

THE COMMITTED AND THE HAPPY: EXPLORING THE EFFECTS OF JUSTICE AND OWNERSHIP PERCEPTIONS AMONG NON-FAMILY EMPLOYEES

Philipp Sieger

Center for Family Business (CFB-HSG)

University of St. Gallen

Dufourstrasse 40a, 9000 St.Gallen, Switzerland

Tel. +41 (0)71 224 7100; Fax: +41 (0) 71 224 7101; philipp.sieger@unisg.ch

Corresponding author. The first two authors contributed equally to this paper.

Fabian Bernhard

INSEEC Business School - Grande École de Commerce

INSEEC Research Center, 27 Avenue Claude Vellefaux, 75010 Paris, France

Tel. +49 (0)173 37 38 835; fabian.bernhard@gmx.de

Urs Frey

Center for Family Business (CFB-HSG)

University of St. Gallen

Dufourstrasse 40a

9000 St.Gallen, Switzerland

Tel. +41 (0)71 224 7100; urs.frey@unisg.ch

ABSTRACT

A main challenge that family businesses face is fostering non-family employees' value-creating attitudes, such as affective commitment and job satisfaction. While justice perceptions have been identified as being critical in the creation of these outcomes, the process how they actually evolve is less clear, especially in family firms. We address this gap by introducing psychological ownership as a mediator in the relationships between justice perceptions (distributive and procedural) and common work attitudes (affective commitment and job satisfaction). Our analysis of a sample of 310 non-family employees from family firms in German-speaking Switzerland and Germany reveals that psychological ownership mediates the relationships between distributive justice and affective commitment as well as job satisfaction. This leads to valuable contributions to family business research, organizational justice and psychological ownership literatures, and to practice.

Keywords: Family firms, non-family employees, organizational justice, organizational commitment, job satisfaction

INTRODUCTION

In family firms, value-creating attitudes and behaviors of non-family employees are crucial for the firms' success, and their creation thus deserves scholarly attention (Barnett and Kellermanns, 2006; Chrisman, Chua, and Litz, 2003a; Chua, Chrisman, and Sharma, 2003). Regarding the evolvement of these attitudes, the importance of organizational justice perceptions is well-established (e.g., Colquitt, Conlon, Wesson, Porter,

and Ng, 2001; Meyer, Stanley, Herscovitch, and Topolnytsky, 2002). However, the family's influence on the business (Habbershon, Williams, and MacMillan, 2003; Habbershon and Williams, 1999) can have unique effects on non-family employees' justice perceptions (Barnett and Kellermanns, 2006). For example, characteristics often attributed to family firms such as a paternalistic-autocratic rule, founder-centric cultures, lack of delegation, and nepotism are potential sources of injustice (cp. Dyer and Handler, 1994; Kelly, Athanassiou, and Crittenden, 2000; Padgett and Morris, 2005; Schein, 1983), as are potential ingroup-outgroup perceptions of non-family employees (Barnett and Kellermanns, 2006; Cropanzano, Byrne, Bobocel, and Rupp, 2001). This may negatively impact the employee's relationship with the organization (Begley, Lee, and Hui, 2006; Greenberg, 1994; Lowe and Vodanovich, 1995).

For that reason, understanding non-family employees' justice perceptions and how they influence employee attitudes such as affective commitment (cp. Allen and Meyer, 1990; Meyer et al., 2002; Van Dyne and Pierce, 2004) and job satisfaction (e.g., Janssen and Van Yperen, 2004; Judge, Thoresen, Bono, and Patton, 2001) is of particular relevance to family businesses.

Even though research has intensively tried to explain how justice perceptions lead to favorable employee attitudes, for example by applying social exchange theory (e.g., Masterson, Lewis, Goldman, and Taylor, 2000; Tekleab, Takeuchi, and Taylor, 2005), scholars point out that "there is still very limited knowledge of any mechanism through which they are connected" (Choi and Chen, 2007, p. 688). In addition, few empirical studies have explicitly addressed justice perceptions and related outcomes in the context of family firms (cp. Carmon, Miller, Raile, and Roers, 2010; Lubatkin, Schulze, Ling, and Dino, 2005).

