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Competition in Career Tournaments: Investigating the Joint Impact of Trait Competitiveness and Competitive Psychological Climate on Objective and Subjective Career Success

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Practitioner Points

- Organizations should be aware that competitive environments, and specifically their related perceptions, are only beneficial for some employees' career success
- Within perceived highly competitive organizational contexts, personnel selection and development should consider competitive traits of employees when deciding about hiring and career planning
- Career counselors may consider perceived organizational climates and competitive personal characteristics when objective and subjective career success is of topic in the counseling process

Abstract

This study investigates the joint impact of trait competitiveness (i.e., the enjoyment of interpersonal competition and the desire to win and be better than others) and competitive psychological climate (i.e., the degree to which employees perceive organizational rewards as contingent upon comparisons of their performance against that of their peers) on objective and subjective career success. Based on tournament and person–environment fit theory, we assumed that the positive effects of trait competitiveness on different indicators of objective (i.e., salary, promotions) and subjective (i.e., career satisfaction, internal marketability, and meaningful work) career success are stronger under conditions of a highly competitive psychological climate. Moderated regression analyses using data from a 6-month time-lagged study of 340 employees working in diverse occupational fields in their early careers revealed joint effects of the two competition variables. For both objective and subjective career success, the effect of trait competitiveness was strengthened under conditions of a highly competitive psychological climate. We discuss the results by integrating theoretical reasoning from a tournament and person–environment fit perspective on the attainment of career success.

Keywords: career success, tournament theory, trait competitiveness, competitive psychological climate

Competition in Career Tournaments: Investigating the Joint Impact of Trait Competitiveness and Competitive Psychological Climate on Objective and Subjective Career Success

The question of what predicts career success is of importance for individuals' work, career, and life (Arthur, Khapova, & Wilderom, 2005; Hall & Chandler, 2005; Ng, Eby, Sorensen, & Feldman, 2005). Individuals who are successful in their careers experience higher levels of well-being (e.g., Abele, Hagmaier, & Spurk, 2016; Russo, Guo, & Baruch, 2014), show higher levels of work motivation, and have lower turnover intentions—all of which are employee attitudes that are pivotal to career development (e.g., Pachulicz, Schmitt, & Kuljanin, 2008; Shockley, Ureksoy, Rodopman, Poteat, & Dullaghan, 2016; Spurk & Abele, 2014). Therefore, it is not surprising that past research applied different theoretical and empirical approaches to explain how individuals can become successful in their careers (Feldman & Ng, 2007; Spurk, Hirschi, & Dries, in press).

Because the labor market and organizational life has become more and more competitive over the past years (e.g., due to globalization, economic pressures, and performance based HR systems; Fletcher & Nusbaum, 2008; Jones, Davis, & Thomas, 2017; Rynes, Gerhart, & Parks, 2005), theoretical explanations that focus on competition (e.g., tournament theory) have gained relevance within current career contexts. *Tournament theory* (Connelly, Tihanyi, Crook, & Gangloff, 2014; Lazear & Rosen, 1981) proposes that a competition among career actors—and the relative rank within this competition—affects the actors' career outcomes. Moreover, contextual characteristics of the tournament (e.g., tournament type, prize spread) that are associated with perceived competition in the workplace (Connelly et al., 2014; Fletcher, Major, & Davis, 2008) relate to the actors' career outcomes. Although such assumptions are central to a tournament perspective on career success, past research has not provided a stringent test of how individual (e.g., personality) and context-related (e.g., psychological climate) competition variables jointly relate to career attainment. Considering context-related variables within career tournaments also contributes to recent calls in career literature to account for the context in career development, and to move beyond the controversial, narrow focus of individual agency (e.g., Akkermans & Kubasch, 2017; Rodrigues, Guest, Oliveira, & Alfes, 2015; Spurk et al., in press).

Past research identified the global region (United States versus Europe; Boudreau, Boswell, & Judge, 2001), occupational type (people-oriented versus non-people-oriented occupations; Seibert & Kraimer, 2001), or perceived person–organization fit judgements (Erdogan & Bauer, 2005) as meaningful moderators for how personality traits (e.g., Big Five, proactive personality) relate to career success. Another study provided support for the theoretical relevance of tournament perspective on career success because the interaction effects of gender and organizational culture preferences on income were mediated by work time (O'Neill & O'Reilly, 2010). However, these studies did not measure varying degrees of person (e.g., trait competitiveness) and context-related (e.g., competitive psychological climate) competition as tournament indicators in a stringent and explicit manner. Moreover, the studies partly focused on one indicator of either objective or subjective career success (e.g., income; O'Neill & O'Reilly, 2010).

Against this backdrop, the present study aimed to analyze the joint impact of trait competitiveness and competitive psychological climate on career success. We relied on the concept of competition in the workplace because it represents a core dimension within the tournament perspective (Connelly et al., 2014). Based on tournament theory, we examine objective career success (i.e., salary and promotions; Ng et al., 2005; Spurk & Abele, 2014) as typical rewards for tournament winners (Connelly et al., 2014). In addition, we relied on person–environment fit theory (Edwards & Shipp, 2007; Kristof-Brown, Zimmerman, & Johnson, 2005)—specifically, trait activation theory (Tett & Burnett, 2003)—to further explain the joint effects of trait competitiveness and competitive psychological climate on both objective *and* subjective career success (i.e., career satisfaction, internal marketability, and meaningful work; Eby, Butts, & Lockwood, 2003; Greenhaus, Parasuraman, & Wormley, 1990; Shockley et al., 2016).

Altogether, this study makes several contributions to the existing literature. First, it provides a more stringent test (i.e., through direct measurement of specific competition variables) of how varying degrees of competition in career tournaments impact career success. Second, it provides new knowledge about how competition-related personality and psychological climate variables interact in relation to career success. Such knowledge is not only theoretically meaningful, but also has practical implications for personnel selection and (organizational) career management. Third, the study integrates tournament theory *and* person–environment fit theory to make predictions about how person- and context-related competitiveness relates to objective *and* subjective career success. By doing so, this study provides theoretical insights into whether competition is only relevant for objective career success or can also be relevant for subjective types of career success.

Objective and Subjective Career Success as Outcomes of Competition in Career Tournaments

Before explaining how and why trait competitiveness and competitive psychological climate affect objective and subjective career success, we briefly introduce both success domains. The distinction between objective career success and subjective career success has received much attention in the literature (e.g., Abele & Spurk, 2009; Arthur et al., 2005; Gunz & Heslin, 2005). Objective career success is defined as directly observable by others and measurable in a standardized way (Arthur et al., 2005; Gunz & Heslin, 2005)—typically by weighing a person's career against societal norms concerning salary or promotion history (Dries, Pepermans, Hofmans, & Rypens, 2009). Subjective career success is defined as the focal career actor's evaluation and experience of achieving personally meaningful career outcomes (Ng et al., 2005; Seibert, 2006; Shockley et al., 2016). Subjective career success is often measured through career satisfaction (Greenhaus et al., 1990; Seibert, Kraimer, Holtom, & Pierotti, 2013) as an indicator of an individual`s overall evaluation about different aspects of personal career progress (e.g., salary and advancement; Spurk, Abele, & Volmer, 2015). However, especially in the context of the *new* career (Dries & Verbruggen, 2012), subjective career success can refer to a range of indicators (Shockley et al., 2016). In our study, we therefore also focus on internal marketability and

meaningful work to capture such recently mentioned types of subjective career success (Akkermans & Tims, 2017; Mayrhofer et al., 2016). Internal marketability thereby refers to the self-assessed value of individuals for their current organization, including potential other interesting employment opportunities within the current organization (Eby et al., 2003). Meaningful work refers to an employee's evaluation of the significance of one's work (Bunderson & Thompson, 2009).

Although tournament theory mainly focuses on objective career success indicators as typical tournament *prizes* (Connelly et al., 2014), it also acknowledges the role of subjective reward experiences, such as having feelings of mastery, recognition, or appreciation through winning a tournament (Connelly et al., 2014; Lazear & Rosen, 1981). Our study accounts for this broader perspective of the potential effects within career tournaments, as well as the expanded meaning of career success, by investigating several indicators of both objective and subjective career success as potential outcomes of career tournaments.

Trait Competitiveness and Objective and Subjective Career Success

Trait competitiveness is defined as "enjoyment of interpersonal competition and the desire to win and be better than others" (Spence & Helmreich, 1983, p. 41). Research identified self-aggrandizement and striving for interpersonal success as a common core of trait competitiveness across several studies (Fletcher & Nusbaum, 2008; Houston, Mcintire, Kinnie, & Terry, 2002). Some conceptualize trait competitiveness as one dimension of achievement motivation (McClelland, Atkinson, Clark, & Lowell, 1953; Wang & Netemyer, 2002) and empirical work has suggested small to moderate correlations with several subdimensions of agreeableness (negatively) and conscientiousness (positively), as well as self-discipline (positively; Fletcher & Nusbaum, 2008).

According to tournament theory (Connelly et al., 2014; Lazear & Rosen, 1981), a *tournament* is a contest wherein actors compete for a prize that is awarded based on relative rank. The tournament *arena* (i.e., places where tournaments are carried out) can vary from a specific environment, such as units within organizations, to general environments, such as labor markets (Connelly et al., 2014; Lazear & Rosen, 1981). Within career tournaments, there is an open contest for achieving objective career success, such as measured by prestigious jobs, promotions, and salary within the labor market and organizations, where accomplishments and performance evaluations determine winners and losers. Moreover, as mentioned above, tournament theory also mentions that, for example, mastery experiences or interpersonal respect can result from successfully competing with others. Therefore, winning career tournaments can also be relevant for achieving idiosyncratic subjective career success (e.g., recognition, career satisfaction).

