and systems have on individuals' careers, the study by Park (2009) provides evidence for the positive relationship between the perceived learning climate implemented in the employing firm and the employees' protean career orientation. Thus, new career orientations are likely to propel feedback learning:

Proposition 5. New career orientations are positively associated with feedback learning.

4.2.3 Contextual factors

Research on careers (e.g., Baruch, 2004, 2006; Greenhaus et al., 2010; Sullivan & Baruch, 2009) as well as organizational learning (e.g., Bapuji & Crossan, 2004; Fiol & Lyles, 1985; Vera & Crossan, 2004) highlight the impact of environmental characteristics and organizational structures as contextual variables. As external and organizational variables play a crucial role in driving and shaping new career orientations and organizational learning processes, both will be included in this conceptual framework and considered in the following.

Environmental dynamism. Several authors argue that individuals perceive and learn about a new career orientation in rather dynamic and less stable organizational environments, which are characterized by progress, challenging complexity, and rapid change (e.g., Baruch, 2003, 2004; Hall & Mirvis, 1995; Sullivan, 1999). Based on criteria, such as the rate of change and the unpredictability of the environment (Dess & Beard, 1984; Jansen et al.,

2009), environmental dynamism can be measured on a continuum ranging from stable to less stable (dynamic) environment. As work environments have changed vastly and will continue to change in terms of technological developments (e.g., the internet, communication, and information technology), new employment types, including temporary or part-time workers, and increasing firm internationalization (e.g., Baruch, 2004; Daft, 2013; Greenhaus et al., 2010; Sullivan & Baruch, 2009), they are often characterized as being dynamic and less stable recently. Such dynamic environments do not only urge organizations to develop their structures, strategies, and practices in order to stay flexible and competitive but also provide a basis for continuous organizational learning (e.g., Hitt, Keats, & DeMarie, 1998; Sanchez, 2005; Yang & Chen, 2009). Furthermore, alterations in individuals' (work) lives, such as increasing life expectancy and consequently tenure, new family structures, including dual career couples or single parent families, and an increased emphasis on work-life-balance, contribute to the environmental characteristics which drive learning process about individuals' new career orientations (Sullivan & Baruch, 2009). Consequently, it is argued that in dynamic environments, in which individuals learn about new career opportunities, paths, and responsibilities, individuals are more likely to engage in feed-forward learning processes. In return, dynamic environments drive organizations to rethink their structures, strategies, and routines, such as career systems (Baruch, 2003), in order to meet both new individual and organizational needs. Through feedback learning processes, employees are then made used to new organizational systems and routines.

In contrast, in stable and predictable environments, a different setting is more likely to prevail. As traditional careers are said to exist in stable and predictable environments (e.g., Arthur, 1994; Baruch, 2004, 2006), individuals might be less motivated to change their career orientations to new forms of careers. Furthermore, stable and predictable environments might give less impetus for organizations to learn about new career orientations and career systems (Fiol & Lyles, 1985). Following this logic, it can be assumed that the degree of environmental dynamism moderates the relationship between career orientations and feedforward and feedback learning processes. Thus, the following proposition addresses the relationship depending on the respective environmental conditions.

Proposition 6. Environmental dynamism moderates the association between new career orientations and feed-forward and feedback learning, such that the association is stronger when the environment is dynamic.

Organizational structure. The literature suggests that the organizational structure represents the basic framework of an organization (Dalton, Todor, Spendolini, Fielding, & Porter, 1980) and is "the way responsibility and power are allocated, and work procedures are carried out, among organizational members" (Nahm, Vonderembse, & Koufteros, 2003: 283). Organizational structures can be specified by the following criteria: number of the organization's hierarchical levels, degree of centralization of decision making, formalization and specialization (i.e., horizontal integration), and communication channels (Daft, 2013; Nahm et al., 2003). Organizations are characterized as having mechanistic or inorganic structures when they employ a high degree of formalization, many hierarchical levels, a low level of horizontal integration (i.e., specialized departments and workers), a centralized decision-making process, and slow and limited communication channels (Nahm et al., 2003). In contrast, organizations involving only few hierarchical levels (i.e., flat structure), a low degree of formalization, a high level of horizontal integration (i.e., integrated departments and workers), a decentralized decision-making process, and fast and simple communication channels, are said to have organic structures. Consequently, organizations can be "categorized along a continuum ranging from a mechanistic design to an organic design" (Daft, 2013: 30).

Since the organizational structure defines the management of organizational entities, communication channels, and (more or less hierarchical) career systems, it is certainly linked to the way how new career orientations (Baruch, 2004, 2006; Sullivan & Baruch, 2009) and learning processes (Bapuji & Crossan, 2004; Fiol & Lyles, 1985; Vera & Crossan, 2004) might unfold through this structure. Researchers on new careers revealed that especially organizations with rather flat and trans-boundary structures allowing for multi-directional movements of individuals (e.g., job switches, downward, or temporary moves), provide a supportive basis for enhancing new career orientations (Baruch, 2004, 2006; Brousseau, Driver, Eneroth, & Larsson, 1996; Kelly et al., 2003). Therefore, new career orientations are more likely to develop in organizations which rather show organic structures. Moreover, the organizational learning literature suggests that organizational structures with more organic features tend to enhance individuals' learning about new and complex aspects (Daft, 2013; Fiol & Lyles, 1985; Nahm et al., 2003). Within organic structures, information among individuals is able to flow more freely, not being filtered by superiors across multiple organizational levels. Moreover, work rules and procedures are organized in such a way that learning flows are enhanced.

In contrast, when organizations show mechanistic structures, including centralized decision making, top down communication flows, and traditional hierarchical career systems, career mobility and opportunities are limited and thus, new career orientations are less likely to develop and spread among individuals within such organizations (Arthur & Rousseau, 1996; Brousseau et al., 1996). Moreover, organizations with mechanistic structures, involving formalized and well established work procedures and routines, may struggle with accepting and learning about new career orientations and thus, may continue to support and manage traditional careers. Based on these theoretical assumptions and previous findings, we assume that organizational structure will moderate the association between career orientations and learning processed and suggest the following.

Proposition 7. Organizational structure moderates the association between new career orientations and feed-forward and feedback learning, such that the association is stronger when the organizational structure is organic.

To sum up, Figure 4.2 presents all predicted influences of new career orientations on individual-, group-, and organizational-level learning stocks as well as feed-forward and feedback learning flows within the proposed conceptual framework.

Figure 4.2: Proposed conceptual framework

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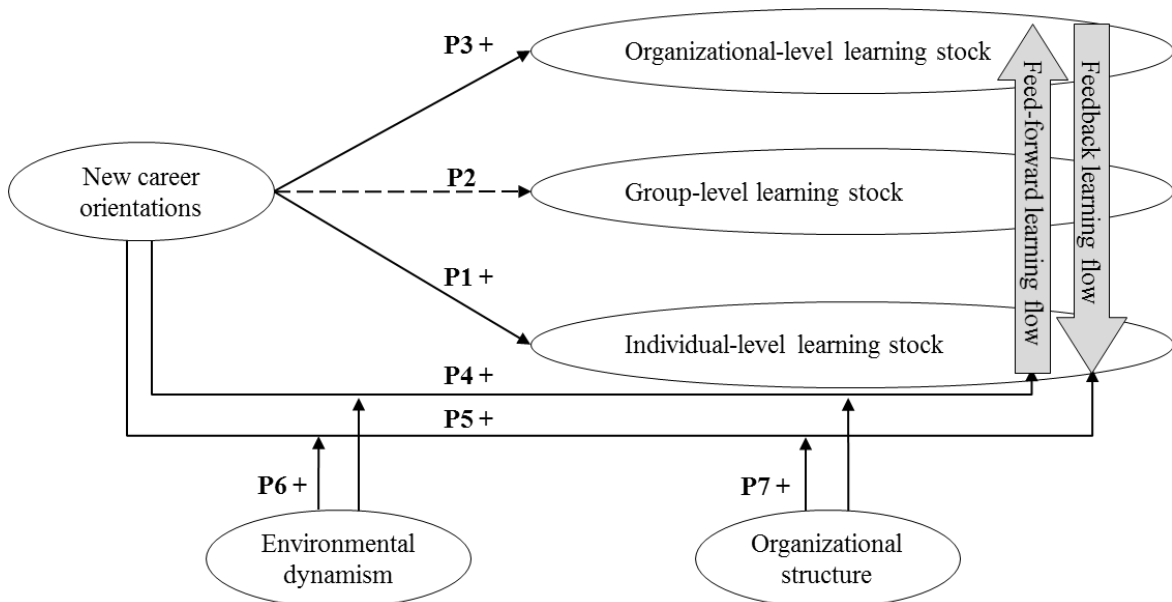
4.3 Discussion

This study aims at shedding further light on the effects of the change from traditional to the new career concepts of protean and boundaryless careers on organizations. By reviewing the literature on the protean and boundaryless career orientations and building on the comprehensive, multiple-level organizational learning framework by Crossan et al. (1999) and Vera and Crossan (2004), the study has offered a theoretical framework highlighting the impact of recent career orientations on multiple learning levels and flows. With this framework developed, we can derive important implications for career research and practice.