Summing up, the mechanism linking justice perceptions and attitudinal outcomes such as affective commitment and job satisfaction is still not fully understood, especially in the context of family firms. Given these outcomes' relevance for family firms' success and the unique context of these firms there is a clear need for further research. We aim to close this gap by applying the concept of psychological ownership, "the state in which individuals feel as though the target of ownership or a piece of that target is 'theirs' " (Pierce, Kostova, and Dirks, 2003, p. 86). We integrate recent initial findings regarding a potential link between justice perceptions and psychological ownership (Chi and Han, 2008), as well as existing knowledge about the relationship between psychological ownership and affective commitment (Bernhard and O'Driscoll, 2011; Mayhew, Ashkanasy, Bramble, and Gardner, 2007; O'Driscoll, Pierce, and Coghlan, 2006), and job satisfaction (Avey, Avolio, Crossley, and Luthans, 2009; Van Dyne and Pierce, 2004). We argue that psychological ownership of non-family employees toward the organization mediates the effects of both distributive and procedural justice perceptions on employees' affective commitment and job satisfaction.

We test our hypotheses on a random sample of 310 non-family employees from family firms based in Germany and German-speaking Switzerland. We find that psychological ownership indeed mediates the relationships between distributive justice and affective commitment as well as job satisfaction, whereas no mediation is found in the context of procedural justice. This leads to a number of valuable contributions to family business, organizational justice, and psychological ownership literature, as well as to practice.

Our paper is structured as follows. First, we introduce the theoretical foundations of the main concepts of this study. Second, we theoretically derive our hypotheses. Third, we illustrate our sample as well as the methods used. Fourth, we present the empirical findings. Fifth, we enter into a discussion of the results, contributions, and limitations of the study, and suggest avenues for future research. We then offer our final conclusions.

THEORETICAL FOUNDATIONS

Organizational Justice

Organizational justice is one of the most intensively researched topics in the field of organizational behavior (cp. Colquitt *et al.*, 2001; Cropanzano *et al.*, 2001). It is concerned with employees' subjective fairness perceptions in their employment relationship (Byrne and Cropanzano, 2001; Greenberg, 1990). Justice assessments in existing research are mostly based on the perceptions of individuals, which implies that an act is just when it is perceived as just (Colquitt *et al.*, 2001; Cropanzano and Greenberg, 1997). Over time, four dimensions of organizational justice have been established: distributive, procedural, informational, and interpersonal justice (Colquitt *et al.*, 2001; Cropanzano *et al.*, 2001; Judge and Colquitt, 2004). Scholars agree that people mainly draw on distributive and procedural justice perceptions when deciding how to react to the overall *organization*, whereas interpersonal and informational justice perceptions seem to be more relevant when referring to authority figures such as supervisors (cp. Bies and Moag, 1986; Colquitt *et al.*, 2001; Walumbwa, Cropanzano, and Hartnell, 2009). In light of our goal to investigate the link between justice perceptions and *organization*-related outcomes, we limit our considerations to distributive and procedural justice perceptions.

Distributive justice refers to the perceived fairness of outcome distributions (cp. Colquitt *et al.*, 2001). Typical examples of organizational outcomes are salary, benefits, or promotions (cp. Colquitt, 2001; Colquitt *et al.*, 2001). A distribution is perceived to be just if it is consistent with chosen norms of allocation (Fortin, 2008), for instance the widely applied equity theory (e.g., Adams, 1965; Colquitt *et al.*, 2001). Equity theory states that people are less concerned about the absolute level of outcomes but rather whether the outcomes are fair (Colquitt *et al.*, 2001). In the context of employees and organizations people compare their own input/output ratio to that of other individuals within their reference frame. If the ratios are unequal, inequity is perceived, and the distribution is regarded as unjust. Procedural justice refers to the perceived fairness of the allocation process that leads to outcomes (Colquitt *et al.*, 2001; Walumbwa *et al.*, 2009). Thibaut and Walker (1975) found that process control is able to increase individuals' perceived fairness, even if the outcome itself cannot be influenced.

Both of these justice dimensions have been linked to common work attitudes and behaviors such as affective commitment (e.g., Begley *et al.*, 2006; Jones and Martens, 2009; Masterson *et al.*, 2000), job satisfaction (e.g., Jones and Martens, 2009; Lam, Schaubroeck, and Aryee, 2002; Masterson *et al.*, 2000), and organizational citizenship behavior (Aryee, Budhwar, and Chen, 2002; Tepper and Taylor, 2003). Recently, Chi and Han (2008) found initial evidence for a potential link to psychological ownership. Various scholars have given insight into the mechanism that connects justice perceptions with outcomes such as affective commitment and job satisfaction. The most widely applied perspective is social exchange theory (cp. Erdogan, Liden, and Kraimer, 2006; Masterson *et al.*, 2000; Tekleab *et al.*, 2005), whereas also self-esteem (Tyler and Blader, 2000), trust (e.g., Lind, 2001; Van den Bos, Lind, and Wilke, 2001), and organizational identification (Carmon *et al.*, 2010) have been investigated. Despite these efforts, however, Choi and Chen (2007) refer to the relationship between distributive justice and affective commitment and point out that "there is still very limited knowledge of any mechanism through which they are connected" (p. 688). Similarly, Aryee *et al.* (2002) conclude that existing social exchange research is "not without limitations" (p. 268). Judge & Colquitt (2004) state that the underlying theoretical mechanisms are "less clear" compared to the effects of justice (p. 395).