Furthermore, tournament theory refers to *actor heterogeneity*, defined as "differences among actors that could influence tournament variables and their final relative rank" (e.g., human capital or personality, Connelly et al., 2014, p. 22). Hence, individual differences that predispose individuals to focus on putting themselves one step ahead of others should be especially relevant for career tournaments. Trait competitiveness can be seen as actor heterogeneity within tournament theory. Individuals who are motivated, enjoy interpersonal competition, and have a desire to win

and be better than others can be expected to show diverse strategies for being evaluated better than their competitors (e.g., colleagues), which should result in higher career success outcomes. Specifically, individuals with high trait competitiveness showed higher levels of job performance (Brown, Cron, & Slocum, 1998; Wang & Netemyer, 2002), self-set goals (Brown et al., 1998), organizational commitment and job dedication (Fletcher et al., 2008), and self-efficacy and internal locus of control (Brown et al., 1998; Fletcher & Nusbaum, 2008). This suggests that individuals who are highly competitive may succeed in their careers because of higher motivation and better performance, resulting in objective tournament rewards.

Moreover, because highly competitive individuals invest more time and energy in their work, and are more committed to their work (Fletcher et al., 2008; Jones et al., 2017), it is reasonable that they will subjectively evaluate their own career as more successful. Based on goal setting theory (Locke & Latham, 2002), investment of effort into goal pursuit is related to a higher probability of goal attainment, which is, in turn, related to feelings of satisfaction and competence. Hence, the higher probability of attaining career goals for individuals high in competitiveness should lead to higher levels of (a) satisfaction with one's career, as well as (b) a stronger sense of competence that is expressed in higher perceived marketability (Eby et al., 2003; Spurk, Kauffeld, Meinecke, & Ebner, 2016). Moreover, actively pursuing and attaining personal goals can create a sense of (c) meaning and purpose in one's work and career (Barrick, Mount, & Li, 2013; Sutin & Robins, 2008). In other words, an employee who likes to compete with others typically sets higher work-related goals (e.g., reaching high organizational performance standards) and is more persistent in achieving these goals (e.g., due to investing more time and better managing setbacks), leading to a higher probability of goal attainment (e.g., superior performance or getting a promotion), which leads to higher career satisfaction. At the same time, feelings of mastery and competence resulting from goal attainment might increase a sense of marketability (i.e., possessing skills valuable for the organization), and progress towards challenging goals can lead to a feeling of increased meaningfulness of work.

In addition, cognitive-motivational mechanisms, such as cognitive dissonance reduction, may be at work. Individuals who like to compete with others and invest much effort into career competition and their work-related activities should judge their careers as more successful, including a more positive evaluation of their marketability and work meaningfulness, to align their cognitions with related attitudes and behaviors (Festinger, 1962; Mayrhofer, Meyer, Schiffinger, & Schmidt, 2008). Because of this theorizing and because competition has become more and more prevalent in recent labor markets and organizations (e.g., Fletcher & Nusbaum, 2008; Jones et al., 2017; Rynes et al., 2005), we assume the following.

Hypothesis 1: Trait competitiveness positively affects (a) objective (i.e., salary and promotions) and (b) subjective (i.e., career satisfaction, internal marketability, and meaningful work) career success.

The Joint Impact of Trait Competitiveness and Competitive Psychological Climate on Objective and Subjective Career Success

Although we expect that trait competitiveness is positively related to objective and subjective career success, there still might exist boundary conditions under which such effects should be more or less pronounced (Fletcher et al., 2008). Considering that different kinds of tournaments might be related to different degrees of perceived competition (Connelly et al., 2014; Fletcher et al., 2008), and based on person–environment fit theory (Edwards & Shipp, 2007; Kristof-Brown et al., 2005), a competitive psychological climate seems especially relevant as such a boundary condition (Fletcher et al., 2008; Jones et al., 2017).

Psychological climates are formed on the basis of a more objective work environment, such as organizational characteristics (Field & Abelson, 1982; James, Hartman, Stebbins, & Jones, 1977; Parker et al., 2003), and are positively related to organizational climate on the group level (Fletcher et al., 2008; Parker et al., 2003). *Competitive psychological climate* is conceptualized as an individual-level construct comprised of an individual's psychologically meaningful representations of competition-related proximal organizational structures, processes, and events (James, Hater, Gent, & Bruni, 1978; Rousseau, 1988). More specifically, competitive psychological climate is defined as "the degree to which employees perceive organizational rewards to be contingent on comparisons of their performance against that of their peers" (Brown et al., 1998, p. 89). Factors that build a competitive psychological climate are, for instance, perceptions of differential rewards that are dependent on performance evaluations based on comparisons with others, perceived competition with others, and frequent status comparisons within the social environment, such as coworkers or supervisors (Fletcher et al., 2008). Therefore, the degree of a competitive psychological climate reflects the subjective perception of applied tournament systems in the workplace.

We assume that the interaction of trait competitiveness and competitive psychological climate positively affects the attainment of career success. We specifically propose this interaction by adding a person–environment fit perspective to the tournament perspective discussed above. Within person–environment fit theory, fit can be defined as a compatibility between an individual and the (perceived) work environment that occurs when their characteristics are well matched (Kristof-Brown et al., 2005). One core tenant of the person–environment fit theory is that fit results in positive outcomes, such as job satisfaction, organizational commitment, job performance, or health and well-being (Edwards & Shipp, 2007; Edwards, 2008; Kristof-Brown et al., 2005). Applying this view to the tournament perspective, we expect that individuals with high trait competitiveness who work within highly competitive psychological climates become objectively *and* subjectively more successful in their careers because of a high subjective person–environment fit.

More specifically, based on trait activation theory (e.g., Tett & Burnett, 2003) as one specific approach within a person-environment fit perspective, we expect that individuals with highly competitive traits should especially flourish under competitive conditions that are subjectively represented within a competitive psychological climate (Fletcher et al., 2008) because they enjoy competing for career rewards against other persons (Fletcher & Nusbaum, 2008; Spence & Helmreich, 1983). Inherent pressures of the environment are more salient under conditions of a

highly competitive psychological climate, activating behavioral tendencies relevant for career success competitions, especially if the individual has a predisposition to react in a competitive manner. More specifically, perceived competitive cues can be expected to activate predisposed competitive traits and lead to competitive career behavior, such as higher work investment or the use of specific career management strategies, such as creating opportunities, self-presentation, attention drawing, information seeking, or networking (e.g., Noe, 1996; Sturges, Guest, Conway, & Davey, 2002).

Regarding subjective career success, because a competitive psychological climate corresponds to, and activates, an existing competitive trait, competitive employees might derive more satisfaction from their career and work because personal needs to be competitive are satisfied (Edwards & Shipp, 2007; Edwards, 2008; Kristof-Brown et al., 2005). Moreover, because personal attributes and competencies associated with trait competitiveness are perceived as valuable for the organization with a perceived highly competitive climate, employees high in trait competitiveness should evaluate their internal marketability especially positively under such conditions. This can also be explained by a perceived attribute-demand fit of the employee under such conditions (Kristof-Brown et al., 2005). Finally, Barrick et al. (2013) argued in a theory of purposeful work behavior that personality traits (e.g., trait competitiveness) initiate purposeful goal strivings, and when the motivational forces associated with the work environment act in concert with these purposeful motivational strivings (i.e., competitive psychological climate), employees experience the psychological state of work meaningfulness.

Empirically, research has shown that a combination of high trait competitiveness and a highly competitive psychological climate results in higher self-set goals, as well as a higher overall job performance (Brown et al., 1998; Fletcher et al., 2008). Moreover, a recent study showed that the relation between a performance goal orientation (which has some similarities with trait competitiveness) and work engagement is stronger under conditions of perceived high competition (Jones et al., 2017). In sum, we expect the following interaction:

> *Hypothesis 2*: *The positive effect of trait competitiveness on (a) objective (i.e., salary and promotions) and (b) subjective (i.e., career satisfaction, internal marketability, and meaningful work) career success is stronger under conditions of a highly competitive psychological climate compared to conditions of a less competitive psychological climate.*

Method

Sample

The sample was gathered in Germany and took place through a survey company in the middle and at the end of 2015. The online panel service (i.e., *respondi*: www.respondi.com) was selected due to its excellent reputation for conducting scientific studies and because of its extensive experience in scientific data sampling. A similar procedure has been successfully applied by other researchers (Masuda, McNall, Allen, & Nicklin, 2012; Ng & Feldman, 2010; Strauss, Griffin, & Parker, 2012). The online panel service invited people who were working in private industry (not self-employed or working students), aged between 25 and 35 years, and holding contracts between 50% and 100% of full-time employment. We chose individuals in their early careers for this study

because findings would less likely be the result of previous work and career experiences, and because career tournaments play a more important role in early, compared to late, career stages (e.g., Ng & Feldman, 2007; Super, 1980). Individuals were invited to fill in an initial online questionnaire (T1), and 6 months later, to fill in a follow-up questionnaire (T2). Individuals who participated at T1 were reminded by email to fill in the follow-up questionnaire.

Overall, 502 individuals responded to the survey within 14 days (T1). Out of these, 378 participants (75.3%) answered the survey questions at T2. We excluded nine participants who indicated working less than 20 hours per week, and 39 participants with missing data on the study variables, resulting in a sample size of 340 employees. In the final sample, 48.2% were female, and the mean age was 31.5 (*SD* = 2.7). Thirty-two percent of participants had a university degree. On average, participants had a tenure of 5.0 years (*SD* = 3.7) and worked 40.8 hours (*SD* = 8.1) per week. Participants worked in various occupations and industries. The most common industries were related to different types of technology and manufacturing (42.9%), commerce and transport (16.5%), and media and culture (10.0%). Dropout analyses revealed no significant differences between participants who only responded at T1 and participants who responded at T1 and T2 with regards to the study variables.

Measures

The predictor variables of trait competitiveness and competitive psychological climate were measured at T1. The outcome variables representing career success were measured at T1 and T2 (except promotions because the participants rated their number of promotions between T1 and T2).