4.3.1 Implications for theory

The study contributes and responds to calls in the career literature for analyzing career outcomes at the organizational level (e.g., Rodrigues et al., 2015; Sullivan & Baruch, 2009) by enhancing the understanding of the influence of new career orientations on organizational learning. Based on the examination of contemporary careers and the organizational learning framework by Crossan et al. (1999) and Vera and Crossan (2004), it can be certainly assumed that protean and boundaryless career orientations have positive associations with individual and organizational-level learning and feed-forward and feedback learning flows. From the comparison between the characteristics of traditional and new career orientations, we can conclude that the most important changes coming along with the new career orientations are represented by the shift of career management responsibility from the organization to the individual and the emphasis put on continuous learning throughout the whole work life. Within contemporary careers, individuals increasingly guide their careers themselves within and across organizations and seek job and organization-specific learning opportunities in order to improve employability. This change has important implications for individual and organizational-level learning as learning now implies a strategic process to individuals and organizations as initially stated by Stata (1989). Moreover, organizational-level learning is enhanced since organizations need to manage and retain their workers in order to run organizational systems and processes in accordance with the company's strategic goals. Consequently, based on the organizational learning framework, it is argued that individuals' career-related insights and needs are communicated and transferred across multiple learning levels (i.e., feed-forward flow: developed at individual level, communicated and shared at

group level, implemented at organizational level) and also vice versa triggered by organizational activities (i.e., feedback flow: career management activities at organizational level, communicated and shared at group level, new insights and opportunities at individual level). As ongoing, life-long learning is suggested to be essential to both employees' and employers' development and linked through flows circulating within and across several learning levels, this fact might even display a stabilizing effect on employees' careers in the long run. If both parties will invest and gain from learning activities, these aligned goals could lead to an increased person-organization fit resulting in long-term employee-employer-relationships.

Moreover, the present study enriches to the career literature by examining the moderating roles of environmental and organizational context in the ways in which new careers and learning processes are unfolding. In particular, the conceptual framework assumes that within dynamic environments and organic organizational structures new career orientations are more likely to enhance individual learning to feed forward into organizational learning through feed-forward learning processes and vice versa through feedback learning processes. In contrast, when individuals are surrounded by stable environments and working for organizations with rigid and formalized structures, new career orientations are suggested to have a negative association with feed-forward and feedback learning.

4.3.2 Implications for practice

In addition, the present study provide important practical implications. First, the findings will help managers, in particular human resource managers to increase their understanding of the importance of learning activities for the employees' career development. Consequently, superiors might consider creating a favorable learning climate to their employees and providing learning opportunities in the form of career and work-related trainings or encouraging developmental relationships in order to manage and retain their workforce effectively.

Second, as this study emphasizes associations between individuals' career orientation and learning processes at multiple levels (i.e., individual, group, organization), human resource managers might better understand how fostering individual career and learning opportunities may feed back into organizational learning and consequently organizational goal-setting and performance.

4.3.3 Limitations and directions for future research

With this study, we call attention to the important association between career orientation and organizational learning. At present, the two streams of career and organizational learning research have been used separately. With the conceptual framework developed, we provide a very first attempt to link individual careers and organizational learning in order to address some gaps in the career and organizational learning literatures. Future research might provide further new insights on this association. However, the framework is not free of certain limitations.

Given the general focus on new career orientations, one limitation is that this study has not considered the impact of different new career orientations, such as the protean or the boundaryless career orientations, separately. Although both protean and boundaryless career concepts have been found to share many main ideas, they are still treated separately due to their different foci on career-related values (i.e., protean career) versus mobility goals (i.e., boundaryless career) (Gubler et al., 2014; Briscoe & Hall, 2006). In addition, although we argued that new career orientations are becoming increasingly dominant in work-contexts, some previous studies have suggested that traditional career orientations are still existing, in particular in public sector organizations (e.g., Biemann et al., 2012; McDonald et al., 2005). Thus, the potential different effects of protean, boundaryless, and even traditional career orientations on multiple learning levels and flows are likely to be explored most effectively by empirical research. Moreover, we suggest the association between new career orientations and learning flows to be in particular positive in the contexts of dynamic environments and organic organizational structures. As these contexts might be specific to some organizations, like organizations performing in the knowledge-intensive business sector (Czarnitzki & Spielkamp, 2003; Love et al., 2011), the proposed relationships with moderation by environmental dynamism and organizational structure should be tested for different organization and industry types.

To test the conceptual framework developed empirically, it is necessary to approach the different individual, group, and organizational levels with a multiple-level analysis that is also increasingly required in management research (Hitt, Beamish, Jackson, & Mathieu, 2007). Proceeding from the present study, future research findings can inform theory building in the career and organizational learning literatures.

5 Summary and conclusion

The underlying major aims of the present thesis were threefold. The first major study aim was linked to the first career development stage of career choice (Greenhaus et al., 2010). By examining the moderating roles of two cultural value dimensions in the association between prior work experience and career-related interests in ten specific industries, the thesis responded to calls for analyzing cultural moderation in career choice (Lent et al., 2006; Sheu et al., 2010). The second study aim was related to the subsequent career stages of early and midcareer, as determined by Greenhaus et al. (2010). The thesis aimed at filling gaps in the career literature by studying the effects of organizational-level factors, in particular that of the direct supervisors' leadership behavior on the employees' career advancement. Finally, the last major aim was to respond to the calls in the career literature for analyzing career-related outcomes at the organizational level by conceptualizing on the effects of the modern career orientations of protean and boundaryless careers on multiple organizational learning levels and flows. Therefore, the thesis addressed another gap in the career literature that was linked to the later career stages. Based on the manifold findings, we can draw important implications for theory and practice and suggest directions for future research.

The study findings on the moderating role of cultural context in predicting career-related interests provide empirical evidence for the cultural value dimension of long-term orientation significantly moderating the experience-interest association in line with the suggested hypothesis for three industries and not in line for one case. Additionally, we found support for the significant two-way interaction between uncertainty avoidance and work experience in predicting industry interests in line with underlying hypothesis for four industry cases and not in line for two. The test for the three-way interaction between work experience, long-term orientation, and uncertainty avoidance revealed one significant result in line with the underlying hypothesis and three unexpected results. Despite some unforeseen findings regarding the two and three-way interactions, the study contributes to the career literature by emphasizing the role of cultural context in reinforcing individuals' career-related decision making. Therefore, the study findings might help practitioners like career counselors and human resource managers to consider the effects of the desired job candidates' cultural backgrounds on the career interest development, which most likely translate into career choice. Consequently, human resource managers might think of creating appropriate recruiting strategies that match the cultural background of the potential candidates. Moreover, the study findings indicate that related work experiences gathered prior to actual employment play a

crucial role in the development of career interests and choice goals. Therefore, business practice might increase the engagement in offering organization and industry-related work activities to individuals before they transition from school into work.

For the exploratory study in the German state administration, in particular the analysis of the open comments revealed a range of leadership behaviors perceived to be effective in fostering employees' careers. In line with previous findings in the private sector (Rohde et al., 2012), public sector employees valued supportive leadership behaviors, such as providing career-related training and developmental activities or showing trust and positive expectations. In contrast to the leadership behavior suggested in the existing literature, employees working for the state administration emphasized the importance of role modeling, communication, and emotional support of the immediate supervisor. These findings imply some important practical implications. The study findings might help superiors to increase their awareness to a great range of direct and indirect behaviors with which they can influence the employees working for their department. Moreover, the results might help human resource managers to consider certain training activities to support the individuals having leadership responsibilities to improve their skills and leadership styles.

Furthermore, we extend the career literature by developing a conceptual framework that illustrates the complex, multiple level associations between new career orientations, in the form of protean and boundaryless career orientations, and organizational learning levels. By building on research on the protean and boundaryless careers together with the organizational learning framework by Crossan et al. (1999) and Vera and Crossan (2004), we suggest that new career orientations have positive associations with individual and organizational-level learning and feed-forward and feedback learning flows. Moreover, the thesis contributes to career research by emphasizing the roles of dynamic environments and organic organizational structures in strengthening some of the suggested career-learning relations. The proposed conceptual framework might help organizations and in particular human resource managers to enhance the understanding of altered career needs and goals of their employees, that are directed towards continuous career and job-related learning, and how they will run through various organizational levels. Moreover, the findings might help practitioners to understand and make use of how organizational structures and activities feed back into individuals' learning behavior and consequently affect the employees' careers.

The thesis suggests several directions for future research. First, as the present thesis studies the development of career interests and choice primarily of economics and management

students from eight countries, future research should replicate the study to investigate students from other educational and national backgrounds. Moreover, future research should extend the study by addressing further important person variables, such as self-efficacy beliefs and outcome expectations (Lent et al., 1994, 2000), as well as contextual variables, such as social status (Flores et al., 2017). In addition, as some empirical findings give some initial hints that also other cultural levels, including industry or occupational cultures, might play a role in career decision making (Taras et al., 2016), there is a great need to discover such effects. Furthermore, the sampling should be extended to the working population since career decision-making processes are also crucial in shaping career paths during later career stages (Lent & Brown, 2013). Second, as the present thesis takes only first steps in the study of the impact of the immediate supervisors' behavior on employees' career development with a quite small sample, future research should conduct further extensive studies in a greater number of public sector institutions. Moreover, since the findings are very specific to the German public administration, future studies might discover further important insights on the superior-employee relationship in multinational settings. In order to conduct more research on effective leadership behavior, future research should derive validated constructs to measure several direct and indirect behaviors. As employees' career development represents in general an understudied topic in the public administration literature, there is a present need to conduct further studies in order to enhance the understanding on how various individual, organizational, and environmental-level factors affect the careers progression of people employed in that work setting. Finally, the present thesis would like to draw the attention of researchers and practitioners to the study of the association between modern career concepts and organizational learning. As the thesis provides one of the first attempts to link protean and boundaryless career orientations with organizational learning, further scholars should conduct extensive research to evaluate the proposed relationships. Future studies on this topic seem to be worthwhile since individual and organizational learning are found to be essential in gaining and sustaining competitive advantages (Stata, 1989). Moreover, as environmental and organizational contexts are expected to influence the career-learning relations, studies are required which are based in different settings, such as private sector versus public sector-related studies.