Given the need to enhance our knowledge of how justice perceptions weave their way into desirable non-family employees' attitudes and behaviors, we introduce the concept of psychological ownership as a mediator in the relationships between justice

(distributive and procedural) and both affective commitment and job satisfaction, “the two most commonly researched employee attitudes” (Van Dyne and Pierce, 2004, p. 440). We consider psychological ownership as particularly relevant in this context given recent initial findings regarding its link to justice perceptions (Chi and Han, 2008) and existing knowledge about its relationship with commitment and job satisfaction (Mayhew et al., 2007; O’Driscoll et al., 2006; Van Dyne and Pierce, 2004).

Psychological ownership

Employees’ ownership feelings toward the organization they work for, labelled psychological ownership, have received considerable scholarly attention (Avey et al., 2009; Pierce and Jussila, 2009; Pierce et al., 2003). When employees perceive ownership of the organization, this perception becomes part of the psychological owner's identity and is felt as extension of the self (Belk, 1988; Dittmar, 1992). Pierce et al. (2003; 2001) propose that psychological ownership can satisfy three human motives, namely efficacy/effectance, self-identity, and having a place. Furthermore, they conceptualize three potentially interrelating “routes” that lead to psychological ownership: intimately knowing the target of ownership feelings, gaining control over it, and investing oneself into it. So far, only the route of control has been empirically validated (Pierce, O’Driscoll, and Coghlan, 2004). Research still has to address “the conditions in organizations, work groups and individuals that enhance psychological ownership” (Avey *et al.*, 2009: 186). Numerous positive effects of psychological ownership have been validated, such as affective commitment (e.g., Avey et al., 2009; Mayhew et al., 2007; Van Dyne and Pierce, 2004), job satisfaction (Avey et al., 2009; Pierce, Van Dyne, and Cummings, 1992; Van Dyne and Pierce, 2004), organizational citizenship behavior (Avey *et al.*, 2009), and organization-based self-esteem (Van Dyne and Pierce, 2004). As psychological ownership may exist in the absence of formal ownership (Pierce *et al.*, 2001), it may constitute a viable alternative to employee stock ownership plans that oppose the dominant wish of many families to control legal ownership across generations (Chua, Chrisman, and Sharma, 1999; Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, and Moyano-Fuentes, 2007). Psychological ownership is a distinct concept because of the sense of possession as conceptual core (cp. Pierce et al., 2001; Van Dyne and Pierce, 2004). Psychological ownership asks, “How much do I feel this organization is mine” (Van Dyne and Pierce, 2004: 443); organizational commitment asks, “Why should I maintain my membership in this organization” (cp. Meyer and Allen, 1997; Van Dyne and Pierce, 2004); organizational identification asks, “Who am I” (Dutton, Dukerich, and Harquail, 1994); and job involvement asks, “How important is the job and job performance to my self-image?” (Lawler and Hall, 1970).

Affective commitment and job satisfaction

In organizational behavior research, the construct of organizational commitment has been intensively investigated (cp. Lavelle et al., 2009; Meyer and Allen, 1991). Meyer & Allen (1991) differentiate between three types of organizational commitment, namely affective, normative, and continuance commitment. Affective commitment is regarded as the most widely studied form of commitment (Lavelle et al. 2009), also in the context of organizational justice and psychological ownership research (Meyer *et al.*, 2002; Pierce *et al.*, 2003). It is defined as “affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organization” (Allen and Meyer, 1990, p. 2). Job satisfaction, another important work attitude (cp. Heller and Watson, 2005; Ilies, Wilson, and Wagner, 2009; Van Dyne and Pierce, 2004) has been commonly defined as an attitudinal evaluative judgment of one's job or job experiences (Ilies *et al.*, 2009). It asks, ‘How do I evaluate my job?’ (Van Dyne and Pierce, 2004, p. 444).