Trait competitiveness was measured using a 4-item scale of Helmreich and Spence (1978), which was also applied in recent research (Fletcher et al., 2008). A sample item is "I enjoy working in situations involving competition with others." Participants answered items on a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). To translate the scale from English to German, we followed conventional back-translation procedures. Cronbach alpha for the scale was .86.

Competitive psychological climate was measured by a 4-item scale with items such as "The amount of recognition you get in this company depends on how you perform compared to others", and "My manager frequently compares my performance with that of my coworkers" (Brown et al., 1998; Fletcher et al., 2008). Participants scored the items on a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Again, to translate the scale from English to German, we followed conventional back-translation procedures. Cronbach alpha was .82.

Objective career success was measured as salary and promotions. *Salary* was measured in categories. Respondents were able to indicate their monthly salary on a scale with 21 steps ranging from less than 500 Euros (1) to equal or higher than 10,000 Euros (21), with every step in between spanning 500 Euros (e.g., 500 to 999 Euros; Spurk, Keller, & Hirschi, 2016). Regarding *promotions*, respondents were asked to indicate how often they were promoted between T1 and T2 (Judge, Cable, Boudreau, & Bretz, 1995). We decided to measure the number of promotions between T1 and T2 (as opposed to overall number of promotions) because such an

operationalization accounts for the prospective, time-lagged design of our study and allows one to focus on objective career success development in the tournament between T1 and T2.

Subjective career success was measured as career satisfaction (i.e., Greenhaus et al., 1990), internal marketability (i.e., Eby et al., 2003), and meaningful work (i.e., Bunderson & Thompson, 2009). Regarding *career satisfaction*, participants rated the five career satisfaction items on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item from this scale is "I am satisfied with the progress I have made toward meeting my goals for income." Cronbach's alpha for this scale was .92 (T1 and T2). Participants rated the three *internal marketability* items on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). A sample item is "My company views me as an asset to the organization." Cronbach's alpha for this scale was .82 (T1) and .80 (T2). *Meaningful work* was measured with five items rated from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "The work that I do is important." Cronbach alpha for this scale was .88 (T1) and .86 (T2).

As *control variables*, we considered gender (0 = *female*, 1 = *male*), working hours per week (open format), educational degree (0 = *non-academics*, 1 = *academics*), change of employer between T1 and T2 (0 = *no change*, 1 = *change*), and industry (dummy coded: technology and manufacturing, commerce and transport, media and culture, health and social, finance and insurance, and other) as potentially confounding variables in the prediction of career success (Feldman & Ng, 2007; Ng et al., 2005; Seibert, Crant, & Kraimer, 1999). These variables may also be related to competition in the workplace (Brown et al., 1998; Fletcher et al., 2008; Jones et al., 2017; Keller, Spurk, Baumeler, & Hirschi, 2016), and therefore represent variables of specific theoretical and practical interest in our study that should be controlled for (Becker, 2005). Besides eliminating potential confounding influences, this strategy allowed us to answer the question of whether competition variables analyzed here add meaningful variance beyond a range of other relevant predictors of career success.

Analytical Procedure

Data were analyzed using a moderated regression analysis using *M*plus version 7 (Muthén & Muthén, 1998-2015) to account for all career success outcomes simultaneously within one statistical model. The outcome at T2 was controlled for with the same variable at T1 to establish a temporal order within the analyses (Allison, 1990), and thereby, statistically, to define a starting point for the career tournament. By doing so, the results also can be interpreted as predicting autoregressive change (i.e., that some individuals change their relative career success level more than others from T1 to T2; Ferrer & McArdle, 2003). Such logic is in line with the development of outcomes within a career tournament. However, because these baseline control models have also been criticized specifically for the possibility of binding relevant variance in the outcome variable at T2 (Allison, 1990; Zapf, Dormann, & Frese, 1996), we also analyzed the data without a baseline. We report the central values for this additional analysis in the hypotheses testing section and provide all results without a baseline in Supplemental Material 1 and 2.

We first estimated a model that included only main effects (see Hypothesis 1) and then proceeded to a model that included the moderation effects (see Hypothesis 2) because this procedure mirrored the logic of a stepwise moderated regression analysis where, first, main effects,

and afterwards, the interaction terms, are entered into the regression models (Cohen, Cohen, West, & Aiken, 2013). In case of a significant interaction, we calculated simple slope tests and plotted the interaction for a better understanding of the nature of the interaction (Cohen et al., 2013). Model fit was evaluated based on comparative fit index (CFI), root mean squared error of approximation (RMSEA), and the standardized root mean squared residual (SRMR). Values above .90 for CFI, below .08 for RMSEA, and below .08 for SRMR indicate good model fit (Hu & Bentler, 1999).

Results

Preliminary Analyses

In a first step, we conducted a confirmatory factor analyses (CFA) to show that the two predictors and the three subjective career success outcome variables career satisfaction, internal marketability, and meaningful work are empirically distinct constructs in our sample. Therefore, we estimated different models with varying numbers of latent factors (conceptually expected Model 1: trait competitiveness, competitive psychological climate, career satisfaction, internal marketability, and meaningful work as separate factors, Model 2: trait competitiveness and competitive psychological climate as one factor, and career satisfaction, internal marketability, and meaningful work as separate factors, Model 3: trait competitiveness and competitive psychological climate as separate factors, and career satisfaction, internal marketability, and meaningful work as one factor, Model 4: a general factor model where all items of all constructs load on one factor). Model 1, in which five factors were modeled, showed superior model fit to all other models (Model 1: $\chi^2(179) = 631.5$, CFI = .91, RMSEA = .08, SRMR = .06; Model 2: $\chi^2(183) = 1017.7$, CFI = .83, RMSEA = .11, SRMR = .09; Model 3: $\chi^2(186) = 1610.1$, CFI = .71, RMSEA = .14, SRMR = .10; Model 4: $\chi^2(189) = 2766.1$, CFI = 474, RMSEA = .19, SRMR = .16).

Descriptive analyses (see Table 1) showed that trait competitiveness and competitive psychological climate were positively related to all career success indicators, to a small to moderate extent, at T1 and T2 (all r values from .11 to .42, all p values < .05), with overall larger correlations of trait competitiveness. The smallest correlations were between competitive psychological climate and meaningful work. Additionally, we found moderate to high stabilities for salary, career satisfaction, internal marketability, and meaningful work over the 6-month period (all r values from .55 to .81, all p values < .001). Trait competitiveness and competitive psychological climate were moderately positively related ($r = .37$, $p < .001$).

Hypotheses Testing

Main effects of trait competitiveness on objective and subjective career success. Providing some initial support for Hypothesis 1a and 1b on a correlational level (see Table 1), trait competitiveness at T1 was positively related with salary at T2 ($r = .21$, $p < .001$) and promotions between T1 and T2 ($r = .15$, $p < .01$), as well as with career satisfaction ($r = .26$, $p < .001$), internal marketability ($r = .34$, $p < .001$), and meaningful work at T2 ($r = .17$, $p < .001$).

Within the regression models (see Figure 1), the results for objective and subjective career success revealed that after controlling for the career success baseline at T1, slightly fewer main effects, compared to not controlling for the baseline, were identified. Specifically, trait

competitiveness was positively related with promotions between T1 and T2 (β = .12, $p < .05$; baseline not applicable), and with internal marketability at T2 (β = .13, $p < .05$; without baseline: β = .23, $p < .001$), but not with career satisfaction at T2 (β = .07, $p = .115$; without baseline: β = .14, $p < .001$), and meaningful work at T2 (β = .03, *ns*; without baseline: β = .11, $p < .01$) after considering the baseline. The effect on salary at T2 was positive and almost significant (β = .06, $p = .08$; without baseline: β = .11, $p < .05$) after considering the baseline. Altogether, these findings give *partial support* for Hypothesis 1a and 1b when considering the baseline, and *full support* when not considering the baseline. Competitive psychological climate at T1 was not significantly related to objective or subjective career success indicators at T2 within this regression model.

The joint impact of trait competitiveness and competitive psychological climate on objective and subjective career success. The expected interaction effect of trait competitiveness and competitive psychological climate (see Table 2 and Figure 2) was supported—with and without considering the outcome baseline—for all indicators of objective career success (salary T2: $b = .09$, $p < .05$; without baseline: $b = .14$, $p < .05$; promotions between T1 and T2: $b = .02$, $p < .05$; baseline not applicable), and subjective career success (career satisfaction T2: $b = .06$, $p < .01$; without baseline: $b = .06$, $p < .01$; internal marketability T2: $b = .08$, $p < .01$; without baseline: $b = .08$, $p < .01$; meaningful work T2: $b = .07$, $p < .001$; without baseline: $b = .09$, $p < .001$). In all cases, the effect of trait competitiveness was larger under the conditions of a highly competitive psychological climate, which supports Hypothesis 2a and 2b.

Simple slope tests showed that trait competitiveness was positively related with salary at T2 (*SD* +1: b = .25, $p < .01$), promotions between T1 and T2 (*SD* +1: b = .07, $p < .01$), career satisfaction at T2 (*SD* +1: b = .21, $p < .01$), internal marketability at T2 (*SD* +1: b = .20, $p < .001$), and meaningful work (*SD* +1: b = .12, $p < .01$) under the conditions of a highly competitive psychological climate, but not a low competitive psychological climate (for salary *SD* -1: b = .02, $p = .82$; promotions *SD* -1: b = .01, $p = .66$; career satisfaction *SD* -1: b = -.02, $p = .865$; internal marketability *SD* -1: b = .01, $p = .88$; meaningful work *SD* -1: b = -.06, $p = .16$). Trait competitiveness was also positively related to career success indicators under average levels of competitive psychological climate for promotions between T1 and T2 (b = .04, $p < .05$), and internal marketability at T2 (b = .10, $p < .01$). For salary at T2 (b = .14, $p = .07$) and career satisfaction at T2 (b = .05, $p = .10$), the effects of trait competitiveness were nearly significant, but for meaningful work at T2 (b = .03, $p = .38$), the effect was clearly nonsignificant under average levels of competitive psychological climates. Figures 3 to 7 show the interaction effects plotted for all career success outcome variables.