Despite these limitations, I hope that the present thesis provide novel and relevant insights on the crucial processes of career interests development, career decision making and subsequent career progression during the work life.

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Appendix

Appendix 1: Questionnaire on students' career plans

OTTO-VON-GUERICKE-UNIVERSITY MAGDEBURG
FACULTY OF ECONOMICS & MANAGEMENT

MARJAANA GUNKEL
CHRISTOPHER SCHLÄGEL

Questionnaire on Students' Career Plans

This questionnaire consists of 11 pages. You will need about 15 minutes to complete it.

Instructions:

Please read the statements/questions proposed by the questionnaire carefully and check the option that represents your opinion the closest. You are given various five point scales in the different parts of the questionnaire for stating your opinion. You can, for example, check:

		strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
A1	I am good at adapting to new work settings.	☐	☒	☐	☐	☐

There are no "right" or "wrong" answers, and you don't need to be an expert to fill in the questionnaire adequately. Please read all of the statements/questions carefully and check the answer that represents your opinion the closest. In case you change your opinion after checking an answer, cross out the incorrect answer clearly. Please answer the questions quickly however carefully. **Do not leave any statements/questions unanswered.** Even if it is difficult to find the right answer, answer the question by checking the option that is closest to your opinion. Your answers will be kept completely anonymous. Please start now with answering the questions.

1

Part A

This part of the questionnaire is interested in your career plans. Please check the option which most accurately represents your opinion.

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
A1 I am good at adapting to new work settings.	☐	☐	☐	☐	☐
A2 I can adapt to change in my career plans.	☐	☐	☐	☐	☐
A3 I can overcome potential barriers that may exist in my career.	☐	☐	☐	☐	☐
A4 I enjoy trying new work-related tasks.	☐	☐	☐	☐	☐
A5 I can adapt to change in the world of work.	☐	☐	☐	☐	☐
A6 I will adjust easily to shifting demands at work.	☐	☐	☐	☐	☐
A7 Others would say that I am adaptable to change in my career plans.	☐	☐	☐	☐	☐
A8 My career success will be determined by my efforts.	☐	☐	☐	☐	☐
A9 I tend to bounce back when my career plans don't work out quite right.	☐	☐	☐	☐	☐
A10 I am rarely in control of my career.	☐	☐	☐	☐	☐
A11 I am not in control of my career success.	☐	☐	☐	☐	☐
A12 I get excited when I think about my career.	☐	☐	☐	☐	☐
A13 Thinking about my career inspires me.	☐	☐	☐	☐	☐
A14 Thinking about my career frustrates me.	☐	☐	☐	☐	☐
A15 It is difficult for me to set career goals.	☐	☐	☐	☐	☐
A16 It is difficult to relate my abilities to a specific career plan.	☐	☐	☐	☐	☐
A17 I understand my work-related interests.	☐	☐	☐	☐	☐
A18 I am eager to pursue my career dreams.	☐	☐	☐	☐	☐
A19 I am unsure of my future career success.	☐	☐	☐	☐	☐
A20 It is hard to discover the right career.	☐	☐	☐	☐	☐
A21 Planning my career is a natural activity.	☐	☐	☐	☐	☐

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		strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
A22	I will definitely make the right decisions in my career.	☐	☐	☐	☐	☐
A23	I am good at understanding job market trends.	☐	☐	☐	☐	☐
A24	I do not understand job market trends.	☐	☐	☐	☐	☐
A25	It is easy to see future employment trends.	☐	☐	☐	☐	☐

A26 Choose the one description below that you feel best represents your career plans at this time.

☐ 1. I have not made a career choice at this time and I do not feel particularly concerned or worried about it.

☐ 2. I have not made a career decision at this time and I am concerned about it. I would like to make a decision.

☐ 3. I have chosen a career and although I have not investigated it or other career alternatives thoroughly, I think I would like it.

☐ 4. I have investigated a number of careers and have selected one. I know quite a lot about this career, including the kinds of training or education required and the outlook for jobs in the future.

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Part B

Please think of an ideal job, disregarding your present job, if you have one. In choosing an ideal job, how important would it be to you to...
(please check one answer in each line across)

		of utmost importance	very important	of moderate importance	of little importance	of very little or no importance
B1	have sufficient time for your personal or home life.	☐	☐	☐	☐	☐
B2	have a boss (direct superior) you can respect.	☐	☐	☐	☐	☐
B3	get recognition for good performance.	☐	☐	☐	☐	☐
B4	have security of employment.	☐	☐	☐	☐	☐
B5	have pleasant people to work with.	☐	☐	☐	☐	☐
B6	do work that is interesting.	☐	☐	☐	☐	☐
B7	be consulted by your boss in decisions involving your work.	☐	☐	☐	☐	☐
B8	live in a desirable area.	☐	☐	☐	☐	☐
B9	have a job respected by your family and friends.	☐	☐	☐	☐	☐
B10	have chances for promotion.	☐	☐	☐	☐	☐

In your private life, how important is each of the following to you:
(please check one answer in each line across)

		of utmost importance	very important	of moderate importance	of little importance	of very little or no importance
B11	keeping time free for fun.	☐	☐	☐	☐	☐
B12	moderation: having few desires.	☐	☐	☐	☐	☐
B13	being generous to other people.	☐	☐	☐	☐	☐
B14	modesty: looking small, not big.	☐	☐	☐	☐	☐

B15 If there is something expensive you really want to buy but you do not have enough money, what do you do?
☐ 1. always save before buying
☐ 2. usually save first
☐ 3. sometimes save, sometimes borrow to buy
☐ 4. usually borrow and pay off later
☐ 5. always buy now, pay off later

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B16   How often do you feel nervous or tense?
- [ ] 1. always
- [ ] 2. usually
- [ ] 3. sometimes
- [ ] 4. seldom
- [ ] 5. never

B17   Are you a happy person?
- [ ] 1. always
- [ ] 2. usually
- [ ] 3. sometimes
- [ ] 4. seldom
- [ ] 5. never

B18   Are you the same person at work (or at school if you're a student) and at home?
- [ ] 1. quite the same
- [ ] 2. mostly the same
- [ ] 3. don't know
- [ ] 4. mostly different
- [ ] 5. quite different

B19   Do other people or circumstances ever prevent you from doing what you really want to?
- [ ] 1. yes, always
- [ ] 2. yes, usually
- [ ] 3. sometimes
- [ ] 4. no, seldom
- [ ] 5. no, never

B20   All in all, how would you describe your state of health these days?
- [ ] 1. very good
- [ ] 2. good
- [ ] 3. fair
- [ ] 4. poor
- [ ] 5. very poor

B21   How important is religion in your life?
- [ ] 1. of utmost importance
- [ ] 2. very important
- [ ] 3. of moderate importance
- [ ] 4. of little importance
- [ ] 5. of no importance

B22   How proud are you to be a citizen of your country?
- [ ] 1. not proud at all
- [ ] 2. not very proud
- [ ] 3. somewhat proud
- [ ] 4. fairly proud
- [ ] 5. very proud

5

B23   How often, in your experience, are subordinates afraid to contradict their boss (or students their teacher)?

☐ 1. never
☐ 2. seldom
☐ 3. sometimes
☐ 4. usually
☐ 5. always

To what extent do you agree or disagree with each of the following statements:
(please check one answer in each line across)

		strongly agree	agree	undecided	disagree	strongly disagree
B24	One can be a good manager without having a precise answer to every question that a subordinate may raise about his or her work.	☐	☐	☐	☐	☐
B25	Persistent efforts are the surest way to results.	☐	☐	☐	☐	☐
B26	An organization structure in which certain subordinates have two bosses should be avoided at all cost.	☐	☐	☐	☐	☐
B27	A company's or organization's rules should not be broken - not even when the employee thinks breaking the rule would be in the organization's best interest.	☐	☐	☐	☐	☐
B28	We should honor our heroes from the past.	☐	☐	☐	☐	☐

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Part C

This part of the questionnaire is concerned with the areas of business in which you would like to work in the future. Please answer the following two questions.

C1.   Please choose five (5) business areas from the list below, which relate the closest to the areas in which you would want to work, by ranking them from one (1) to five (5). Please write down the ranks in the boxes corresponding to the business areas you have chosen. The area in which you would want to work in the most should get the rank one (1), the area which is preferred the second most should get the rank two (2) etc. Each rank should be given only once.