HYPOTHESES

Organizational justice dimensions and psychological ownership

Distributive justice and psychological ownership. Accountability considerations imply that individuals identify the party that is responsible for justice or injustice, which in turn affects their attitudes toward that party (cp. Folger and Cropanzano, 1998). Walumbwa et al. (2009) argue that pay policies and payment rates in organizations are mostly set by the firm. Consequently, when employees perceive pay and promotion to be just, they are also likely to perceive the organization itself to be just. This supports a more favourable relationship between the employee and the organization (cp. Colquitt et al., 2001; Fortin, 2008). As justice has a positive connotation, a just organization with which the employee has a positive relationship appears attractive. Favorable judgments are related to possessive feelings (Beggan, 1992), and Pierce et al. (2003) state that "attributes like attractiveness [...] render the target more or less subject to psychological ownership" (p. 94). Hence, when individuals perceive pay and promotion systems to be just, the organization as a whole also tends to be perceived as just. As a consequence, the organization appears more attractive, which is conducive to ownership feelings (cp. Pierce et al., 2003). Also resource investment considerations may play a role. Janssen, Lam and Huang (2009) propose that employees who perceive their resource investments to be fairly compensated by the organization will be motivated and encouraged to increasingly invest their personal resources. These personal resources can be intelligence, experience, training, skill, time, energy, and cognitive and emotional labor (Janssen et al., 2009). A high level of distributive justice thus fosters the employees' resource investment. At the same time, the investment of "time, ideas, skills and physical, psychological, and intellectual energies" (Pierce et al., 2001: 302) has been proposed to be one of the three main routes leading to psychological ownership (Pierce et al., 2003; Pierce et al., 2001). In a similar vein, Loi, Hang-yue and Foley (2006) argue that when employees perceive distributive justice in an economic exchange relationship, they are motivated to repay and increase their self-investment in the organization. Hence, we suggest that distributive justice fosters the investment of personal resources, which will ultimately strengthen ownership feelings toward the organization. All these considerations lead us to the following hypothesis:

Hypothesis 1: Distributive justice perceptions of non-family employees are positively related to their psychological ownership toward the organization.

Procedural justice and psychological ownership. Support for a positive relationship can be found in the discussion about sources of justice perceptions (Malatesta and Byrne, 1997; Masterson et al., 2000; Masterson and Taylor, 1996) and accountability (Folger and Cropanzano, 1998). Procedures applied in appraisal interviews (cp. Colquitt et al., 2001), are likely to be developed by the organization and are only carried out by the supervisor. Thus, the organization will be held accountable for justice or injustice (Masterson et al., 2000). Hence, employees tend to consider the organization to be just, if they perceive the procedures to be just (cp. Folger and Cropanzano, 1998). This link can also be clarified by considering the difference between event-based and entity-based judgments. Event-based judgments refer to an individual's fairness assessment of a specific event or experience, such as an appraisal interview. Entity-based judgments, in turn, are aggregated event perceptions to form a summary judgment of a social entity, such as an organization (cp. Cropanzano et al., 2001). Linking these concepts, Cropanzano et al. (2001) proposed an integrative model, concluding that fair procedures go along with the perception of a fair organization. Even though Hollensbe, Khazanchi and Masterson (2008) found that entity-based justice perceptions are based on a multitude of factors, they could not neglect that also event-based "traditional" justice perceptions (p. 1106) played a role. Additional empirical support for a high correlation between event

and entity-based judgments is provided by Konovsky and Pugh (1994). Following this line of thinking, there is good reason to believe that if the procedures in an appraisal interview are considered as just, the perception of the organization as a whole is just, which makes it a more desirable object to be psychologically appropriated (Pierce *et al.*, 2003). Based on these considerations we thus offer the following hypothesis:

Hypothesis 2: Procedural justice perceptions of non-family employees are positively related to their psychological ownership toward the organization.

The mediating effects of psychological ownership

First, numerous studies have reported positive relationships between both distributive and procedural justice and affective commitment (e.g., Begley *et al.*, 2006; Greenberg, 1994; Jones and Martens, 2009; Lowe and Vodanovich, 1995), and between both justice dimensions and job satisfaction (Jones and Martens, 2009; e.g., Lam *et al.*, 2002; Masterson *et al.*, 2000). Second, we propose a positive relationship between both distributive and procedural justice and psychological ownership. Third, psychological ownership is linked to both affective commitment and job satisfaction. Feelings of ownership satisfy the basic human need for place (Porteous, 1976), and non-family thus view the family firm as a place in which to dwell (Dittmar, 1992; Furby, 1978; Pierce *et al.*, 2001). This induces a feeling of attachment and belonging, which is the essence of affective commitment (cp. Van Dyne and Pierce, 2004). Scholars also argue that feelings of possession enhance general satisfaction and provide a context or environment in which job satisfaction is embedded and positively influenced (Kozlowski and Klein, 2000; Van Dyne and Pierce, 2004). Based on above assertions it seems reasonable to introduce psychological ownership as a mediator between distributive justice and both affective commitment and job satisfaction, as well as between procedural justice and the same attitudinal outcomes. These arguments lead us to the following mediation hypotheses:

Hypothesis 3: Psychological ownership of non-family employees toward the organization mediates the relationship between their distributive justice perceptions and their affective commitment.