Discussion

Based on tournament theory and a person–environment fit perspective, this study analyzed the joint impact of two competition variables related to career tournaments on objective and subjective career success: trait competitiveness as a personality variable and competitive psychological climate as a perceived work environment variable. Thereby, the study reacts to recent calls to investigate individual career development as a more contextualized phenomenon (Akkermans & Kubasch, 2017; Rodrigues et al., 2015; Spurk et al., in press). Overall, the

hypotheses directly derived from tournament theory (Hypothesis 1a and 1b) found partial support when considering the baseline, and full support when not considering the baseline. The hypotheses integrating tournament theory and person–environment fit theory (Hypothesis 2a and 2b) were fully supported, regardless of whether the outcome baseline was considered or not. Put differently, individuals who enjoy competing with others (i.e., showing high trait competitiveness) tend to attain more objective and subjective career success within their careers. More specifically, for salary, promotions, career satisfaction, internal marketability, and meaningful work, the results suggest that if individuals perceive their work environment as more competitive, those who enjoy competing with others are particularly objectively and subjectively more successful over time. However, under conditions of less perceived competition at work, trait competitiveness was not related to attaining career success. An average level of perceived competition was enough to facilitate effects of trait competitiveness on some career success indicators, showing that the assumed continuum of competitive psychological climates within tournaments is theoretically and practically meaningful.

Theoretical Implications for Career Tournaments and Competition in the Workplace

Overall, our study contributes in several ways to the literature on career success antecedents, the individual experience of competition in the workplace, career tournaments, and a person–environment fit perspective on the attainment of career success. First, although the tournament perspective on career success is a popular explanation for career achievements, past research has mainly focused on indirect operationalizations of this perspective (e.g., human capital, intelligence, sex, organizational culture preferences; Ng et al., 2005; O'Neill & O'Reilly, 2010). By adding trait competitiveness and competitive psychological climate, we extend this literature by examining more specific competition-related variables in the context of tournament theory. Specifically, our study adds to the existing literature by focusing on trait competitiveness as an indicator of actor heterogeneity and competitive psychological climate as an individual representation of different degrees of career tournaments.

Such an approach provides a theoretical contribution because tournament theory has not clarified in detail how the tournament environment is perceived by the individual, how it interacts with individual traits (i.e., the person–environment fit perspective), and how this interaction might subsequently result in tournament outcomes, such as career success. Our study provides an explanation for how career success may evolve as an interaction of actor heterogeneity and the perceived competition: If the work environment is perceived as competitive, competitive traits may be activated, inducing competitively-disposed employees to show competitive behaviors (e.g., positioning, networking, additional work effort, and better work performance). This, in turn, may act as signals to important stakeholders who make career success-relevant decisions (Spence, 1973), as well as allow the individual to attain personally valuable career goals, and thus achieve higher levels of satisfaction, meaning, and perceived internal marketability. From this perspective, tournament theory, which applies a relatively rational, economical viewpoint to career attainment, might be extended by more psychological, implicit processes that include trait activation as a means of activating or intensifying actor heterogeneity. By integrating a person–environment fit

perspective with a tournament perspective, our model also explains interaction effects on subjective career success: Individuals are subjectively more satisfied, experience their work as meaningful, and perceive higher marketability because individual needs and skills of highly competitive persons are satisfied and in demand within perceived competitive workplaces (Edwards & Shipp, 2007; Kristof-Brown et al., 2005).

Second, our research advances studies on personality and career success, which focused largely on main effects of personality (Ng et al., 2005; Seibert et al., 1999). By doing so, past research often neglected trait activation and person–environment fit aspects when theorizing or empirically analyzing effects of personality on career success (for exceptions see, for instance, Boudreau et al., 2001; Erdogan & Bauer, 2005; Seibert & Kraimer, 2001). The results of our study suggest that the activation of a trait by corresponding perceptions of the environment seem to be more important than the trait alone, as we found more support for interaction effects than main effects of trait competitiveness after controlling for several other variables. This might also be one explanation for why past research frequently found small effect sizes when predicting (especially objective) career success using personality traits (Ng et al., 2005).

Third, to the best of our knowledge, this study is the first to analyze trait competitiveness and perceived organizational climate as antecedents of career success. Therefore, it also extends a line of research that analyzed these variables in relation to other outcomes, such as job performance or self-set goals (Brown et al., 1998; Fletcher et al., 2008). Similar to a study by Jones et al. (2017), we assumed main effects of a competition-related person attribute on the outcome variables, assuming that competition in the workplace became relatively salient over the past few years (e.g., Fletcher & Nusbaum, 2008; Jones et al., 2017; Rynes et al., 2005). However, for some of the analyzed career success outcomes (i.e., career satisfaction and meaningful work), these main effects were not significant after considering the baseline. It is possible that these nonsignificant findings were found because these two career success indicators are less performance related and refer to an intrinsically fulfilling evaluation of one's career that might be less positively affected by trait competitiveness. However, our finding regarding how trait competitiveness relates positively to career satisfaction and meaningful work under the condition of a perceived highly competitive climate is theoretically relevant because it shows that even relatively intrinsic self-referent success evaluations can grow within career tournaments. Specifically, our study helps to address the issue of how past research found mixed results for the direct relation between competitive psychological climate with organizational commitment, job dedication, career calling, and task performance (Fletcher et al., 2008; Jones et al., 2017; Keller et al., 2016). As our study suggests, it is not only competitive traits that might flourish under perceived competitive conditions, but also perceived competition might have beneficial or detrimental career developmental effects for certain individuals (depending on the fit of the climate to individual traits).

Practical Implications

Practical implications of the findings are that individuals with highly competitive attitudes and behaviors, who understand their careers more in terms of tournaments, should aim to work in

environments that they perceive as competitive to achieve their aspired career success. For those who are less competitive, subjecting themselves to the potential stress of working in a competitive environment is less likely to yield a positive career payoff, both in terms of objective, extrinsic rewards, or more subjective, intrinsic benefits, such as conducting meaningful work or experiencing higher levels of satisfaction within a career. Career counselors may apply this knowledge when supporting individuals in their career decision-making and best-fitting job search.

Moreover, human resource management and organizational developers should also be aware that perceptions about the organizational climate—which can be intentionally shaped by the organization—provide boundary conditions for the career development of their employees. Hence, organizational career management should not only account for goals or aims of employees, but also deal with the question of which environmental perceptions are best suited to enhance success of different types of employees. Organizationally provided career paths might therefore differ between individuals with high or low competitive traits, depending on the degree of competition related to these different career models (e.g., leadership versus expert career path).

Finally, although the topic of competition might become more salient in the next few years, some organizations clearly apply competitive career tournaments (e.g., some of the leading consulting firms) as an advancement model for their employees. Hence, organizations that apply such competition-based human resource models might do well to favor competitive traits within their hiring strategy. Against the background that our sample dealt with, early career employees, such a strategy would help employees to have a successful and satisfying career entry, which might have longstanding consequences on later career stages due to path dependency and early socialization experiences (Verbruggen, Van Emmerik, Van Gils, Meng, & de Grip, 2015).

Limitations and Future Research

One limitation of our study is that the data were collected by the same method and the same source, which enhances the probability of common method influences (Podsakoff, MacKenzie, & Podsakoff, 2012). However, we separated the predictors and outcome measure over time to reduce this problem. Moreover, we conducted a CFA that clearly showed that the constructs can be separated from each other (e.g., Harman's single factor test; Podsakoff et al., 2012). Additionally, although we applied a time-lagged research design and controlled for the baseline, and thereby established a temporal order, no clear causal reasoning can be inferred from the study (Mitchell & James, 2001). It might be that individuals who earn more, received more promotions, or see themselves as more marketable within their organization also perceive themselves or their environment as being more competitive. Although this was not the focus of this study, it might be an interesting endeavor for future research.

As another limitation, one might argue that a time span of six months may not be long enough to study effects of the predictors at T1 on subsequent career success attainment at T2, especially on objective career success indicators. The relatively small number of promotions between T1 and T2 supports this assumption. However, this provides a more stringent test of our model, and supports, rather than devalues, the found effects. Hence, overall, the applied time lags seemed to be valid for the analyzed research question, and the identified interaction effects might

even become more nuanced when considering longer time spans. To account for the absolute level of career success achieved during one's whole career, as described in the results, we analyzed the data without a baseline and found very similar interaction effects. Moreover, the main effects of trait competitiveness were significant for all outcomes when not considering the baseline. In sum, detecting relatively similar results in models with and without a baseline provides further validity for the findings.

Third, similar to other research (Jones et al., 2017; Parker et al., 2003), we focused on competitive psychological climate. It has to be acknowledged, however, that psychological climate perceptions are only an approximation for the more objective organizational context and the career tournaments investigated here. Hence, other researchers might be interested in operationalizing tournament theory-related concepts or organizational climate in a more objective manner. For instance, tournament theory refers to concepts, such as tournament breadth (size and composition of tournament actors) or price spread (difference between the highest possible reward and lower rewards) that should affect perceived competition (Connelly et al., 2014). Future studies should assess such objective tournament aspects and link them to perceived competition. Furthermore, future research may also focus on higher levels of analyses to measure and model tournament contexts (e.g., teams, division, or organizations as tournament arenas). For instance, aggregate scores within a unit, supervisor climate judgements, or objective data from the companies (e.g., incentive policies) might be used as such higher-level data.

Fourth, and related to the previous point, we used a heterogeneous sample across several occupations and organizations. On the one hand, such an approach has the advantage of being able to include variance of different degrees of perceived competition, which is a necessary precondition within our model. Furthermore, on a broader level, career tournaments can also be interpreted as tournaments across organizations within the labor market, which is partly covered by the heterogeneous sample investigated here. On the other hand, it might be that the employees in this heterogeneous sample partly worked in organizations that do not apply strict tournament-based career or performance systems. A homogeneous sample would be complementary and allow one to investigate specific tournament parameters or applied tournament systems in more detail. Therefore, future research could analyze similar models and assumptions within more homogeneous samples while considering/comparing clear tournament versus non-tournament-based organizations. Relatedly, we focused on young employees because competition seems particularly important in this group. However, future research also could investigate these processes among middle-aged or older workers because employees of different ages are all confronted with competitive work climates.

