6-6-2009

THE PSYCHOLOGICAL OWNERSHIP OF ENTREPRENEURIAL ORGANIZATIONS: THEORETICAL AND MODEL DEVELOPMENT

David M. Townsend
North Carolina State University, USA, dtownsend@ncsu.edu

Dawn DeTienne
Colorado State University, USA

Ronit Yitshaki,
Bar-Ilan University, Israel

Jonathan D. Arthurs
Washington State University, USA

Recommended Citation
Available at: http://digitalknowledge.babson.edu/fer/vol29/iss6/3

This Paper is brought to you for free and open access by the Entrepreneurship at Babson at Digital Knowledge at Babson. It has been accepted for inclusion in Frontiers of Entrepreneurship Research by an authorized administrator of Digital Knowledge at Babson. For more information, please contact digitalknowledge@babson.edu.
THE PSYCHOLOGICAL OWNERSHIP OF
ENTREPRENEURIAL ORGANIZATIONS:
THEORETICAL AND MODEL DEVELOPMENT

David M. Townsend, North Carolina State University, USA
Dawn DeTienne, Colorado State University, USA
Ronit Yitshaki, Bar-Ilan University, Israel
Jonathan D. Arthurs, Washington State University, USA

ABSTRACT

In entrepreneurship theory, ownership is most often associated with the amount of equity
treated by an individual entrepreneur. However, several scholars acknowledge that feelings of
ownership often exist in the absence of objective control. As such, we explore emerging literature
on psychological ownership to provide a theoretical basis for explaining how the psychological
state of ownership can persist apart from the amount of equity an entrepreneur controls.
Specifically, we show how key determinants of psychological ownership interact and relate to
specific entrepreneurship processes, develop a theoretical model, and examine the contribution of
this work back to the psychological ownership literature. Several empirical implications of our
model and directions for future research are discussed as well.

INTRODUCTION

Prior studies on entrepreneurial ownership have generally considered ownership to be an
equity-based notion referring to the percentage of equity a given stakeholder has in the firm.
Several theoretical perspectives have been used to facilitate our understanding of the
entrepreneurial process from an equity-based perspective. For example, agency theory (Jensen &
Meckling, 1976) has been used to address the misalignment between entrepreneurs and hired
managers. This perspective suggests that the best way to resolve the agency problem is to
optimize both the compensation contract and the agent’s equity ownership (Audretsch, Lehmann,
& Plummer, 2009).

Transaction cost economics scholars focus on the efficient governance between the founder
and other partners or stakeholders. Several scholars (e.g. Katila, Rosenberger & Eisenhardt, 2008)
have examined this decision when the firm seeks capital; thereby entering into an equity
relationship with either an equity investor or an acquiring firm. However, both of these
perspectives focus solely on equity ownership without consideration to other avenues of
ownership even though many scholars have noted that founders of firms often have a strong
psychological tie to the venture in which they have created (Cardon, Zietsma, Saparito, Matherne,
& Davis, 2005).

In order to better examine entrepreneurial ownership we use the emerging literature on
psychological ownership to explain how ownership can exist apart from the equity controlled. We
contribute not only to the entrepreneurship literature, but also back to the psychological ownership
perspective because we propose that the causal determinants of psychological ownership (control,
intimate knowledge, and self-investment) are complementary rather than additive. This has
important implications because the synergistic effect between any two factors may result in high

Frontiers of Entrepreneurship Research 2009
levels of psychological ownership. In addition, high psychological ownership may exist in the absence of any one factor (i.e., control).

The purpose of this paper is to examine the key determinants of psychological ownership, their interaction, and to propose relationship between the entrepreneur’s psychological ownership and governance alignment, between governance alignment and organizational outcomes, and the moderating effect of resource exchanges on governance alignment. To that end we discuss the extant literature, develop a theoretical model, and examine the contribution back to the psychological ownership literature. We then suggest implications for many of the empirical questions in our literature including the decision to pursue certain opportunities, strategic resource decisions, organizational design decisions, and entrepreneurial exit decisions.