1.	☐	Agriculture	25.	☐	Household items
2.	☐	Architecture/Construction industry	26.	☐	Information technology
3.	☐	Auditing	27.	☐	Insurances
4.	☐	Automation technology	28.	☐	Legal services
5.	☐	Aviation	29.	☐	Maritime transportation
6.	☐	Bank/Financial services/Investment	30.	☐	Market research
7.	☐	Biotechnology/Pharmaceutics	31.	☐	Marketing/Distribution
8.	☐	Car manufacturing/Supplier	32.	☐	Media communication
9.	☐	Chemistry/Physics	33.	☐	Non-profit organization
10.	☐	Civil service	34.	☐	Politics
11.	☐	Clothing/Textile	35.	☐	Postal/Delivery services
12.	☐	Consulting	36.	☐	Public relations
13.	☐	Cosmetics	37.	☐	(Public) Safety/Security
14.	☐	Craftsmanship	38.	☐	Public transportation
15.	☐	Culture/Movies/Music/TV	39.	☐	Publishing/Printing
16.	☐	E-Commerce/E-Business	40.	☐	Raw materials
17.	☐	Education/Training	41.	☐	Real estate
18.	☐	Electric/Power utility	42.	☐	Research
19.	☐	Electronic industry	43.	☐	Telecommunication
20.	☐	Environmental protection/technology	44.	☐	Tourism
21.	☐	Food industry/Alcohol/Tobacco	45.	☐	Trade
22.	☐	Headhunting/Temp placement	46.	☐	Transport/Logistics/Ports
23.	☐	Health industry	47.	☐	Water management
24.	☐	Hotel/Restaurant	48.	☐	Other:_____

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C2 Do you have prior work experience (including internships) in the business areas which you chose above? (If not, please move to question C3.)

☐ 1. yes ☐ 2. no

If yes, please denote the number of months (including internships) you have worked in the business areas which you ranked with ranks one (1) to five (5).

Rank 1: _____

Rank 2: _____

Rank 3: _____

Rank 4: _____

Rank 5: _____

C3 Does a relative of yours work or has worked in one of the business areas which you ranked with ranks one (1) to five (5).

☐ 1. yes ☐ 2. no

If yes, please write down those areas of business.

_____

C4 Does someone from your circle of friends work or has worked in one of the business areas which you ranked with ranks one (1) to five (5).

☐ 1. yes ☐ 2. no

If yes, please write down those areas of business.

_____

C5 Below you find a list of occupational areas. Please check the areas in which you would want to work in the future (you are welcome to check more than one area).

1.	☐ Accounting	10.	☐ Planning/Organization
2.	☐ Auditing	11.	☐ Production/Logistics
3.	☐ Consulting	12.	☐ Project management
4.	☐ Controlling	13.	☐ Purchasing/Procurement
5.	☐ E-Business	14.	☐ Quality management
6.	☐ Financial management	15.	☐ Research and Development
7.	☐ Human resources	16.	☐ Sales/Distribution
8.	☐ Legal department	17.	☐ Strategy
9.	☐ Marketing/Product management	18.	☐ Other:_____

8

Part D

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others?* Please indicate the extent to which you agree or disagree with that statement.

I see myself as someone who …

		agree strongly	agree a little	neither agree nor disagree	disagree a little	disagree strongly
D1	is talkative.	☐	☐	☐	☐	☐
D2	tends to find fault with others.	☐	☐	☐	☐	☐
D3	does a thorough job.	☐	☐	☐	☐	☐
D4	is depressed, blue.	☐	☐	☐	☐	☐
D5	is original, comes up with ideas.	☐	☐	☐	☐	☐
D6	is reserved.	☐	☐	☐	☐	☐
D7	is helpful and unselfish with others.	☐	☐	☐	☐	☐
D8	can be somewhat careless.	☐	☐	☐	☐	☐
D9	is relaxed, handles stress well.	☐	☐	☐	☐	☐
D10	is curious about many different things.	☐	☐	☐	☐	☐
D11	is full of energy.	☐	☐	☐	☐	☐
D12	starts quarrels with others.	☐	☐	☐	☐	☐
D13	is a reliable worker.	☐	☐	☐	☐	☐
D14	can be tense.	☐	☐	☐	☐	☐
D15	is ingenious, a deep thinker.	☐	☐	☐	☐	☐
D16	generates a lot of enthusiasm.	☐	☐	☐	☐	☐
D17	has a forgiving nature.	☐	☐	☐	☐	☐
D18	tends to be disorganized.	☐	☐	☐	☐	☐
D19	worries a lot.	☐	☐	☐	☐	☐
D20	has an active imagination.	☐	☐	☐	☐	☐
D21	tends to be quiet.	☐	☐	☐	☐	☐
D22	is generally trusting.	☐	☐	☐	☐	☐
D23	tends to be lazy.	☐	☐	☐	☐	☐
D24	is emotionally stable, not easily upset.	☐	☐	☐	☐	☐

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		agree strongly	agree a little	neither agree nor disagree	disagree a little	disagree strongly
D25	is inventive.	☐	☐	☐	☐	☐
D26	has an assertive personality.	☐	☐	☐	☐	☐
D27	can be cold and aloof.	☐	☐	☐	☐	☐
D28	perseveres until the task is finished.	☐	☐	☐	☐	☐
D29	can be moody.	☐	☐	☐	☐	☐
D30	values artistic, aesthetic experiences.	☐	☐	☐	☐	☐
D31	is sometimes shy, inhibited.	☐	☐	☐	☐	☐
D32	is considerate and kind to almost everyone.	☐	☐	☐	☐	☐
D33	does things efficiently.	☐	☐	☐	☐	☐
D34	remains calm in tense situations.	☐	☐	☐	☐	☐
D35	prefers work that is routine.	☐	☐	☐	☐	☐
D36	is outgoing, sociable.	☐	☐	☐	☐	☐
D37	is sometimes rude to others.	☐	☐	☐	☐	☐
D38	makes plans and follows through with them.	☐	☐	☐	☐	☐
D39	gets nervous easily.	☐	☐	☐	☐	☐
D40	likes to reflect, play with ideas.	☐	☐	☐	☐	☐
D41	has few artistic interests.	☐	☐	☐	☐	☐
D42	likes to cooperate with others.	☐	☐	☐	☐	☐
D43	is easily distracted.	☐	☐	☐	☐	☐
D44	is sophisticated in art, music, or literature.	☐	☐	☐	☐	☐
D45	often has arguments with others.	☐	☐	☐	☐	☐

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Part E

This last part of the questionnaire is concerned with demographic information of the respondents. Please answer the following seven questions.

E1 What is your nationality: _____

E2 What was your nationality at birth: _____

E3 How old are you? _____

E4 What is your gender?   ☐ 1. Female
                          ☐ 2. Male

E5 In which study program are you?   ☐ 1. Undergraduate (e.g. Bachelor, Vordiplom)
                                     ☐ 2. Graduate (e.g. Master, Diplom, Ph.D.)
                                     ☐ 3. Other: _____

E6 What is your major?   ☐ 1. Economics
                         ☐ 2. Management
                         ☐ 3. Other: _____

E7 How many semesters have you studied including this semester? _____

In case you are interested in the progress and results of this study, you are welcome to visit http://www.ww.uni-magdeburg.de/bwl15/projects.shtml. The interim results are available starting from June 2008.

Thank you for your participation in the research project!

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Appendix 2: Overview of empirical studies on the relation between supervisor's behavior and subordinate's career outcomes

Study	Conceptualization of supervisor's behavior	Effect(s) studied	Operationalization of career outcomes	Study sample and context
Biemann, Kearney, and Marggraf (2015)	(Supervisor) empowering leadership	Direct, indirect-mediated	Career satisfaction	Respondents are employees of a pharmaceutical company in Germany
Byrne, Dik, and Chiaburu (2008)	Leader-member exchange, Supervisor career support, supervisor mentoring	Direct-moderated, indirect-mediated	Objective career success: salary, promotions; subjective career success: career success, in-role performance, career satisfaction, organizational career satisfaction	Respondents are employees of a Mid-Atlantic company
Cianni and Romberger (1995)	14 specific supervisor behaviors related to developmental opportunities; Satisfaction with supervisor behaviors	Behavior was not studied in relation to career outcomes but compared among gender and race groups		Respondents are managers of a Fortune 500 financial services company
Cheramie (2013)	Seeking feedback from supervisor	Direct-moderated	Extrinsic, intrinsic career success	Respondents are employees of two medical centers and a marketing firm in the United States
Greenhaus, Parasuraman, and Wormley (1990)	Perceived supervisory support	Mediates	Advancement prospects: assessment of promotability, career plateau; career satisfaction	Respondents are (black and white) managers and supervisors of communication, banking, and electronics firms
Hildisch, Froese, and Pak (2015)	Perceived supervisor support	Direct	Perceived impact of acquisition on career development	Respondents are Korean bank employees and managers of a Western bank in Korea
Jawahar and Stone (2015)	Perceived supervisor support	Direct	Career satisfaction	Respondents are employees of privat, public, and nonprofit organizations in the United States
Jiang and Klein (1999)	Supervisor support	Direct	Career satisfaction	Respondents are entry-level information systems professionals of three large software development organizations in the United States
Joo and Ready (2012)	Leader-member exchange quality	Direct-moderated	Career satisfaction	Respondents are employees of a Fortune Global 500 company in Korea
Kang, Gatling, and Kim (2015)	Supervisor support	Direct	Career satisfaction	Respondents are hospitality students in the United States
Karatepe (2012)	Supervisor support	Indirect-mediated	Career satisfaction	Respondents are full-time frontline employees and supervisors of hotels in Cameroon

(continued on next page)