Finally, we focused on the main and moderated effect of trait competitiveness on career success. Future studies could examine mediating variables in more detail, such as how competitive individuals behave under certain organizational conditions, and if, for example, they show higher levels of manipulation tactics, impression management, career self-management, or task performance, which result in more career success (Kossek, Roberts, Fisher, & DeMarr, 1998; Noe, 1996; Sturges et al., 2002). Another possibility would be to consider the dynamics between trait

competitiveness and competitive psychological climate over time (e.g., reciprocal relationships), and if and how such developments lead to career success and other career-related decisions. As a closing note, we integrated theorizing on subjective career success as a further relevant outcome when investigating competition in the workplace. Future research could further elaborate and develop this line of reasoning, and could, for instance, develop and test assumptions regarding which competition-related concepts are more strongly or weakly related to different indicators of objective versus subjective career success.

Conclusion

This study applied a tournament and person–environment fit perspective to the attainment of an individual's objective and subjective career success. By integrating the concepts of trait competitiveness and competitive psychological climate within these two perspectives, results of the study suggest that considering the joint impact of an individual's traits and perception about the organizational climate is more important than considering personal attributes alone, especially when it comes to the attainment of career success. Moreover, the study suggests that it might be fruitful to extend tournament theory using assumptions of person–environment fit theory to optimally account for the explanation of the attainment of both objective and subjective career success.

References

Abele, A. E., Hagmaier, T., & Spurk, D. (2016). Does career success make you happy? The mediating role of multiple subjective success evaluations. *Journal of Happiness Studies, 17*, 1615–1633.

Abele, A. E., & Spurk, D. (2009). How do objective and subjective career success interrelate over time? *Journal of Occupational and Organizational Psychology, 82*, 803–824.

Akkermans, J., & Kubasch, S. (2017). # Trending topics in careers: a review and future research agenda. *Career Development International, 22*, 586-627.

Akkermans, J., & Tims, M. (2017). Crafting your career: How career competencies relate to career success via job crafting. *Applied Psychology, 66*, 168-195.

Allison, P. D. (1990). Change scores as dependent variables in regression analysis. *Sociological methodology*, 93-114.

Arthur, M. B., Khapova, S. N., & Wilderom, C. P. M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior, 26*, 177–202.

Barrick, M. R., Mount, M. K., & Li, N. (2013). The theory of purposeful work behavior: The role of personality, higher-order goals, and job characteristics. *Academy of management review, 38*, 132-153.

Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods, 8*, 274-289.

Boudreau, J. W., Boswell, W. R., & Judge, T. A. (2001). Effects of personality on executive career success in the United States and Europe. *Journal of Vocational Behavior, 58*, 53–81.

Brown, S. P., Cron, W. L., & Slocum, J. W. (1998). Effects of trait competitiveness and perceived intraorganizational competition on salesperson goal setting and performance. *The Journal of Marketing, 62*, 88–98.

Bunderson, J. S., & Thompson, J. A. (2009). The call of the wild: Zookeepers, callings, and the double-edged sword of deeply meaningful work. *Administrative science quarterly, 54*, 32-57.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, NJ: Erlbaum.

Connelly, B. L., Tihanyi, L., Crook, T. R., & Gangloff, K. A. (2014). Tournament theory: Thirty years of contests and competitions. *Journal of Management, 40*, 16–47.

Dries, N., Pepermans, R., Hofmans, J., & Rypens, L. (2009). Development and validation of an objective intra-organizational career success measure for managers. *Journal of Organizational Behavior, 30*, 543–560.

Dries, N., & Verbruggen, M. (2012). Fresh perspectives on the 'new'career: Introduction to the special section. *Journal of Vocational Behavior, 81*, 269–270.

Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior, 24*, 689–708.

Edwards, I. R., & Shipp, A. I. (2007). The relationship between person-environment fit and outcomes: An integrative theoretical framework. *Perspectives on Organizational Fit*, 209-258.

Edwards, J. R. (2008). 4 person–environment fit in organizations: An assessment of theoretical progress. *Academy of Management Annals, 2*, 167–230.

Erdogan, B., & Bauer, T. N. (2005). Enhancing career benefits of employee proactive personality: The role of fit with jobs and organizations. *Personnel Psychology, 58*, 859–891.

Feldman, D. C., & Ng, T. W. H. (2007). Careers: Mobility, embeddedness, and success. *Journal of Management, 33*, 350–377.

Ferrer, E., & McArdle, J. (2003). Alternative structural models for multivariate longitudinal data analysis. *Structural Equation Modeling, 10*, 493-524.

Festinger, L. (1962). *A theory of cognitive dissonance* (Vol. 2). Stanford University press.

Field, R. G., & Abelson, M. A. (1982). Climate: A reconceptualization and proposed model. *Human Relations, 35*, 181–201.

Fletcher, T. D., Major, D. A., & Davis, D. D. (2008). The interactive relationship of competitive climate and trait competitiveness with workplace attitudes, stress, and performance. *Journal of Organizational Behavior, 29*, 899–922.

Fletcher, T. D., & Nusbaum, D. N. (2008). Trait competitiveness as a composite variable: Linkages with facets of the big-five. *Personality and Individual Differences, 45*, 312–317.

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on orgnizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal, 33*, 64–86.

Gunz, H. P., & Heslin, P. A. (2005). Reconceptualizing career success. *Journal of Organizational Behavior, 26*, 105–111.

Hall, D. T., & Chandler, D. E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior, 26*, 155–176.

Houston, J. M., Mcintire, S. A., Kinnie, J., & Terry, C. (2002). A factorial analysis of scales measuring competitiveness. *Educational and Psychological Measurement, 62*, 284–298.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.

James, L. R., Hartman, A., Stebbins, M. W., & Jones, A. P. (1977). Relationships between psychological climate and a vie model for work motivation. *Personnel Psychology, 30*, 229–254.

James, L. R., Hater, J. J., Gent, M. J., & Bruni, J. R. (1978). Psychological climate: Implications from cognitive social learning theory and interactional psychology. *Personnel Psychology, 31*, 783–813.

Jones, J. L., Davis, W. D., & Thomas, C. H. (2017). Is competition engaging? Examining the interactive effects of goal orientation and competitive work environment on engagement. *Human Resource Management, 56*, 389–405.

Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz, R. D. (1995). An emperical investigation of the predictors of executive career success. *Personnel Psychology, 48*, 485–519.

Keller, A. C., Spurk, D., Baumeler, F., & Hirschi, A. (2016). Competitive climate and workaholism: Negative sides of future orientation and calling. *Personality and Individual Differences, 96*, 122–126.

Kossek, E. E., Roberts, K., Fisher, S., & DeMarr, B. (1998). Career self-management: A quasi-experimental assessment of the effects of a training intervention. *Personnel Psychology, 51*, 935–962.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology, 58*, 281–342.

Lazear, E. P., & Rosen, S. (1981). Rank-order tournaments as optimum labor contracts. *Journal of Political Economy, 89*, 841–864.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57*, 705–717.

Masuda, A. D., McNall, L. A., Allen, T. D., & Nicklin, J. M. (2012). Examining the constructs of work-to-family enrichment and positive spillover. *Journal of Vocational Behavior, 80*, 197–210.

Mayrhofer, W., Briscoe, J. p., Hall, D. T., Dickmann, M., Dries, N., Dysvik, A., . . . Unite, J. (2016). Career success across the globe: Insights from the 5C Project. *Organizational Dynamics, 45*, 197–205.

Mayrhofer, W., Meyer, M., Schiffinger, M., & Schmidt, A. (2008). The influence of family responsibilities, career fields and gender on career success: An empirical study. *Journal of Managerial Psychology, 23*, 292–323.

McClelland, D. C., Atkinson, J., Clark, R., & Lowell, E. (1953). *The achieving motive*. East Norwalk, CT: Appleton Century Crofts.

Mitchell, T. R., & James, L. R. (2001). Building better theory: Time and the specification of when things happen. *Academy of Management Review, 26*, 530–547.

Muthén, L. K., & Muthén, B. O. (1998-2015). *Mplus user's guide (7th ed.)*. Los Angeles, CA: Muthén & Muthén.

Ng, T. W., & Feldman, D. C. (2010). Human capital and objective indicators of career success: The mediating effects of cognitive ability and conscientiousness. *Journal of Occupational and Organizational Psychology, 83*, 207-235.

Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology, 58*, 367–408.

Ng, T. W. H., & Feldman, D. C. (2007). Organizational embeddedness and occupational embeddedness across career stages. *Journal of Vocational Behavior, 70*, 336-351.

Noe, R. A. (1996). Is career management related to employee development and performance? *Journal of Organizational Behavior*, 119–133.

O'Neill, O. A., & O'Reilly, C. A. (2010). Careers as tournaments: The impact of sex and gendered organizational culture preferences on MBAs' income attainment. *Journal of Organizational Behavior, 31*, 856–876.

Pachulicz, S., Schmitt, N., & Kuljanin, G. (2008). A model of career success: A longitudinal study of emergency physicians. *Journal of Vocational Behavior, 73*, 242–253.

Parker, C. P., Baltes, B. B., Young, S. A., Huff, J. W., Altmann, R. A., Lacost, H. A., & Roberts, J. E. (2003). Relationships between psychological climate perceptions and work outcomes: A meta-analytic review. *Journal of Organizational Behavior, 24*, 389–416.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539–569.

Rodrigues, R., Guest, D., Oliveira, T., & Alfes, K. (2015). Who benefits from independent careers? Employees, organizations, or both? *Journal of Vocational Behavior, 91*, 23-34.

Rousseau, D. M. (1988). The construction of climate in organizational research. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (Vol. 3). Oxford, England: John Wiley & Sons.