PSYCHOLOGICAL OWNERSHIP AND CONTROL

Property Rights and Objective Control

Organizational economic theories tend to focus on “rational” explanations that are based on asymmetry of power between actors. According to agency theory, relations between principals and agents involve risk, as the parties may have different or conflicting goals that are considered ‘agency costs’ (i.e., moral hazard and opportunistic behavior—Jensen & Meckling, 1976). The entrepreneurs’ risk results from the need to exchange company shares for outside resources (e.g., venture capital investments). Accordingly, the relationships between VCs and entrepreneurs are formally established through contractual arrangements that include stipulations and governance mechanisms to control opportunistic behavior (Amit, Glosten, & Muller, 1990; Ruhnka & Young, 1991; Amit, Brander, & Christoph, 1998). Hence, the involvement of VCs in their portfolio firms serves as an active control mechanism to ensure that entrepreneurs’ behavior is aligned with their interests. Thus, VCs seek to secure a higher proportion of seats on the board to increase their control over strategic decision-making by entrepreneurs (Sapienza, Manigart, & Vermeir, 1996; Smith, 2005; Williams, Duncan, & Ginter, 2006), so as to ensure that entrepreneurs act according to their expectations (Floyd & Lane, 2000).

Despite the power asymmetry between the two, cooperation between VCs and entrepreneurs is based on each party’s complementary assets and interdependent relations. The outcomes of these relations cannot be predefined, and the dynamics of the relations cannot be fully controlled. Thus, VC-entrepreneur relations are managed by two paradoxical mechanisms: hierarchy and cooperation. While the contractual covenants seek to control entrepreneurs’ actions, formal contracts fail to efficiently monitor the entrepreneurs’ work process, as they possess idiosyncratic and tacit knowledge. Therefore, entrepreneurs and VCs can gain most from cooperative activity which reinforces commitment to the venture management and success (Cable & Shane, 1997).

The transaction cost economic (TCE) approach posits that economic relations between actors in the market are driven by cost-effective considerations (Williamson, 1991). In contrast to agency theory, the TCE approach is aimed at explaining the rational considerations underlying transactions made between organizations. These considerations are influenced by the ability to which the parties can accurately assess associated transaction costs, and they rely on the extent to which complete information can be gathered and understood.

The TCE approach also assumes that the considerations underlying the economic exchange are influenced by particular assets that each party to the transaction holds. In other words, transaction costs are affected by the asset specificity of the actors, each of which possesses idiosyncratic assets
that give them bargaining power over the other (Perrow 1986). Therefore, determination of the most effective control system requires consideration of the value of the unique assets each actor holds and exchanges. Although both VCs and entrepreneurs seek to minimize their transaction costs, transaction costs cannot be fully pre-assessed due to process and outcome uncertainties. Therefore, relations are managed through mutual interdependencies especially as entrepreneurs possess idiosyncratic assets and because they cannot be easily replaced.

In applying an agency or TCE perspectives to the context of entrepreneurial firms it seems that formal considerations cannot fully explain why entrepreneurs devote themselves to their venture especially given their lack of formal control rights (e.g., Wasserman, 2006). Yet, at the same time, these approaches emphasize that an entrepreneurs’ high commitment, emotional involvement and identification are crucial for the ability of both parties to maximize gains (Cable & Shane, 1997).

**The Phenomenological State of Ownership**

Whereas economic theories of the firm generally equate legal ownership with formal control, Etzioni argues that “…property exists on two levels:” an formal, objective level and an informal, subjective level and so feelings of ownership are a “dual creation, part attitude, part object, part in the mind, part ‘real’” (1991: 465-466). Building from this perspective, Pierce and colleagues propose a theory of psychological ownership built on a subjectivist view of ownership arising when “…individuals feel as though the target of ownership (material or immaterial in nature) or a piece of it is ‘theirs’” and “…emerges because it satisfies certain human motives, some them genetic and others social in nature” (2001: 299-300; 2003). Based on this phenomenological state, Pierce and colleagues, among others, argue that individuals will exert their perceived rights to control, manage, dispose of, or countless other decisions derived from the perception that these objects are their own and therefore are extensions of themselves (Pierce et al., 2001; 2003; Reb & Connolly, 2007).

**Motivational Factors in Psychological Ownership.** According to Pierce and colleagues, the motives underlying the state of psychological ownership consist of efficacy and effectance, self-identity, and having a place (2001; 2003). By efficacy and effectance, Pierce and colleagues (2001; 2003) refer to need individuals have of favorably transforming their environment in order to produce desired outcomes. In entrepreneurial ventures, these desired outcomes could consist of wealth creation (Wasserman, 2008; Townsend & Busenitz, 2008), socio-economic change (Townsend & Hart, 2008), personal autonomy (Rauch & Frese 2007), or a broad array of other potential outcomes. A central paradox in entrepreneurship, however, is that entrepreneurs often must relinquish significant control rights in order to acquire critical resources necessary to accomplish these objectives (i.e., equity-based capital, technological inputs, human capital inputs, etc.—Wasserman, 2008). As implied above, when entrepreneurs relinquish some of their objective control over their ventures, economic theory suggests their relative feelings of ownership will subside as well. However, entrepreneurs, like other market actors, are more psychologically complex than traditional economic models often assume (cf. Akerlof & Shiller, 2009; Glimcher, Dorris, & Bayer, 2005), and, therefore, even when the entrepreneur sacrifices a portion of his or her objective control over a venture, the cognitive-affective state of psychological ownership can persist.