Study	Conceptualization of supervisor's behavior	Effect(s) studied	Operationalization of career outcomes	Study sample and context
Karatepe and Olugbade (2017)	Supervisor support	Direct, indirect-mediated	Career satisfaction	Respondents are full-time frontline employees of hotels in Nigeria
Kidd and Smewing (2001)	Supervisor support: career promotion, interpersonal skills and commitment, feedback and goal setting, trust and respect, expertise	Direct-moderated	Career commitment: career resilience, career identity, career planning	Respondents are employees (50% part-time students) of various organizations
Lee (2016)	Knowledge sharing	Direct, mediates	Career satisfaction	Respondents are hotel frontline employees in Korea
London (1993)	Supervisor support for career development, empowerment	Direct	Career motivation	Respondents are employees and supervisors of various organizations
Pan, Sun, and Chow (2011)	Supervisory mentoring	Indirect-mediated, moderated	Career satisfaction	Respondents are employees and supervisors of four pharmaceutical companies in China
Priyabhashini and Krishnan (2005)	Superior's Transformational leadership, expectations	Direct, indirect-mediated	Readiness for promotion: motivation, ability	Respondents are middle level managers and supervisors of public sector engineering consultancy and private sector bank in India
Pucic (2015)	Supervisor's ethical leadership	Direct, mediates	Career satisfaction	Respondents are workers from a stratified random sample
Restubog, Bordia, and Bordia (2011)	Leader-member exchange	Mediates	Objective career success: Actual promotion decision; subjective career success: supervisor-rated promotability ratings	Respondents are employees and supervisors of a large financial institution and public sector organization in the Philippines
Rose (2017)	(Supervisor) participative leadership	Indirect-mediates	Intention to convert from internship to employment	Respondents are interns and supervisors of various organizations in China
Schaubroeck and Lam (2002)	Leader-member exchange, supervisor communication	Mediates, direct-moderated, indirect-mediated	Promotion decision	Respondents are tellers and supervisors of a multinational bank in Hong Kong and the United States
Sibunruang, Garcia, and Tolentino (2016)	(Supervisor) career sponsorship	Moderates	Promotability	Respondents are employees and supervisors of two manufacturing and one hospitality organizations in Thailand
Tepper, Mitchell, Haggard, Kwan, and Park (2015)	Downward hostility	Indirect-mediated	Career satisfaction, career expectations	Respondents are supervised employees in the United States
Thurasamy, Lo, Amri, and Noor (2011)	Supervisor support	Direct-moderated	Perceived and objective career advancement	Respondents are engineers of manufacturing organizations in Northern Peninsular Malaysia
van der Heijden (2006)	Attention from immediate supervisor for a further career development	Attention was not studied in relation to career outcomes but compared among age groups and sectors		Respondents are profit and non-profit sector employees in the Netherlands

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Study	Conceptualization of supervisor's behavior	Effect(s) studied	Operationalization of career outcomes	Study sample and context
van Vianen, Rosenauer, Homan, Horstmeier, and Voelpel (2017)	Supervisor differentiated career mentoring	Indirect-mediated	Promotability	Respondents are job starters and supervisors in a facility management company in Germany
Wakabayashi and Graen (1984)	Vertical exchange: leader-member exchange	Direct, moderates	Promotability index, bonus, speed of promotion, salary	Respondents are college graduates and (performance) raters working for a large department store organization in Japan
Wayne, Liden, Kraimer, and Graf (1999)	Supervisor sponsorship: leader-member exchange, mentoring	Direct	Career success: salary progression, assessment of promotability, career satisfaction	Respondents are employees and supervisors of a large corporation in the United States
Wickramasinghe and Jayaweera (2010)	Supervisory support	Direct	Career satisfaction	Respondents are IT professionals of offshore outsourced IT firms in Sri Lanka
Yarnall (1998)	Managerial support for career development	Direct	Career satisfaction	Respondents are employees of a large service provider in the United Kingdom

Appendix 3: Questionnaire on state administration employees' career motivation and perceived career barriers

Prof. Dr. Marjaana Gunkel
Dipl.-Kffr. Jana Gruner

Fragebogen zur persönlichen Karrieremotivation und den persönlich wahrgenommenen Karrierehindernissen

Sehr geehrte Damen und Herren,

dieser Fragebogen dient dazu, eine Ihren persönlichen Bedürfnissen besser entsprechende Personalentwicklung im Ministerium für Wissenschaft und Wirtschaft aufzubauen. Deshalb werden in anonymer Form zunächst Ihre Eindrücke zu karriererelevanten Themen erbeten. Die Auswertung und Verarbeitung der Fragebögen erfolgt durch Wissenschaftler und Wissenschaftlerinnen der Otto-von-Guericke-Universität Magdeburg. Die Antworten bleiben anonym und werden für Berichtszwecke immer in Gruppen zusammengefasst, so dass in der Auswertung keine persönlichen Einschätzungen erkennbar sind. Des Weiteren besteht bei diesem Online-Fragebogen keine Möglichkeit die IP-Adresse nach zu verfolgen. Der aus den Antworten gewonnene Datensatz verbleibt beim Team der Otto-von-Guericke-Universität und wird nicht an Ihre Behörde weitergeleitet. Nach der Auswertung werden alle Daten umgehend gelöscht.

Bitte beachten Sie beim Ausfüllen des Fragebogens:

1. Sie beantworten eine Frage durch Ankreuzen eines der verfügbaren Kästchen. Sie können zum Beispiel ankreuzen:

		nicht wichtig	weniger wichtig	weder noch	wichtig	sehr wichtig
A48	Wie wichtig wäre eine Beförderung/Höher-gruppierung für Sie?	☐	☐	☐	☐	☐

2. Halten Sie sich nicht zu lange mit den einzelnen Fragen auf. Vielmehr interessiert uns Ihr erster Eindruck – Ihr spontaner Gedanke.

VIELEN DANK FÜR IHRE MITHILFE!

Prof. Dr. Marjaana Gunkel   Dipl.-Kffr. Jana Gruner

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Teil A – Gestaltung der beruflichen Laufbahn

Wie wichtig sind für Sie die folgenden Kriterien bei der Gestaltung Ihrer beruflichen Laufbahn?
(bitte bei jeder Aussage eine Antwort ankreuzen)

		nicht wichtig	weniger wichtig	weder noch	wichtig	sehr wichtig
A1	inhaltlich interessante Aufgaben	☐	☐	☐	☐	☐
A2	gute Aufstiegsmöglichkeiten	☐	☐	☐	☐	☐
A3	gute finanzielle Entwicklungsmöglichkeiten	☐	☐	☐	☐	☐
A4	Einfluss und Macht	☐	☐	☐	☐	☐
A5	Image bzw. Bekanntheit der Dienststelle	☐	☐	☐	☐	☐
A6	sozialer Status/soziale Anerkennung	☐	☐	☐	☐	☐
A7	Weiterbildungs-/Förderprogramme	☐	☐	☐	☐	☐
A8	Work-Life-Balance/flexible Arbeitszeiten	☐	☐	☐	☐	☐
A9	Arbeitsplatzsicherheit	☐	☐	☐	☐	☐
A10	sonstiges (bitte nennen):	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐

Wie schätzen Sie Ihr Interesse an Ihrer beruflichen Tätigkeit ein? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A11	Ich möchte gute fachliche Leistungen erbringen.	☐	☐	☐	☐	☐
A12	Ich bin auch bei wichtigen Entscheidungen bereit, ein Risiko einzugehen.	☐	☐	☐	☐	☐
A13	Ich bin davon überzeugt, dass ich die Fähigkeiten besitze, meine mir gesteckten beruflichen Ziele zu erreichen.	☐	☐	☐	☐	☐
A14	Ich möchte auf jeden Fall mein berufliches Können auf dem neuesten Stand halten.	☐	☐	☐	☐	☐
A15	Ich freue mich darauf, mich immer wieder in neue berufliche Aufgaben einzuarbeiten.	☐	☐	☐	☐	☐
A16	Ich möchte beruflich mit anderen Menschen zusammenarbeiten.	☐	☐	☐	☐	☐
A17	Ich möchte eigene Vorstellungen in den Beruf einbringen können.	☐	☐	☐	☐	☐

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		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A18	Ich will im Beruf Verantwortung tragen.	☐	☐	☐	☐	☐
A19	sonstiges (bitte nennen):	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐
	_____					

Wie schätzen Sie für sich persönlich den Stellenwert anderer Lebensbereiche im Vergleich zum Beruf ein? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A20	Ein sicherer Arbeitsplatz ist mir wichtiger als ein möglicher beruflicher Aufstieg.	☐	☐	☐	☐	☐
A21	Ich würde jederzeit dienstlich verreisen.	☐	☐	☐	☐	☐
A22	Für mich angenehme Arbeitszeiten wären mir wichtig.	☐	☐	☐	☐	☐
A23	Ich würde auch auf Kosten meines Partners/meiner Partnerin für den Beruf Zeit aufwenden.	☐	☐	☐	☐	☐
A24	Es wäre für mich selbstverständlich Überstunden zu machen.	☐	☐	☐	☐	☐
A25	Ich würde Schwierigkeiten in meiner Ehe/Partnerschaft durch die Berufstätigkeit in Kauf nehmen.	☐	☐	☐	☐	☐
A26	Es macht mir keinen Spaß, unter Leistungsdruck zu arbeiten.	☐	☐	☐	☐	☐
A27	Es würde mir etwas ausmachen, an Wochenenden arbeiten zu müssen.	☐	☐	☐	☐	☐