Russo, M., Guo, L., & Baruch, Y. (2014). Work attitudes, career success and health: Evidence from China. *Journal of Vocational Behavior, 84*, 248–258.

Rynes, S. L., Gerhart, B., & Parks, L. (2005). Personnel psychology: Performance evaluation and pay for performance. *Annu. Rev. Psychol., 56*, 571–600.

Seibert, S. E. (2006). Career Success. In J. H. Greenhaus & G. A. Callanan (Eds.), *Encyclopedia of career development*. London: Sage Publications.

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*, 416–427.

Seibert, S. E., & Kraimer, M. L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behaviour, 58*, 1–21.

Seibert, S. E., Kraimer, M. L., Holtom, B. C., & Pierotti, A. J. (2013). Even the best laid plans sometimes go askew: Career self-management processes, career shocks, and the decision to pursue graduate education. *Journal of Applied Psychology, 98*, 169–182.

Shockley, K. M., Ureksoy, H., Rodopman, O. B., Poteat, L. F., & Dullaghan, T. R. (2016). Development of a new scale to measure subjective career success: A mixed-methods study. *Journal of Organizational Behavior, 37*, 128–153.

Spence, J. T., & Helmreich, R. L. (1983). Achievement-related motives and behaviors. *Achievement and Achievement Motives: Psychological and Sociological Approaches*, 7–74.

Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics, 87*, 355–374.

Spurk, D., & Abele, A. E. (2014). Synchronous and time-lagged effects between occupational self-efficacy and objective and subjective career success: Findings from a four-wave and 9-year longitudinal study. *Journal of Vocational Behavior, 84*, 119–132.

Spurk, D., Abele, A. E., & Volmer, J. (2015). The career satisfaction scale in context: A test for measurement invariance across four occupational groups. *Journal of Career Assessment, 23*, 191–209.

Spurk, D., Hirschi, A., & Dries, N. (in press). Antecedents and Outcomes of Objective Versus Subjective Career Success: Competing Perspectives and Future Directions. *Journal of Management*.

Spurk, D., Kauffeld, S., Meinecke, A. L., & Ebner, K. (2016). Why do adaptable people feel less insecure? Indirect effects of career adaptability on job and career insecurity via two types of perceived marketability. *Journal of Career Assessment, 24*, 289–306.

Spurk, D., Keller, A. C., & Hirschi, A. (2016). Do bad guys get ahead or fall behind? Relationships of the Dark Triad of personality with objective and subjective career success. *Social Psychological and Personality Science, 17*, 113–121.

Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology, 97*, 580–598.

Sturges, J., Guest, D., Conway, N., & Davey, K. M. (2002). A longitudinal study of the relationship between career management and organizational commitment among graduates in the first ten years at work. *Journal of Organizational Behavior, 23*, 731–748.

Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior, 16*, 282-298.

Sutin, A. R., & Robins, R. W. (2008). Going forward by drawing from the past: Personal strivings, personally meaningful memories, and personality traits. *Journal of Personality, 76*, 631-664.

Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology, 88*, 500–517.

Verbruggen, M., Van Emmerik, H., Van Gils, A., Meng, C., & de Grip, A. (2015). Does early-career underemployment impact future career success? A path dependency perspective. *Journal of Vocational Behavior, 90*, 101–110.

Wang, G., & Netemyer, R. G. (2002). The effects of job autonomy, customer demandingness, and trait competitiveness on salesperson learning, self-efficacy, and performance. *Journal of the Academy of Marketing Science, 30*, 217–228.

Zapf, D., Dormann, C., & Frese, M. (1996). Longitudinal studies in organizational stress research: A review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology, 1*, 145–169.

Table 1

Mean, Standard Deviations, and Correlations Between Study Variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Working hours	40.81	8.19																				
2 Gender[1]	-	-	-.17**																			
3 Turnover[2]	-	-	-.09	.03																		
4 Education[3]	-	-	.07	.04	-.04																	
5 Technology and manufacturing	-	-	.03	-.21***	-.01	-.02																
6 Commerce and transport	-	-	.15**	.09	-.02	.12*	-.29***															
7 Media and culture	-	-	.01	.01	.02	-.04	-.39***	-.15**														
8 Health and social	-	-	-.16**	.17**	-.02	.02	-.29***	-.11*	-.15**													
9 Finance and insurance	-	-	.01	.04	-.09	-.06	-.27***	-.10	-.14*	-.10												
10 Other industries	-	-	-.04	.04	.10	-.01	-.32***	-.12*	-.16**	-.12*	-.11*											
11 Trait competitiveness T1	4.16	1.23	.17**	-.07	-.02	.02	.01	.07	-.04	-.03	-.01	-.01										
12 Competitive PC T1	3.65	1.25	.14*	-.03	.02	.01	-.01	.01	.01	-.02	.07	-.05	.37***									
13 Salary T1	5.70	2.38	.38**	-.28***	-.13**	.22***	.21***	-.05	-.07	-.15**	.07	-.11*	.17**	.16**								
14 Salary T2	5.86	2.78	.36***	-.23***	-.07	.16**	.23***	-.10	-.10	-.13*	.07	-.08	.21***	.18**	.81***							
15 Promotions from T1 to T2	0.14	0.19	.06	.02	.09	.08	.08	.01	.01	-.08	-.02	-.03	.15**	.14*	.09	.18**						
16 Career satisfaction T1	3.27	0.82	.07	-.10	-.15**	.05	.13*	.01	-.08	.04	-.06	-.10	.35***	.24***	.34***	.32***	.16**					
17 Career satisfaction T2	3.21	0.78	.11*	-.16**	-.14**	.08	.16**	-.03	-.05	-.01	-.05	-.11*	.26***	.13*	.35***	.36***	.20***	.58***				
18 Internal marketability T1	3.89	1.02	.13*	-.14*	-.12*	.03	.03	-.07	-.01	.03	.04	-.04	.42***	.33***	.25***	.25***	.16**	.54***	.39***			
19 Internal marketability T2	3.85	0.99	.19**	-.13*	-.10	.06	.06	-.07	-.01	.01	.03	-.05	.34***	.20***	.26***	.27***	.17***	.36***	.56***	.59***		
20 Meaningful work T1	3.11	0.90	-.12*	-.06	-.15**	.07	.10	-.13*	-.10	.22***	-.12*	-.01	.26***	.19**	.06	.04	.12*	.53***	.28***	.44***	.23***	
21 Meaningful work T2	3.08	0.86	-.05	.01	.10	.08	.14	-.12*	-.08	.14**	-.05	-.11	.17***	.11*	.05	.05	.15**	.36***	.51***	.27***	.41***	.55***

Note. $N = 340$. Competitive PC = competitive psychological climate; [1] 0 = male, 1 = female; [2] 0 = no change of employer between T1 and T2, 1 = change of employer between T1 and T2; [3] 0 = non-academic education, 1 = academic degree. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 2

Regression Coefficients of all Model Variables for Objective and Subjective Career Success (see Figure 2, Test for Hypothesis 2)

	Objective career success T2						Subjective career success T2								
	Salary T2			Promotions T2			Career satisfaction T2			Internal marketability T2			Meaningful work T2		
	b	*SE*	β	*b*	*SE*	β	*b*	*SE*	β	*b*	*SE*	β	*b*	*SE*	β
Working hours	.03	.01	.08*	.01	.01	.03	.01	.01	.05	.01	.01	.11*	.01	.01	.02
Gender[1]	.06	.18	.01	.05	.05	.06	-.12	.07	-.07	-.05	.09	-.03	.11	.08	.06
Turnover[2]	.31	.33	.03	.14	.09	.09	-.20	.14	-.07	-.12	.16	-.03	-.05	.15	-.02
Education[3]	-.03	.19	-.01	.08	.05	.08	.11	.08	.06	.11	.09	.05	.09	.08	.05
Commerce and transport[4]	-.84	.31	-.09**	-.07	.08	-.05	-.17	.13	-.07	-.23	.15	-.07	-.26	.14	-.09*
Media and culture[4]	-.59	.25	-.08*	-.05	.07	-.04	-.12	.10	-.06	-.08	.12	-.03	-.18	.11	-.08
Health and social[4]	-.23	.31	-.03	-.15	.08	-.10	-.07	.13	-.03	.01	.15	.01	-.03	.14	-.01
Finance and insurance[4]	-.12	.32	.01	-.08	.09	-.05	-.14	.13	-.05	.01	.16	.01	-.07	.14	-.02
Other industries[4]	-.19	.28	.02	-.09	.08	-.06	-.18	.12	-.07	-.09	.14	-.03	-.33	.12	-.12**
Baseline DV T1	.87	.04	.75***	Not applicable			.45	.04	.50***	.47	.04	.49***	.49	.04	.52***
Competitive PC T1	-.34	.21	-.15	-.07	.06	-.21	-.26	.09	-.40**	-.34	.10	-.43**	-.31	.09	-.49**
Trait C T1	-.20	.18	-.09	-.05	.05	-.13	-.15	.08	-.24*	-.17	.09	-.22	-.23	.08	-.33**
Trait C T1 * Competitive PC T1	.09	.05	.28*	.02	.01	.46*	.06	.02	.59**	.08	.02	.64**	.07	.02	.69***
R^2	.67			.07			.36			.38			.36		

Note. $N = 340$. [1] 0 = male, 1 = female; [2] 0 = no change of employer between T1 and T2, 1 = change of employer between T1 and T2; [3] 0 = non-academic education, 1 = academic degree, [4] dummy coded (reference industry was technology and manufacturing). Baseline DV T1 = Baseline dependent variable at T1; Trait C = Trait Competitiveness; Competitive PC = Competitive psychological climate. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