According to Pierce and colleagues, psychological ownership persists apart from objective control because it provides a mechanism for expressing one’s self-identity. Specifically, “…people use ownership for the purpose of defining themselves, expressing their self-identity to others, and ensuring the continuity of self across time” (Pierce et al., 2001: 300). The desire to
create and establish one’s legacy likely explains why some founders maintain close ties with the organizations they created even when they no longer exert formal control (e.g., Bill Gates and Microsoft). In this sense, the organization reifies the founder’s perceived self-identity thereby motivating them to continue to work for positive organizational outcomes (cf. Avey, Avolio, Crossley, & Luthans, 2009).

Lastly, Pierce and colleagues (2001) suggest that in addition to efficacy/effectance and self-identity, psychological ownership also allows individuals to create a sense of belonging (or a home) in a venture. Among entrepreneurs such a sense of belonging allows individuals to anchor their values, ideals, personal ambitions to an organization thereby providing a platform for personal action. For example, Dan Bricklin, the co-creator of VisiCalc (the first electronic spreadsheet), suggests that belonging to an organization he created (even when he is not in formal control) provides him a platform for expressing his personal values and talents (Bricklin, 2001). Towards this point Bricklin notes “I am not the most senior person in the company but I can influence the company’s direction in ways that matter to me and make the company better” (Bricklin, 2001: 57). This sense of belonging then, as a core motivational factor underlying psychological ownership, explains why some entrepreneurs can remain deeply attached to their ventures even when they do not possess formal, objective control.

**Causal Determinants of Psychological Ownership.** Whereas efficacy/effectance, self-identity, and a sense of belonging serve the motivational base of psychological ownership, Pierce and colleagues argue that control, insider’s (intimate) knowledge, and self-investment are the causal determinants of psychological ownership (2001; 2003). Regarding control, as noted above, most established theories of the firm rely upon formal, legal (i.e., objective) control as the basis for the ownership of any object—material or immaterial (Audretsch, Lehmann, & Plummer, 2009). In similar fashion, Pierce and colleagues suggest that when individuals perceive they possess the ability to control an object, they will eventually come to see the object as an extension of themselves, and therefore, the psychological state of ownership towards that object will naturally increase (2001). This argument implies that the longer an entrepreneur controls an organization, the deeper the psychological attachment. However, when entrepreneurs are challenged to relinquish some of this control in order to facilitate resource exchanges with critical external constituencies, extant theory would suggest that an entrepreneur’s sense of ownership towards a venture would decrease proportionally and instigate the classic principal-agent problem in agency theory (Jensen & Meckling, 1976; Fama & Jensen, 1983).

In addition, the psychological attachment of an entrepreneur to his or her organization increases relative to the level of insider’s knowledge the entrepreneur possesses of the venture. Specifically, Pierce and colleagues argue that “the more information and the better the knowledge an individual has about an object, the deeper the relationship between the self and the object, and, hence, the stronger the feeling of ownership toward it” (2001: 301). Among entrepreneurs, this type of insider’s knowledge could consist of a deep knowledge of the venture’s specific opportunity set, core technology, relationships with external capital providers, among other factors. Essentially, insider’s knowledge reflects the tacit understanding built up by the entrepreneur through his or her involvement with the venture and exerts a distinct effect on psychological ownership apart from control (cf. Pierce et al., 2001; 2003).

The third factor causally linked with psychological ownership is self-investment. According to Pierce and colleagues, self-investment “…comes in many forms, including the investment of one’s time; ideas; skills; and physical, psychological, and intellectual energies” (2001: 302). Among entrepreneurial ventures, self-investment refers to the specific human capital investments
entrepreneurs make into their ventures (Bates, 1990). Over time, as these specific investments accumulate, the venture becomes a stronger reflection of the entrepreneur’s self (i.e., goals, personality, leadership style, etc.—Wasserman, 2008). While the loss of control can mitigate some of the influence of the specific human capital investments the entrepreneur makes into the venture on firm-level characteristics, the specific decision to make these investments is likely independent from the relative control an entrepreneur has over a venture.