Hypothesis 4: Psychological ownership of non-family employees toward the organization mediates the relationship between their procedural justice perceptions and their affective commitment.

Hypothesis 5: Psychological ownership of non-family employees toward the organization mediates the relationship between their distributive justice perceptions and their job satisfaction.

Hypothesis 6: Psychological ownership of non-family employees toward the organization mediates the relationship between their procedural justice perceptions and their job satisfaction.

METHOD

Sample and data collection

Our sample consists of the responses of 1,024 employees of companies based in Germany and German-speaking Switzerland. In 2009, valid email addresses of 10,750 management-level employees were randomly retrieved from these countries' largest employee database. An identification-based online survey instrument prevented multiple responses. A response rate of 9.5% was achieved using one reminder email. Research has found that a 10-12% response rate is typical for studies that target executives in upper echelons (Geletkanycz, 1998; Koch and McGrath, 1996) and managers in small to mid-sized firms (MacDougall and Robinson, 1990). In addition, sending emails without prior notice generates lower response rates than other approaches (Kaplowitz, Hadlock, and Levine, 2004). Given the circumstances, our response rate can thus be

regarded as adequate. We only included fully completed questionnaires and respondents that were working in a family firm. The criteria were at least one family member in an operational position, majority of equity ownership in the family's hands, and the employees' perception that it is a family business (cp. Astrachan, Klein, and Smyrnios, 2002; Nordqvist and Zellweger 2010). In addition, family members were excluded, which reduced the sample to 310 employees. 26% of them were female, with an average age of 45.25 years, and an average tenure of 12.06 years.

Measures

To measure distributive and procedural justice we relied on a validated German version (Maier, Streicher, Jonas, and Woschée, 2007) of the widely applied measure by Colquitt (2001). Following Colquitt (2001), distributive justice referred to the outcome employees receive from their work (pay and promotion) based on their last appraisal interview, and procedural justice referred to the process applied in that interview that led to these outcomes (cp. also Masterson *et al.*, 2000). Sample items were "Does your appraisal interview outcome (e.g., salary, promotion, raise) reflect the effort you have put into your work?" (distributive justice) and "Have you been able to express your views and feelings during your last appraisal interview?" (procedural justice). All items in our study were rated from 1 = *strongly disagree* to 7 = *strongly agree* on a seven-point Likert-type scale. We pre-tested the scale with 90 employees and found low factor loadings (< 0.6) for the same items as Maier *et al.* (2007), leading to 4 items for distributive and 5 items for procedural justice (cp. Nunnally and Bernstein, 1994). A factor analysis confirmed this factor structure. Cronbach's Alphas were 0.95 and 0.85. For psychological ownership we relied on a seven item measure developed by Pierce *et al.* (1992) and validated by numerous scholars (e.g., Mayhew *et al.*, 2007; O'Driscoll *et al.*, 2006; Pierce *et al.*, 2004). Sample items included "I feel a very high degree of personal ownership for this organization" and "This is MY organization". After translating the scale into German, two independent bilingual experts who did not know the original scale retranslated it into English. Together with a native English speaker we compared the English version of the scale with our translation. No major differences were found. Cronbach's Alpha was 0.89.

For affective commitment we relied on the scale by Allen and Meyer (1990) and its validated German version (Felfe, Six, Schmook, and Knorz, 2004). We used the six items that exhibited the highest factor loadings (> 0.6) in our pre-test. Sample items were "I would be very happy to spend the rest of my career with this organization" or "This organization has a great deal of personal meaning for me". Cronbach's Alpha was 0.93. We used a four item measure inspired by van Dyne and Pierce (2004), Mayhew *et al.* (2007), and Zhou, Li, Zhou and Su (2008) to measure job satisfaction. Sample items were "I like the things that I do at work" and "In general, I am very satisfied with my job". Cronbach's Alpha was 0.73.