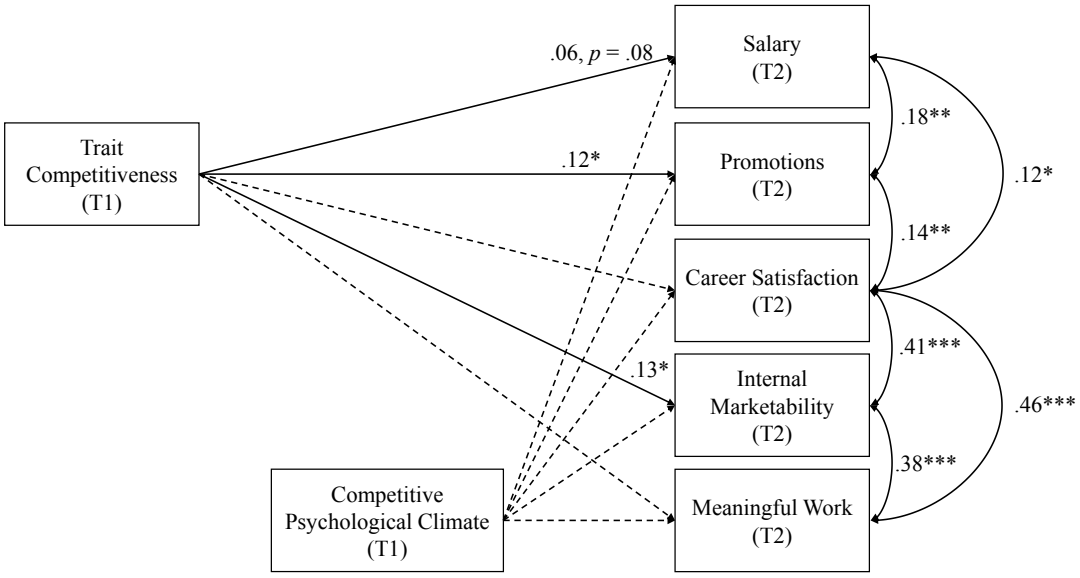

Figure 1. Standardized coefficients for model testing main effects of trait competitiveness on career success (Hypothesis 1a and 1b).

Note. $\chi^2(16) = 29.6$, CFI = .99, RMSEA = .05, SRMR = .02. Dashed lines represent nonsignificant relationships. All outcome variables were allowed to correlate in the model, but nonsignificant relations were omitted in the graph for clarity. Model controlled for gender, education, working hours, turnover, industry, and baseline.
* $p < .05$, ** $p < .01$, *** $p < .001$.

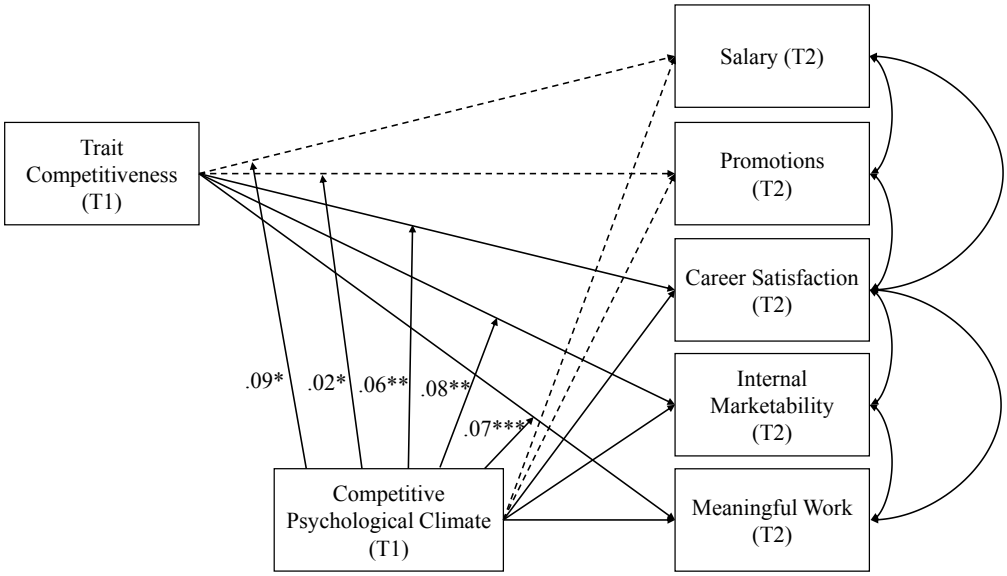

Figure 2. Unstandardized coefficients for model testing interaction effects between trait competitiveness and competitive psychological climate on career success (Hypothesis 2a and 2b).

Note. $\chi^2(16) = 30.6$, CFI = .99, RMSEA = .05, SRMR = .02. Dashed lines represent nonsignificant relationships. All outcome variables were allowed to correlate in the model, but nonsignificant relations were omitted in the graph for clarity. Model controlled for gender, education, working hours, turnover, industry, and baseline.
* $p < .05$, ** $p < .01$, *** $p < .001$.

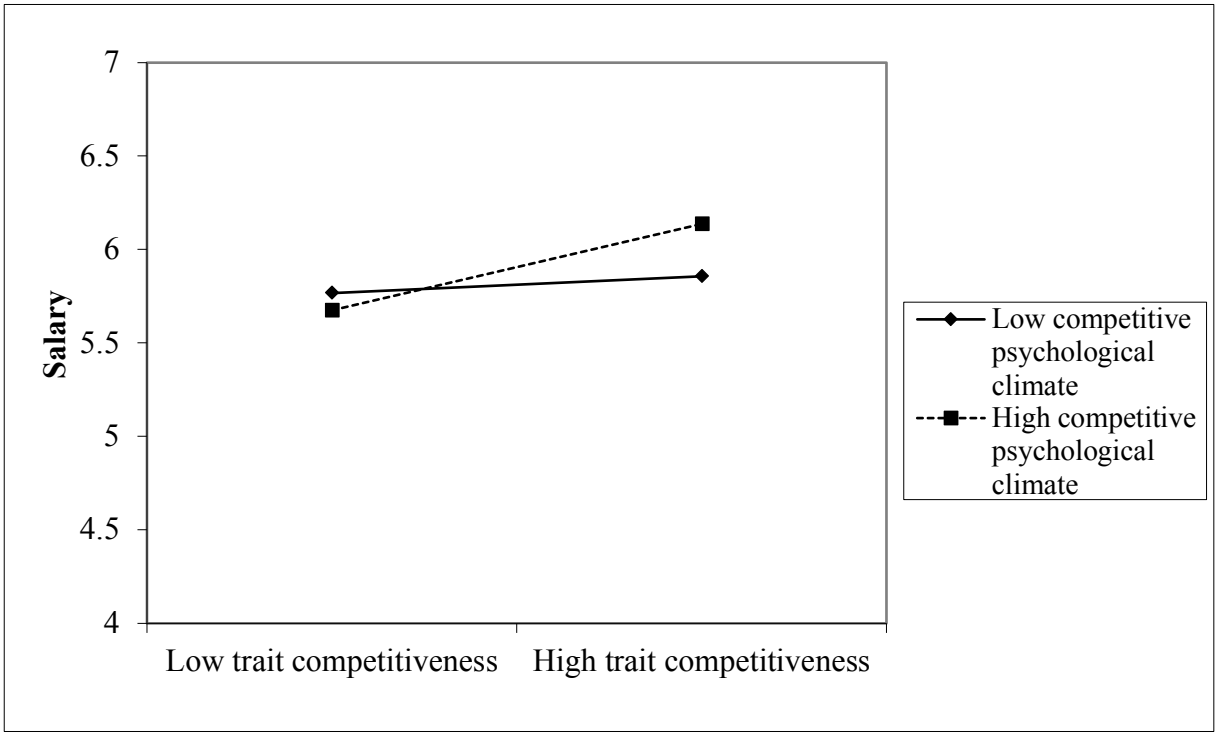

Figure 3. Competitive psychological climate as a moderator for the relationship between trait competitiveness and salary.

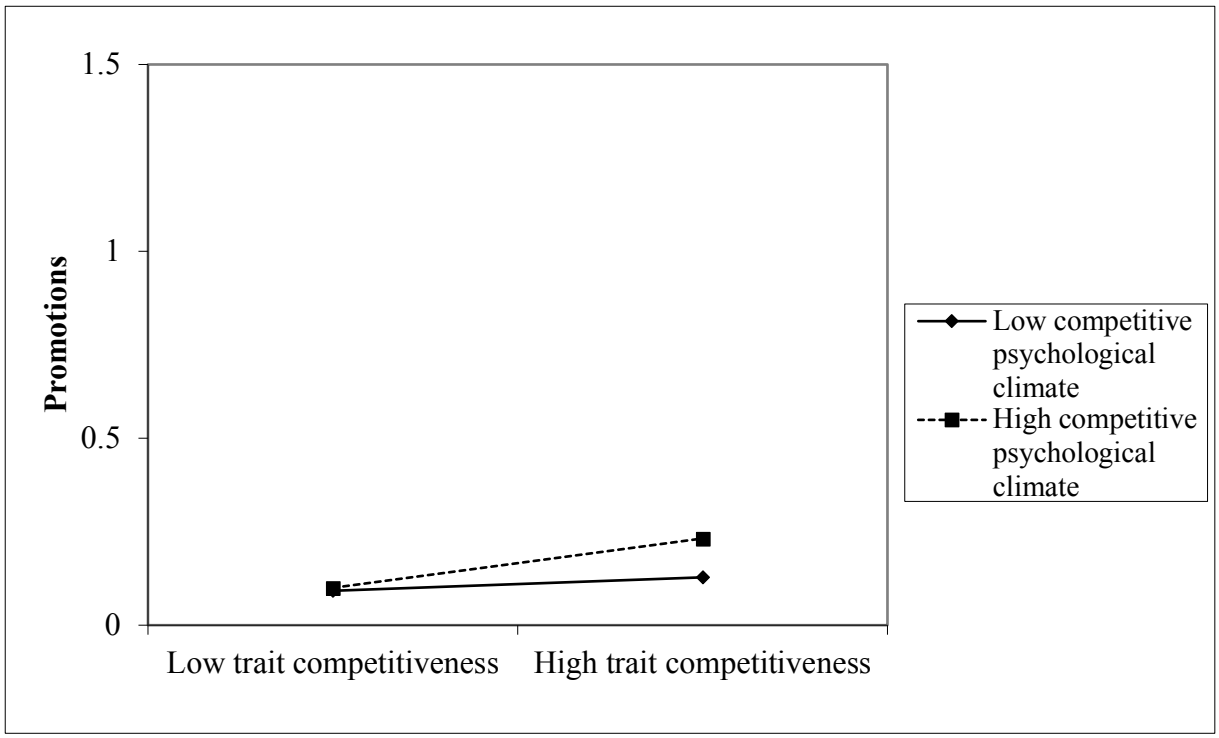

Figure 4. Competitive psychological climate as a moderator for the relationship between trait competitiveness and promotions.