In sum, the psychological state of ownership emerges based on the influence of three factors: control, insider knowledge, and self-investment. As Pierce and colleagues suggest, however, although each factor positively increases psychological ownership the question remains as to whether these effects are simply additive or complementary (i.e., synergies and/or trade-offs exist among these factors—2001). In the following section, we argue that in the context of governance decisions in response to facilitating resource exchanges with critical external constituencies, these effects are complementary—that is, even when objective control is low, high insider’s knowledge and self-investment both increase the entrepreneur’s relative psychological ownership.

THE PSYCHOLOGICAL OWNERSHIP OF ENTREPRENEURIAL ORGANIZATIONS

Although the concept of psychological ownership is relatively new in the entrepreneur decision-making literature, we expect this construct to exert empirically detectable effects on different aspects of the entrepreneurship process including the decision to pursue certain potential opportunities, strategic resource decisions such as capital structure (i.e., debt vs. equity funding) and size of the founding team, organizational design decisions such as lifestyle versus high growth ventures, and entrepreneurial exit decisions. In Figure 1 illustrated below, we extend prior research on psychological ownership to demonstrate how psychological ownership affects the alignment of entrepreneurial and organizational goals during the process of new venture creation and development.

Psychological Ownership and Governance Alignment

In the governance literature, governance mechanisms (including bonding mechanisms, monitoring, and incentives) are used to reduce potential agency problems a priori between principals and agents (Williamson 1988). Owing to self-interest seeking, the goals of agents and principals must be aligned through governance mechanisms or else agents may engage in acts of opportunism which benefit themselves at the expense of principals. These mechanisms are intended to reduce information asymmetry between the two parties, discourage the agent from engaging in behaviors which might hurt the organization (such as excessive diversification or other unprofitable growth), and encourage the agent to engage in behaviors which are beneficial to the organization. For example, by developing contingent compensation schemes, the board of directors can effectively induce the agent to take appropriately risky actions to try and profitably grow the organization (Certo et al. 2003).

We argue, however, that psychological ownership impacts the governance in the organization and creates an inherent alignment of goals. Because psychological ownership involves an investment of self into the organization, the entrepreneur with high psychological ownership is not verging on self-interested behavior which is destructive to the organization (or costly only to principals). Instead, the entrepreneur with high psychological ownership in the organization may act out of self interest but this activity also is consonant with the interests of the organization since the entrepreneur may view the organization as an extension of herself/himself. As such, high psychological ownership will reduce the necessity of governance to bluntly align goals. In
essence, high psychological ownership lessens the need for intense governance. On the flip side of this argument, however, is the problem of declining psychological ownership. When psychological ownership declines in the entrepreneur, goal alignment will naturally decline and will be increasingly dependent on the established governance mechanisms.

**Proposition One:** There is a positive relationship between an entrepreneur’s psychological ownership and governance alignment such that higher psychological ownership will increase the alignment between an entrepreneur’s and organization’s goals and weaker psychological ownership will reduce the alignment between the entrepreneur’s and organization’s goals.

**Resource Exchanges and Governance Alignment**

Entrepreneurial organizations typically face resource constraints as they seek to grow (Baker & Nelson 2005). For this reason, many entrepreneurs pursue external resources including capital or debt financing when possible. To this end, venture capital is often sought by ventures with high growth prospects when other capital is either depleted (such as that from family, friends, or business angels), or unavailable. While venture capital financing can be quite beneficial and VCs are known for providing strategic guidance, access to potential suppliers and customers, and ties to prominent underwriters (Megginson & Weiss 1991), there is a downside to this funding. More specifically, obtaining venture capital means that an entrepreneur must give up not only a sizeable portion of ownership but also control as VCs typically take seats on the board of directors and establish elaborate contractual safeguards to protect their interests (Sahlman, 1990). Indeed, VCs utilize staged financing to exert stronger control over their funded ventures and to reduce total exposure to ventures which are trending toward failure.