We used several control variables. As conceptualizations of ownership can differ between countries due to varying legal arrangements and social programs (Rousseau and Shperling, 2003), we included dummy variables for Germany and Switzerland. Moreover, the competitive environment may impact firm behaviour (Antoncic and Hisrich, 2001; Porter, 1985), and consequently employees' ownership feelings or organization-related attitudes. Thus, we added dummy variables for industry and service sectors. We also controlled for employees' age (McFarlin and Sweeney, 1992), gender (Lee, Pillutla, and Law, 2000), tenure (Meyer *et al.*, 2002), and hierarchy level (Begley *et al.*, 2006). We also controlled for stock ownership, as this incentive may affect our study variables (Daily, Dalton, and Rajagopalan, 2003; Van Dyne and Pierce, 2004). Other controls were firm age and size, whereas the latter was measured by the number of employees (cp. Choi and Chen, 2007; Wallace, 1995). As it was not normally distributed, we trans-

formed it using the natural logarithm. Furthermore, we included the company's current performance, as our study variables might be affected when the company is perceived as successful and thus attractive (cp. Pierce *et al.*, 2003). We adapted a measure by Eddleston and Kellermanns (2007), including three items pertaining to the company's development of sales, market share, and profits in comparison to its competitors. Cronbach's Alpha was 0.91.

ANALYSIS

To explore the possibility of non-response bias, we compared early and late respondents using ANOVA, as late respondents are more similar to non-respondents than early respondents (Chrisman, Chua, and Litz, 2004; Oppenheim, 1966). No significant differences in the mean scores of our variables were found. To address the potential of common method bias we used Harman's one factor test (1967) as suggested by Podsakoff and Organ (1986). Following Podsakoff, MacKenzie, Lee, & Podsakoff (2003), we entered all our variables into a factor analysis, extracting a 7-factor solution, accounting for 68.83% of total variance. The first factor explained 19.3% of variance, providing initial evidence that common method bias was not a major problem because no single factor accounted for the majority of variance. As an additional precaution and to assess the validity and distinctiveness of our measures, we conducted a confirmatory factor analysis (Podsakoff *et al.*, 2003). Specifically, we compared the fit of a five-factor structure to that of a one-factor structure. The five-factor structure fits the data significantly better (difference in $\chi^2=3169.514$, $df = 10$, $p < 0.001$). This indicates that our measures were not only theoretically but also empirically distinguishable, and further mitigate common method bias concerns (Podsakoff *et al.*, 2003). To deal with potential multicollinearity we centered the variables (cp. Cronbach, 1987) and found that the Variance Inflation Factor did not exceed 2.357, and the condition index did not exceed 13.752, suggesting that multicollinearity is not a concern (Hair, Black, Babin, Anderson, and Tatham, 2006). To investigate mediating effects we followed Baron and Kenny (1986) and tested the mediation effects' significance with the Sobel test (cp. MacKinnon, Lockwood, Hoffman, West, and Sheets, 2002).

RESULTS

Means, standard deviations, and Pearson correlations are reported in Table 1.

Insert Table 1 about here

Our hypotheses are tested in Table 2¹. Hypotheses 1 and 2 are investigated in model 1. We find a significant and positive relationship between distributive justice and psychological ownership ($r = 0.148$, $p < 0.05$), which confirms hypothesis 1. However, the relationship between procedural justice and psychological ownership was not significant, which rejects hypothesis 2.

For mediation to occur, three conditions must be met (Baron and Kenny, 1986). First, the independent variable must affect the mediator. This applies only for distributive justice (model 1). Second, the independent variable must affect the dependent variable. In model 2, we find a significant relationship between distributive justice and affective commitment ($r = 0.212$, $p < 0.01$). but not for procedural justice and affective commitment. Third, when investigating the effects of the independent variable and the mediator on the dependent variable simultaneously, the effect of the mediator has to be significant, and the effect of the dependent variable has to be weaker than in condition 2 (cp. Baron and Kenny, 1986). Model 3 shows that psychological ownership is significantly

¹ To increase readability we did not report the different control models.

related to affective commitment ($r = 0.298, p < 0.001$), while the effect of distributive justice is weaker but significant ($r = 0.168, p < 0.05$). This indicates partial mediation and supports hypothesis 3. The Sobel test confirms this finding ($z = 3.687, p < 0.001$). Hypothesis 4, however, has to be rejected. Referring to job satisfaction, model 4 shows that distributive justice is significantly related to job satisfaction ($r = 0.392, p < 0.001$), while procedural justice is not. When psychological ownership is added in model 5, psychological ownership is significant ($r = 0.185, p < 0.001$), whereas the effect of distributive justice is weaker but significant ($r = 0.364, p < 0.001$). The Sobel test confirms this effect ($z = 3.195, p < 0.01$), lending support to hypothesis 5, whereas hypothesis 6 has to be rejected.