Wie schätzen Sie Ihr Interesse an einem beruflichen Aufstieg ein? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A28	Ich habe bei der Wahl meiner Ausbildung/ meines Studiums sowie verschiedener Praktika vorm beruflichen Einstieg darauf geachtet, dass diese meiner Karriere förderlich sind.	☐	☐	☐	☐	☐
A29	Es ist mir wichtiger, tun zu können, was mich interessiert, als beruflich weiter zu kommen.	☐	☐	☐	☐	☐

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A30	Ich hatte meine Ausbildung/mein Studium hinsichtlich der Chancen auf dem Arbeitsmarkt gewählt.	☐	☐	☐	☐	☐
A31	Es wäre schlimm für mich, mein gestecktes berufliches Ziel nicht zu erreichen.	☐	☐	☐	☐	☐
A32	Ich möchte auf jeden Fall viel Geld verdienen.	☐	☐	☐	☐	☐
A33	Es ist mir wichtig eine gesellschaftlich angesehene berufliche Position zu erreichen.	☐	☐	☐	☐	☐
A34	Ich werde mein berufliches Weiterkommen konsequent vorantreiben.	☐	☐	☐	☐	☐
A35	Es hat keinen hohen Stellenwert für mich, beruflich aufzusteigen.	☐	☐	☐	☐	☐

Welche der folgenden Begriffe verbinden Sie persönlich am ehesten mit Karriere? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A36	Delegationsmacht	☐	☐	☐	☐	☐
A37	Einflussmöglichkeit/Entscheidungsmacht	☐	☐	☐	☐	☐
A38	Ehrgeiz befriedigen	☐	☐	☐	☐	☐
A39	hohes Einkommen	☐	☐	☐	☐	☐
A40	hohe hierarchische Position	☐	☐	☐	☐	☐
A41	hohes Sozialprestige	☐	☐	☐	☐	☐
A42	Sachthemen vorantreiben/ Selbstverwirklichung	☐	☐	☐	☐	☐
A43	Verantwortung tragen	☐	☐	☐	☐	☐
A44	andere (bitte nennen):	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐

A45 Wann wurden Sie das letzte Mal befördert/höhergruppiert?

☐ innerhalb des letzten Jahres (< 1 Jahr)

☐ vor 1–3 Jahren

☐ vor 4–6 Jahren

☐ vor mehr als 6 Jahren

☐ bisher noch nie

4

		nicht wahrscheinlich	weniger wahrscheinlich	weder noch	wahrschein- lich	sehr wahrscheinlich
A46	Wie wahrscheinlich ist Ihrer Meinung nach eine Beförderung/Höhergrup- pierung innerhalb der nächsten 2 Jahre?	☐	☐	☐	☐	☐

		nicht wahrscheinlich	weniger wahrscheinlich	weder noch	wahrschein- lich	sehr wahrscheinlich
A47	Wie wahrscheinlich ist Ihrer Meinung nach eine Beförderung/Höhergrup- pierung innerhalb der nächsten 5 Jahre?	☐	☐	☐	☐	☐

		nicht wichtig	weniger wichtig	weder noch	wichtig	sehr wichtig
A48	Wie wichtig wäre eine Beförderung/Höhergrup- pierung für Sie?	☐	☐	☐	☐	☐

A49 Welchen Arbeitsplatz würden Sie nach der Beförderung/Höhergruppierung einnehmen?

☐ Mitarbeiter/Mitarbeiterin bzw. Bürosachbearbeiter/Bürosachbearbeiterin

☐ Sachbearbeiter/Sachbearbeiterin

☐ Referent/Referentin bzw. Dezernent/Dezernentin

☐ Referatsleiter/Referatsleiterin bzw. Dezernatsleiter/Dezernatsleiterin

☐ Abteilungsleiter/Abteilungsleiterin

☐ einen anderen (bitte nennen):

Inwieweit treffen folgende Aussagen auf Sie zu? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A50	Für eine Beförderung/Höhergruppierung würde ich die Dienststelle bzw. Behörde wechseln.	☐	☐	☐	☐	☐
A51	Für eine Beförderung/Höhergruppierung würde ich den Dienstort bzw. die Stadt wechseln.	☐	☐	☐	☐	☐

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		schlecht	eher schlecht	weder noch	eher gut	gut
A52	Wie gut fühlen Sie sich von Ihren unmittelbaren Vorgesetzten über arbeitsrelevante Themen informiert?	☐	☐	☐	☐	☐
A53	Wie gut fühlen Sie sich von Ihren Kollegen/Kolleginnen über arbeitsrelevante Themen informiert?	☐	☐	☐	☐	☐
A54	Wie beurteilen Sie die Führungsqualitäten Ihres unmittelbaren Vorgesetzten/Ihrer unmittelbaren Vorgesetzen?	☐	☐	☐	☐	☐

A55 Was schätzen bzw. vermissen Sie insbesondere am Führungsstil Ihres unmittelbaren Vorgesetzten/Ihrer unmittelbaren Vorgesetzen?

_____

Über welche der nachfolgenden Wege informieren Sie sich über berufliche Entwicklungsmöglichkeiten? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A56	Mitarbeitergespräche mit Vorgesetzten	☐	☐	☐	☐	☐
A57	Gespräche mit Kollegen/Kolleginnen	☐	☐	☐	☐	☐
A58	Gespräche mit Verwandten	☐	☐	☐	☐	☐
A59	über interne Medien (wie Intranet, Newsletter, Ausschreibungen)	☐	☐	☐	☐	☐
A60	über Internet	☐	☐	☐	☐	☐
A61	über die Personalvermittlungsstelle (PVS)	☐	☐	☐	☐	☐
A62	über andere Wege (bitte nennen): _____	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐

Welche informellen Netzwerke nutzen Sie persönlich zu Ihrem beruflichen Fortkommen? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
A63	persönliche Kontakte (Familie, Freunde, Kollegen)	☐	☐	☐	☐	☐
A64	berufsbezogene Netzwerke/ Mitgliedschaften	☐	☐	☐	☐	☐
A65	Internet/Mailinglisten	☐	☐	☐	☐	☐

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A66	Tagung/Konferenz/Kongress/Messe	☐	☐	☐	☐	☐
A67	Frauen-/Männernetzwerke	☐	☐	☐	☐	☐
A68	Mentoring	☐	☐	☐	☐	☐
A69	sonstiges (bitte nennen):					
	_____	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐

		nicht wichtig	weniger wichtig	weder noch	wichtig	sehr wichtig
A70	Wie wichtig ist Ihrer Einschätzung nach der Zugang zu informellen Netzwerken für einen stringenten Karriereverlauf?	☐	☐	☐	☐	☐

		kein Zugang	geringer Zugang	weder noch	guter Zugang	sehr guter Zugang
A71	Wie beurteilen Sie Ihren eigenen Zugang zu informellen Netzwerken?	☐	☐	☐	☐	☐

Teil B – Qualifikation

Falls Sie an den folgenden Weiterqualifizierungsmaßnahmen teilgenommen haben, wie sinnvoll fanden Sie diese für sich? (bitte bei jeder Aussage eine Antwort ankreuzen)

		nicht sinnvoll	weniger sinnvoll	weder noch	sinnvoll	sehr sinnvoll	nicht teilgenommen
B1	Beschäftigungslehrgang 1 des AFI	☐	☐	☐	☐	☐	☐
B2	Beschäftigungslehrgang 2 des AFI	☐	☐	☐	☐	☐	☐
B3	Fachfortbildung	☐	☐	☐	☐	☐	☐
B4	Führungskräftefortbildung	☐	☐	☐	☐	☐	☐
B5	nebenberufliches Studium/Fernstudium	☐	☐	☐	☐	☐	☐
B6	landesinterne Studiengänge	☐	☐	☐	☐	☐	☐
B7	Coaching	☐	☐	☐	☐	☐	☐
B8	Mentoring	☐	☐	☐	☐	☐	☐
B9	Karriereberatung	☐	☐	☐	☐	☐	☐
B10	Netzwerke	☐	☐	☐	☐	☐	☐
B11	andere (bitte nennen):						
	_____	☐	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐	☐

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Teil C – Work–Life–Balance

Wie beurteilen Sie ... (bitte bei jeder Aussage eine Antwort ankreuzen)

		schlecht	eher schlecht	weder noch	eher gut	gut
C1	... die Ihnen gebotenen Möglichkeiten der Arbeitsgestaltung durch Ihren Arbeitgeber in Bezug auf Gleitzeit?	☐	☐	☐	☐	☐
C2	... die Ihnen gebotenen Möglichkeiten der Arbeitsgestaltung durch Ihren Arbeitgeber in Bezug auf Teilzeit?	☐	☐	☐	☐	☐
C3	...die Vereinbarkeit von einer Teilzeitbeschäftigung in Führungspositionen?	☐	☐	☐	☐	☐
C4	...die Vereinbarkeit von Ihrem Beruf und Ihrer Familie?	☐	☐	☐	☐	☐

Falls Sie die Vereinbarkeit von Ihrem Beruf und Familie als *eher schlecht* bzw. *schlecht* beurteilt haben, wie schätzen Sie in diesem Zusammenhang die nachfolgenden möglichen Ursachen ein?