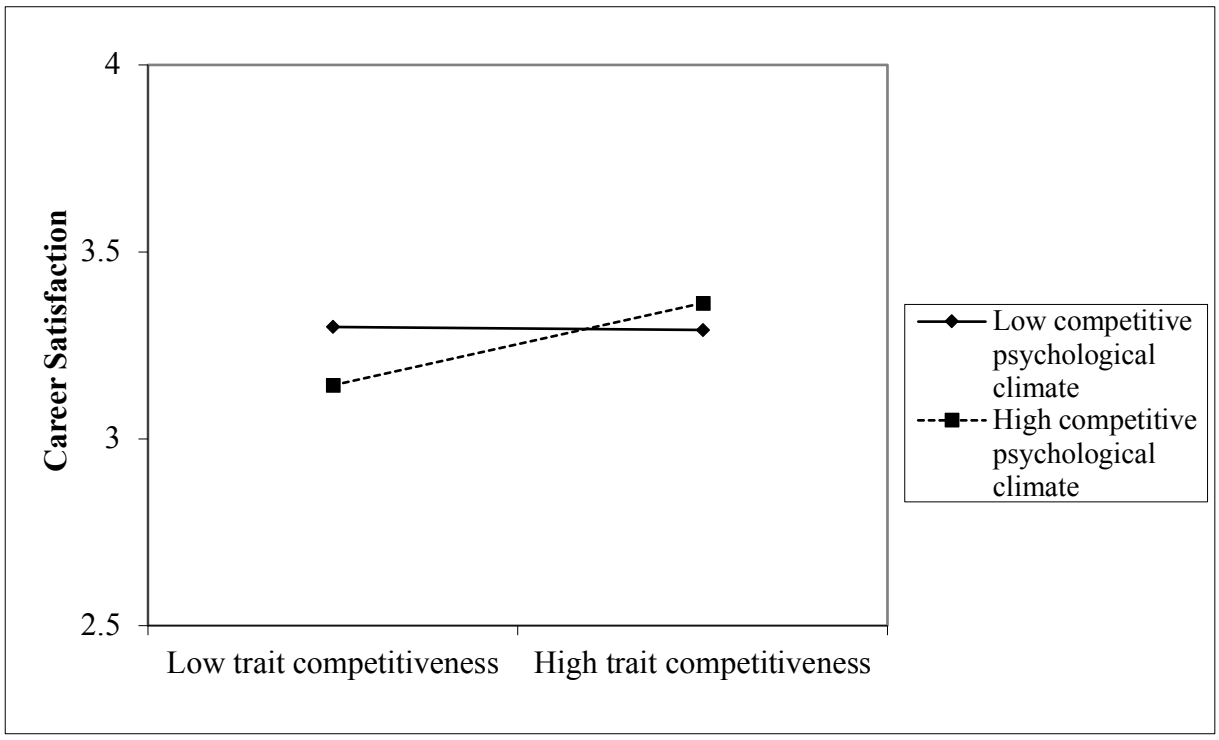

Figure 5. Competitive psychological climate as a moderator for the relationship between trait competitiveness and career satisfaction.

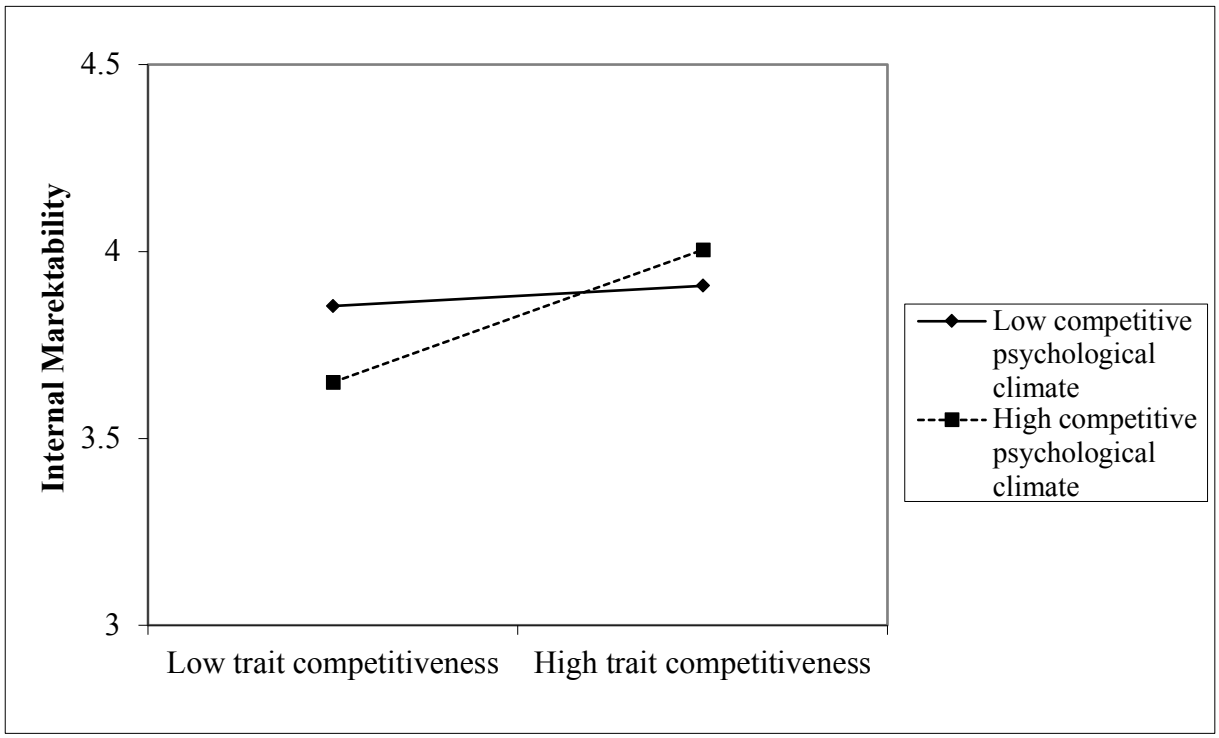

Figure 6. Competitive psychological climate as a moderator for the relationship between trait competitiveness and internal marketability.

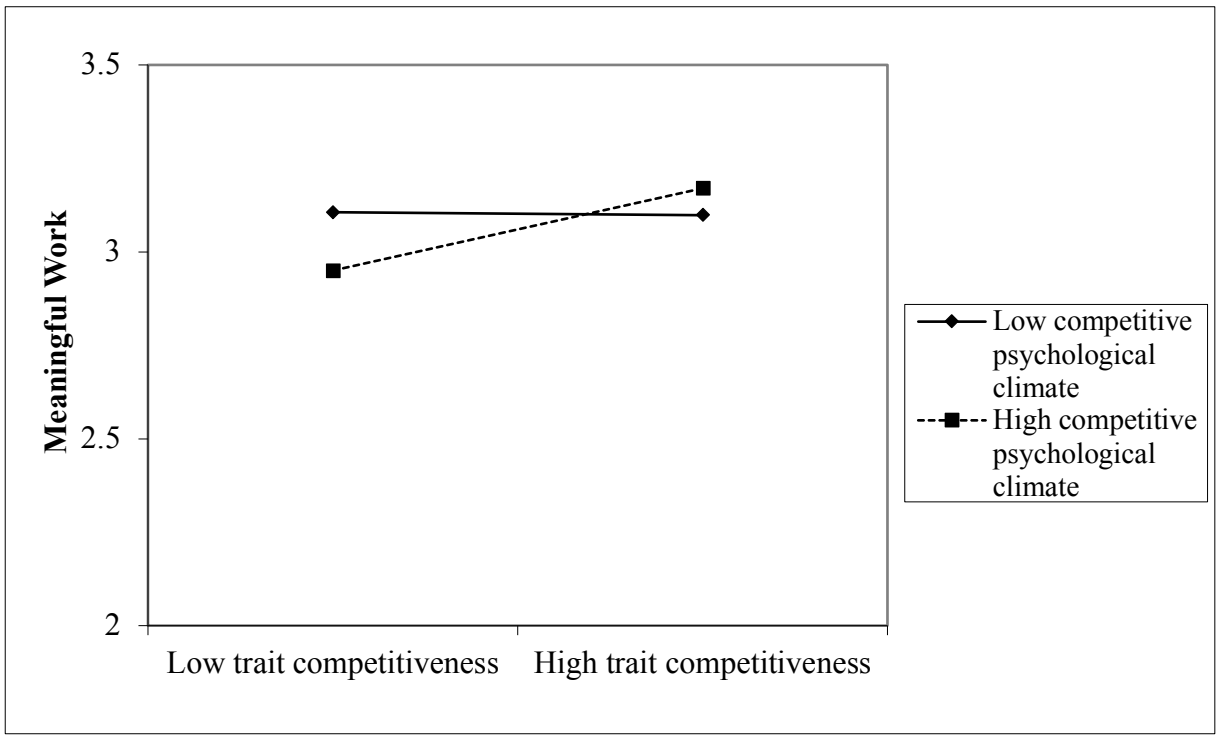

Figure 7. Competitive psychological climate as a moderator for the relationship between trait competitiveness and meaningful work.