 Insert Table 2 about here

DISCUSSION

Our study set out to shed a more nuanced light on the mechanism that connects justice perceptions and pro-organizational outcomes in family firms. Our findings constitute valuable contributions to literature. First, we contribute to family business literature. The finding that psychological ownership partially mediates the relationships between distributive justice and both affective commitment and job satisfaction of non-family employees in family firms increases our understanding of how family firms can foster their employees' value-creating attitudes (Barnett and Kellermanns, 2006; Chrisman, Chua, and Litz, 2003b; Chua et al., 2003). By drawing a fine-grained picture of how justice perceptions weave their way into employee-related outcomes we also speak to scholars who investigate family firms as potential sources for injustice (cp. Barnett and Kellermanns, 2006; Dyer and Handler, 1994; Kelly et al., 2000; Schein, 1983). Second, we contribute to the field of organizational justice. We offer detailed theoretical reasoning and validate the relationship between distributive justice and psychological ownership in the European context. However, against our theoretical expectations related to accountability issues and the considerations on event- and entity-based judgments (cp. Cropanzano et al., 2001; Folger and Cropanzano, 1998; Hollensbe et al., 2008), procedural justice did work as predicted. It seems like that rather the supervisor than the organization as a whole was regarded as the source for procedures enacted in the appraisal interviews. In addition, psychological ownership offers a new perspective in understanding the mechanism that connects justice perceptions and organization-related outcomes. This complements existing approaches (e.g., Masterson et al., 2000; Tyler and Blader, 2000; Van den Bos et al., 2001) and addresses an acknowledged research gap (Choi and Chen, 2007). Third, we add to psychological ownership literature. We support the notion that distributive justice constitutes a factor conducive to psychological ownership (Chi and Han, 2008). This addresses the call of Avey et al. (2009) to further investigate psychological ownership's antecedents (cp. also Pierce *et al.*, 2004). In addition, we are the first to situate psychological ownership as a mediator between justice perceptions and both affective commitment and job satisfaction, which adds to knowledge on psychological ownership in general (Pierce *et al.*, 2003). Third, our insights are also of value for family business practitioners. By delineating the relationships between distributive justice, psychological ownership, affective commitment, and job satisfaction, we extend the understanding and range of options of how pro-organizational attitudes of non-family employees can be fostered in practice.

LIMITATIONS AND FUTURE RESEARCH

As a first limitation, our respondents were all working in firms based in Germany or German-speaking Switzerland, which could lead to a cultural bias. Second, as our study

design is based on a cross-sectional sample, there is uncertainty in terms of causality, even though previous theoretical considerations indicate causal relations (Pierce et al., 1991; Mayhew et al., 2007) and mediation effects give a first indication of direction. Another limitation is that all our variables were measured by the responses of a single source. However, as we have to rely on employees' perceptions due to theoretical reasons, this measurement approach can be justified. In addition, our tests mitigate common method bias concerns. Our research opens up several avenues for future research. Most importantly, we strongly encourage other researchers to further investigate the role of psychological ownership in the relationship between justice perceptions and attitudinal outcomes in the family business context. Here, the influence of family business specific variables could be addressed as a next step, such as family involvement, family ownership, family conflicts, governance systems, or image and reputation. In addition, in our analysis we found only partial mediating effects which speaks for the existence of other mechanisms and processes in the justice-commitment and the justice-job satisfaction relationship. We therefore encourage future studies to develop comprehensive models addressing the specific role and weight of psychological ownership compared with other suggested mediators such as self-esteem (Tyler and Blader, 2000), trust (e.g., Lind, 2001; Van den Bos *et al.*, 2001), and organizational identification (Carmon *et al.*, 2010). Furthermore, psychological ownership as a mediator could be applied to other outcomes such as organizational citizenship behavior or company performance. Exploring causality effects and validating our results in other cultural contexts may also be fruitful avenues of future research. For psychological ownership scholars it may be worthwhile to examine the link between different justice dimensions and psychological ownership in more detail. For example, a mediating effect of employees' perceived control in these relationships could be studied (cp. Pierce *et al.*, 2003).

CONCLUSION

Addressing the perennial challenge of family firms to foster their non-family employees' value-creating attitudes we successfully validate psychological ownership as an alternative explaining mechanism in the relationship between organizational justice perceptions and affective commitment as well as job satisfaction. Our findings constitute valuable additions to family business, organizational justice, and psychological ownership research, as well as to practice.