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu
C5	Job erfordert hohe Flexibilität	☐	☐	☐	☐	☐
C6	ungünstige Arbeitszeiten	☐	☐	☐	☐	☐
C7	befristete Arbeitsverträge	☐	☐	☐	☐	☐
C8	mangelnde Absicherungsmöglichkeiten bei Elternzeit	☐	☐	☐	☐	☐
C9	Vereinbarkeit ist nicht das spezielle Problem	☐	☐	☐	☐	☐

Für eine (noch) bessere Vereinbarkeit von Beruf und Familie würde es mir helfen, wenn ...? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu	trifft auf mich persönlich nicht (mehr) zu
C10	ich auf längere Kinderbetreuungsmöglichkeiten zurückgreifen könnte	☐	☐	☐	☐	☐	☐
C11	es eine Betreuungseinrichtung in Betriebsnähe gäbe	☐	☐	☐	☐	☐	☐
C12	eine Betreuung meines/r Kindes/r während der Ferien zur Verfügung stünde	☐	☐	☐	☐	☐	☐

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C13	ich bei der Betreuung meiner/s pflegebedürftigen Angehörigen mehr Unterstützung hätte	☐	☐	☐	☐	☐	☐
C14	ich mir mehr Betreuung/Unterstützung bei der Hausarbeit (Wäsche, Einkaufen, Kochen) leisten könnte	☐	☐	☐	☐	☐	☐
C15	ich meine Arbeitszeit insgesamt verkürzen könnte	☐	☐	☐	☐	☐	☐
C16	ich Beginn und Ende meiner Arbeitszeit sowie Pausen flexibler gestalten könnte (z.B. Funktionsarbeitszeit)	☐	☐	☐	☐	☐	☐
C17	ich manchmal Arbeit von zu Hause aus erledigen könnte	☐	☐	☐	☐	☐	☐
C18	Besprechungen bzw. feste Termine anders gelegt würden	☐	☐	☐	☐	☐	☐
C19	Aufgaben und Arbeitsanfall verlässlicher planbar wären	☐	☐	☐	☐	☐	☐
C20	ich in Notfällen (wie Krankheit von Kindern) auf Unterstützung zurückgreifen könnte	☐	☐	☐	☐	☐	☐
C21	ich leichter an Fortbildungsmöglichkeiten teilnehmen könnte	☐	☐	☐	☐	☐	☐
C22	ich beim Wiedereinstieg in den Beruf noch besser unterstützt würde	☐	☐	☐	☐	☐	☐
C23	meine Führungskraft mehr Verständnis für meine familiären Verpflichtungen hätte	☐	☐	☐	☐	☐	☐
C24	sonstiges (bitte nennen):						
	_____	☐	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐	☐

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Teil D – Karriereplanung

Welche der nachfolgenden Gründe sehen Sie als entscheidende Hindernisse für Ihre persönliche Karriere? (bitte bei jeder Aussage eine Antwort ankreuzen)

		trifft nicht zu	trifft kaum zu	weder noch	trifft zu	trifft sehr zu	trifft auf mich persönlich nicht (mehr) zu
D1	mangelnde Unterstützung durch Vorgesetzte und Kollegen/Kolleginnen	☐	☐	☐	☐	☐	☐
D2	fehlende Möglichkeit, in eine andere Regionen zu ziehen	☐	☐	☐	☐	☐	☐
D3	geforderte Rücksichtnahme auf die Wünsche des Partners/der Partnerin	☐	☐	☐	☐	☐	☐
D4	mangelnde Entlastung durch den Partner/die Partnerin	☐	☐	☐	☐	☐	☐
D5	zu geringe Flexibilität der Arbeitszeiten	☐	☐	☐	☐	☐	☐
D6	mögliche Doppelbelastung durch Familie und Beruf	☐	☐	☐	☐	☐	☐
D7	Bevorzugung des anderen Geschlechts durch Vorgesetzte	☐	☐	☐	☐	☐	☐
D8	mangelnde Unterstützung des Arbeitgebers bei Vereinbarung von Familie und Beruf	☐	☐	☐	☐	☐	☐
D9	Unvereinbarkeit von Familie und Beruf allgemein	☐	☐	☐	☐	☐	☐
D10	mangelnde Kinderbetreuung (Qualität oder Dauer)	☐	☐	☐	☐	☐	☐
D11	geforderte berufliche Mobilität (z.B. Dienstreisen)	☐	☐	☐	☐	☐	☐
D12	Folgen der Abwesenheit durch Elternzeit	☐	☐	☐	☐	☐	☐
D13	schwierige Vereinbarung von Führungspositionen mit Kindern	☐	☐	☐	☐	☐	☐
D14	Schwierigkeit der Teilzeitarbeit	☐	☐	☐	☐	☐	☐

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D15	schlecht organisierte Arbeitsstrukturen für Eltern mit Kindern	☐	☐	☐	☐	☐	☐
D16	Schwierigkeit des Wiedereinstiegs	☐	☐	☐	☐	☐	☐
D17	Vorurteile gegen Männer/Frauen in Elternzeit	☐	☐	☐	☐	☐	☐
D18	wenig passende Stellen für Eltern mit Kindern	☐	☐	☐	☐	☐	☐
D19	Vorurteile gegenüber Frauen/Männer (z.B. durch Vorgesetzte oder Kolleginnen und Kollegen)	☐	☐	☐	☐	☐	☐
D20	männliche/weibliche Entscheidungsstrukturen	☐	☐	☐	☐	☐	☐
D21	fehlende Vorbilder/Mentoren oder Mentorinnen/weibliches oder männliches Führungspersonal	☐	☐	☐	☐	☐	☐
D22	individuelle Gründe allgemein	☐	☐	☐	☐	☐	☐
D23	mangelndes Selbstbewusstsein	☐	☐	☐	☐	☐	☐
D24	mangelndes Durchsetzungsvermögen	☐	☐	☐	☐	☐	☐
D25	Bescheidenheit	☐	☐	☐	☐	☐	☐
D26	fehlender Egoismus	☐	☐	☐	☐	☐	☐
D27	sonstige persönliche Gründe (wie Emotionalität, Teamorientierung)	☐	☐	☐	☐	☐	☐
D28	traditionelle Rollenvorstellungen/ mangelnde partnerschaftliche Aufgabenverteilung	☐	☐	☐	☐	☐	☐
D29	kein Interesse oder andere Vorstellung von Karriere	☐	☐	☐	☐	☐	☐
D30	unterschiedliche Lebensplanung von Frauen und Männern	☐	☐	☐	☐	☐	☐
D31	Angst vor Neid und Missgunst der Kolleginnen und Kollegen	☐	☐	☐	☐	☐	☐
D32	sonstige Hindernisse (bitte nennen):	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐

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Teil E – Zukünftige Entwicklung

Wie wichtig sind Ihrer Einschätzung nach folgende Maßnahmen für die Förderung Ihrer persönlichen Karriere? (bitte bei jeder Aussage eine Antwort ankreuzen)

		nicht wichtig	weniger wichtig	weder noch	wichtig	sehr wichtig	trifft auf mich persönlich nicht (mehr) zu
Allgemeine Forderungen							
E1	Förderung der Kinderbetreuung (durch Staat und Arbeitgeber)	☐	☐	☐	☐	☐	☐
E2	Hinterfragen bzw. Änderung der traditionellen Rollenbilder bezüglich der Kindererziehung	☐	☐	☐	☐	☐	☐
E3	Förderung von Vätern in Erziehungszeit	☐	☐	☐	☐	☐	☐
E4	Stärkung des Selbstbewusstseins	☐	☐	☐	☐	☐	☐
E5	Stipendien	☐	☐	☐	☐	☐	☐
E6	Förderung des Aufbaus von formellen und informellen Netzwerken	☐	☐	☐	☐	☐	☐
Spezielle Forderungen an den Staat							
E7	Förderung bereits in der Schule	☐	☐	☐	☐	☐	☐
E8	Elterngeld nur bei gleicher Beteiligung von Frauen und Männern an Erziehung	☐	☐	☐	☐	☐	☐
E9	Wohnmodelle für Familien und Alleinerziehende	☐	☐	☐	☐	☐	☐
Forderungen an den Arbeitgeber							
E10	Arbeitsgestaltung (flexible Arbeitszeit)	☐	☐	☐	☐	☐	☐
E11	familienfreundliche Strukturen	☐	☐	☐	☐	☐	☐
E12	sichere, unbefristete Stellen, sichere Finanzierung	☐	☐	☐	☐	☐	☐
E13	mehr Teilzeitstellen	☐	☐	☐	☐	☐	☐
E14	Erleichterung und Förderung des Wiedereinstiegs (z.B. durch Programme)	☐	☐	☐	☐	☐	☐
E15	Öffentlichkeitsarbeit/Informationen über Fördermöglichkeiten	☐	☐	☐	☐	☐	☐
E16	höheres Stellenangebot/mehr Einstellungen in leitenden Positionen	☐	☐	☐	☐	☐	☐
E17	mehr Vorbilder	☐	☐	☐	☐	☐	☐

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E18	Seminare bzw. Qualifizierungen während der Elternzeit ermöglichen	☐	☐	☐	☐	☐	☐
E19	vermehrt Personalgespräche/ Gesprächsgruppen einführen	☐	☐	☐	☐	☐	☐
E20	Führungskräftetraining	☐	☐	☐	☐	☐	☐
E21	gezielte Programme für weibliche/ männliche Führungskräfte	☐	☐	☐	☐	☐	☐
E22	interne, behördenübergreifende Netzwerke	☐	☐	☐	☐	☐	☐
E23	externe Netzwerke, z.B. Frauennetzwerke, Berufsverbände	☐	☐	☐	☐	☐	☐
E24	Mentoring	☐	☐	☐	☐	☐	☐
E25	Coaching	☐	☐	☐	☐	☐	☐
E26	mehr Engagement durch die Institution ‚Gleichstellungsbeauftragte‘	☐	☐	☐	☐	☐	☐
E27	interne/externe Kinderbetreuungsangebote	☐	☐	☐	☐	☐	☐
E28	flexiblere Arbeitszeiten statt Präsenzzeitdenken	☐	☐	☐	☐	☐	☐
E29	andere (bitten nennen):						
	_____	☐	☐	☐	☐	☐	☐
	_____	☐	☐	☐	☐	☐	☐

Teil F – Angaben zu Person und Beruf

Im Folgenden bitten wir Sie um einige demographische Angaben für statistische Zwecke. Alle Antworten zu diesen Fragen werden zu Gruppen aggregiert, so dass keine Rückschlüsse auf Antworten einzelner Personen gezogen werden können.

F1   **Sie sind…**

☐   weiblich

☐   männlich

F2   **Wie alt sind Sie?**

☐   < 25 Jahre

☐   25–35 Jahre

☐   36–45 Jahre

☐   46–55 Jahre

☐   > 55 Jahre

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F3 Welche der nachfolgenden Bildungsabschlüsse haben Sie erzielt? (Mehrfachnennungen möglich)

☐ Haupt- bzw. Realschulabschluss

☐ Ausbildung

☐ Fachhochschulreife

☐ fachgebundene Hochschulreife (z.B. nach Fachgymnasium, Berufsoberschule)

☐ allgemeine Hochschulreife (Abitur)

☐ Abschluss zur beruflichen Weiterbildung (nach Fachschule)

☐ Berufsqualifizierender Studienabschluss (Diplom, Magister, Staatsexamen, Bachelor, Master)

☐ Promotion

☐ Habilitation

☐ andere (bitte nennen):

F4 Ihr Familienstand ist...

☐ ledig, ohne feste Partnerschaft

☐ ledig, mit fester Partnerschaft

☐ verheiratet

☐ geschieden/getrennt lebend, ohne neue feste Partnerschaft

☐ geschieden/getrennt lebend, mit neuer fester Partnerschaft

☐ verwitwet, ohne neue feste Partnerschaft

☐ verwitwet, mit neuer fester Partnerschaft

F5 Falls Sie in einer festen Partnerschaft leben, welchen der nachfolgenden Bildungsabschlüsse hat Ihr Partner/Ihre Partnerin erzielt? (Mehrfachnennungen möglich)

☐ Haupt- bzw. Realschulabschluss

☐ Ausbildung

☐ Fachhochschulreife

☐ fachgebundene Hochschulreife (z.B. nach Fachgymnasium, Berufsoberschule)

☐ allgemeine Hochschulreife (Abitur)

☐ Abschluss zur beruflichen Weiterbildung (nach Fachschule)

☐ Berufsqualifizierender Studienabschluss (Diplom, Magister, Staatsexamen, Bachelor, Master)

☐ Promotion

☐ Habilitation

14

☐ andere (bitte nennen):

_____

F6 Falls Sie in einer festen Partnerschaft leben, welche der folgenden Aussagen trifft auf Ihren Partner/Ihre Partnerin zu? Er/Sie …

☐ studiert.

☐ befindet sich in einer Ausbildung.

☐ arbeitet ebenfalls in der Landesverwaltung.

☐ arbeitet in einem ganz anderen beruflichen Kontext.

☐ betreut ausschließlich das Kind/die Kinder.

☐ ist arbeitslos.

☐ sonstiges (bitte nennen):

_____

F7 Wie viele Kinder haben Sie?

☐ keine

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5 oder mehr

F8 Alter des Kindes/der Kinder? (Mehrfachnennungen möglich)

☐ 0–3 Jahre

☐ 4–6 Jahre

☐ 7–11 Jahre

☐ 12–18 Jahre

☐ > 18 Jahre

F9 Kinderbetreuung durch… (Mehrfachnennungen möglich)

☐ meinen Partner/meine Partnerin

☐ Babysitter

☐ Eltern

☐ Tagesmutter

☐ Ganztagesstätte

☐ Schule

15

☐ sonstiges (bitte nennen):

_____

☐ Mein Kind/meine Kinder braucht/brauchen keine Betreuung mehr

F10 Haben Sie einen befristeten oder einen unbefristeten Vertrag?

☐ befristet bis zu 1 Jahr

☐ befristet, 1–3 Jahre

☐ befristet, mehr als 3 Jahre

☐ unbefristet

Kommentare

Fragebögen können natürlich nicht alle Probleme erfassen, zu denen Sie sich vielleicht gern äußern möchten. Unten bieten wir Ihnen Platz für jegliche zusätzlichen Kommentare, die Sie machen möchten. Nochmals vielen Dank für Ihre wertvolle Zeit und die von Ihnen zur Verfügung gestellten Einschätzungen.

_____

_____

_____

_____

_____

_____

Falls Sie nach Ausfüllen dieses Fragebogens Interesse an einem persönlichen Beratungsgespräch zu Ihren individuellen Karriereentwicklungsmöglichkeiten bekommen haben, können Sie sich natürlich jederzeit mit Ihrer Dienststelle in Verbindung setzen.

Falls Sie nach Ausfüllen dieses Fragebogens gerne an der Verlosung im Ministerium für Wissenschaft und Wirtschaft teilnehmen möchten, würden wir Sie nun bitten diese Seite auszudrucken und bei Vorlage dieser Seite, beim Pförtner eine Losnummer zu ziehen.

Unter allen Teilnehmern wird als Hauptpreis ein Gutschein für ein Abendessen im Wert von 100 Euro und als zweiter und dritter Preis jeweils ein Büchergutschein im Wert von 50 Euro verlost.

Viel Glück bei der Verlosung und vielen Dank für Ihre Unterstützung!

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Appendix 4: System of categories derived from survey comments, description, and examples

Main and subcategories	Description	Examples
Demonstrates abilities and competences of a good leader • Decision-making ability • Ability to deal with conflicts • Ability to assert oneself • Ability to motivate employees • Ability to develop and realize ideas • Ability to stay calm • Goal orientation and agreement • Problem orientation • Demonstrates leadership behavior in general • Demonstrates social competence in general • Demonstrates functional competence in general	A good leader should demonstrate or act as a role model as a superior with certain abilities, competences and characteristics	- "Decision-making ability" - "Ability to deal with conflicts at the department" - "Miss the ability to assert oneself" - "No precise target agreements; no goal orientation" - "Shows no leadership behavior, gives no guidance"
Shows interest • Shows interest in employees and their work • Demonstrates identification with and provide support to organization	The immediate supervisor should show interest in his or her employees, work fields, and should increase identification with the organization	- "Very often lack of interest in subordinate's work, employees" - "Miss deep interest"
Fosters open, honest discussion culture • Fosters open and honest conversation and discussion • Mutual exchange of views	The immediate supervisor should foster open and honest conversation including mutual exchange of views	- "Willingness to exchange controversial views" - "Appreciate openness" - "Appreciate honesty"
Straightforward cooperation with the supervisor • Team orientation or team spirit • Approachability	The immediate supervisor should engage in cooperation and be approachable to employees	- "Cooperation without any hierarchical thinking" - "Approachability and readiness to talk" - "Appreciate team spirit"
Communicates with employees • Communicates with employees • Provides constructive critique or feedback	The immediate supervisor should communicate with and provide constructive feedback to employees	- "Communication is limited to a minimum" - "Do not appreciate, if supervisor is getting personal with his/her critique"
Informs employees • Provides access to information, meetings and events • Fosters transparency	The immediate supervisor should provide access to information, meetings and events and thereby foster transparency	- "Miss transparent leadership style" - "Miss continuous and organized transfer of information"
Sponsors and challenges employees • Sponsors employees • Offers or supports further education	The immediate supervisor should sponsor and engage in exercise of the employee's mind	- "Appreciate sponsoring and exercise of the employee's mind" - "Appreciate support to further education"

Main and subcategories	Description	Examples
Protective and emotional support for employees • Protects employees • Shows appreciation • Builds trusted and loyal relationship • Shows positive and appropriate expectations about employee's skills, work, abilities, and capabilities • Is sympathetic to personal issues	The immediate supervisor should support his or her subordinates on an emotional as well as protective level by showing appreciation, build a trusted and loyal relationship and is sympathetic to personal issues	- "Appreciate commitment to and protection of subordinates" - "Appreciation of subordinate's work" - "Wrong assessment standards employed by superior, way too high expectations" - "Is very self-centered and ignores subordinates' issues"
(Reasoned) Delegation	The immediate supervisor should delegate tasks reasonably	- "Delegation of many tasks" - "No unnecessary tasks"
Being given freedom • Being given the freedom to work independently • Being given the freedom to schedule work flexibly	The immediate supervisor allows the subordinate to have the freedom to work independently and to schedule work flexibly at work	- "To work independently is allowed" - "It is not possible to work independently" - "Possibility of flexible working hours"