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TABLE 1
Means, standard deviations (S.D.), and Pearson correlations

		Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Switzerland	0.52	0.5	1															
2	Germany	0.32	0.47	-0.723**	1														
3	Industry	0.33	0.47	0.252**	-0.171**	1													
4	Service	0.91	0.28	-0.184**	0.166**	-0.445**	1												
5	Employee age	45.25	8.67	0.110*	-0.027	0.039	-0.024	1											
6	Gender	1.27	0.45	-0.018	0.036	0.051	-0.040	-0.231**	1										
7	Tenure	12.06	8.84	-0.056	0.111*	0.026	0.003	0.486**	-0.127*	1									
8	Hierarchy level	5.08	0.94	0.145**	-0.024	0.075	-0.031	0.286**	-0.409*	0.091	1								
9	Share ownership	1.93	0.26	-0.108*	0.093	-0.064	0.132*	0.034	0.018*	-0.048	-0.076	1							
10	Company age	81.20	59.37	0.209**	-0.160**	0.016	-0.038	0.071	-0.011	0.125*	0.035	-0.057	1						
11	Company size (ln)	5.785	1.13	-0.015	-0.042	0.068	-0.109*	-0.028	-0.085	0.041	-0.012	-0.035	0.167**	1					
12	Current performance	4.70	0.87	0.173**	-0.108*	0.166**	-0.140*	0.031	-0.035	-0.033	0.095	-0.106	-0.006	0.217**	1				
13	Distributive justice	4.91	1.23	0.149**	-0.110*	0.141*	-0.069	0.026	0.072	-0.032	0.134*	-0.070	-0.019	0.094	0.239**	1			
14	Procedural justice	5.17	1.01	0.140**	-0.202**	0.121*	-0.074	-0.028	0.004	-0.076	0.089	-0.060	-0.049	0.124*	0.265**	0.682**	1		
15	Psychological ownership	4.44	1.29	0.043	-0.027	0.155**	-0.074	0.194**	-0.203**	0.141**	0.356**	-0.100	0.024	0.010	0.174**	0.222**	0.173**	1	
16	Affective commitment	5.39	1.06	0.044	0.017	0.098	-0.071	0.131*	-0.062	0.185**	0.235**	-0.093	-0.085	-0.036	0.257**	0.301**	0.237**	0.418**	1
17	Job satisfaction	5.37	0.76	0.155**	-0.087	0.217**	-0.071	0.054	-0.002	0.017	0.153**	-0.059	-0.055	0.028	0.307**	0.527**	0.431**	0.328**	0.609**

N = 310, * $p < .05$, ** $p < .01$

TABLE 2

Results of Regression Analyses

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Dependent variable	Psychological ownership	Affective commitment	Affective commitment	Job satisfaction	Job satisfaction
<u>Control variables</u>					
Switzerland	-0.133	-0.034	0.005	0.055	0.079
Germany	-0.081	-0.012	0.012	0.010	0.025
Industry	0.115	0.039	0.005	0.137*	0.116*
Service	0.006	-0.015	-0.017	0.054	0.053
Employee Age	0.061	-0.059	-0.077	-0.027	-0.038
Gender	-0.096	0.029	0.058	0.008	0.026
Tenure	0.079	0.252***	0.228***	0.115*	0.100
Hierarchy level	0.255***	0.206**	0.130*	0.076	0.028
Share ownership	-0.065	0.000	0.019	0.015	0.027
Company age	0.035	-0.040	-0.050	-0.027	-0.034
Company size (ln)	-0.031	-0.125*	-0.115*	-0.063	-0.057
Current perf.	0.102	0.230***	0.200***	0.183***	0.164**
<u>Independent variables/mediator</u>					
Distributive justice	0.148*	0.212**	0.168*	0.392***	0.364***
Procedural justice	0.031	0.011	0.001	0.095	0.089
Psychological Ownership			0.298***		0.185***
Adjusted R ²	0.177	0.209	0.280	0.334	0.360
F-Statistics	5.758***	6.842***	9.009***	12.051***	12.571***
Delta R ²	0.026**	0.042***	0.070***	0.186***	0.027***

Sobel test (for distributive justice and affective commitment): $z = 3.687$, $p < 0.001$

Sobel test (for distributive justice and job satisfaction): $z = 3.195$, $p < 0.01$

N=310

* $p < .05$

** $p < .01$

*** $p < .001$