For the entrepreneur with high psychological ownership toward her/his venture, this ceding of control and ownership to others may be necessary for growth purposes or even survival. However, we view the need for VC funding (in particular) and other external resources as potentially problematic. In particular, as other individuals occupy the position of principal, there arises potentially competing interests in the organization. This situation can create problems for two reasons. First, as VCs begin to alter the governance mechanisms to exert greater control over the organization, this may generate feelings of protectiveness toward the organization particularly among the founders. Second, these feelings of protectiveness may ultimately fuel conflict between the entrepreneurial team and the VCs resulting in reduced confidence in cooperative relations (Shepherd & Zacharakis 2001). The net result here is that VCs may begin to increase the intensity of the governance (such as through increased monitoring) if they perceive weak goal alignment (Sapienza & Gupta 1994). So where high psychological ownership previously aided goal alignment, we believe that the need for external resources will actually lead to a weakening in the relationship.

**Proposition Two:** Resource exchanges moderate the relationship between psychological ownership and governance alignment such that entrepreneurs with a greater need to acquire resources from external constituencies will weaken the relationship between psychological ownership and governance alignment while entrepreneurs with a lesser need to acquire resources from external constituencies will strengthen the governance alignment.
Governance Alignment and Organizational Outcomes

By utilizing a proper mix of governance mechanisms the board of directors seeks to create goal alignment between the principal and agent with the expectation that performance of the organization can be restored to pre-dilution levels (Jensen & Meckling 1976). The implicit assumption here is that when an entrepreneur dilutes her/his ownership (by selling ownership to raise additional capital) the result is poorer organizational performance unless the governance mechanisms are effective in aligning interests. However, because no governance system is completely effectual there will be so called residual costs or losses which theoretically represent the difference in organizational performance from where it would be if the entrepreneur were sole owner and its performance when the entrepreneur dilutes his/her ownership in the company.

The benefit from high psychological ownership is that these residual costs or losses may be much lower in the first place because effort by the entrepreneur will be properly guided toward benefitting the organization. Furthermore, it may reduce the need for intense governance mechanisms which would duplicate the effect of this psychological ownership. For example, executive compensation can be used to link pay with performance and thereby motivate executives to expend additional effort in growing the organization. Interestingly, however, executive compensation tends to be much lower in entrepreneurial organizations where founders are still running the business. Wasserman (2006) calls this the “founder’s discount” and attributes it to the presumed higher psychological ownership among founders (which obviates the need for higher compensation). So while organizational performance should be higher when goals are aligned, an added benefit of higher psychological ownership is that governance costs will be lower.

Proposition Three: There is a positive relationship between the governance alignment (between the entrepreneur and key stakeholders) and organizational outcomes such that higher levels of alignment reduce governance costs and increase organizational performance while lower levels of alignment increase governance costs and decrease organizational performance.

Organizational Outcomes and Psychological Ownership

In prior research, psychological ownership is frequently linked with higher financial performance and general organizational effectiveness (e.g., Wagner, Parker & Christiansen, 2003). In general, these outcomes are thought to develop because employees and managers engage in positive organizational behaviors (i.e., OCBs, etc.—Avey et al., 2009) derived from the strong bond of ownership they feel towards an organization. In addition, as we note above, this subjective state of ownership can evolve to the point where these individuals start to view the object of ownership as an extension of themselves (Pierce et al., 2001; 2003). For entrepreneurs, this means that they often come to view their venture as the public projection of their personality, goals, and/or identity (Wasserman, 2008). Organizational outcomes, therefore, are likely to be perceived by the entrepreneur as a reflection of their skills and abilities.

Whereas, then, positive organizational outcomes are likely to increase the attachment between an individual and the organization, prior research is largely silent on the effect of negative organizational outcomes on psychological ownership. Furthermore, for a broad set of reasons (i.e., personal autonomy; psychic income; etc.), Gimeno and colleagues (1997) report that some entrepreneurs are willing to endure less-than-optimal returns for years without closing their ventures suggesting that public status and/or identity concerns are trumped by other psychological factors. However, once organizational performance weakens to a point lower than the
entrepreneur’s performance threshold, the probability of closure increases dramatically (Gimeno et al., 1997). Together these observations suggest that poor organizational performance may not inversely impact an entrepreneur’s attachment to a venture up to a certain point (in fact, mediocre performance may actually increase the subjective attachment as the entrepreneur makes a greater self-investment to try to turn the fortunes of the company around), but once performance dips below a certain threshold, extant theory would suggest that an entrepreneur’s attachment to the venture likely decreases. Formally, 

**Proposition Four:** There is a positive relationship between an organization’s performance-based outcomes and psychological ownership such that ventures with outcomes above an entrepreneur’s performance threshold will increase an entrepreneur’s psychological ownership while ventures with performance-based outcomes lower than an entrepreneur’s performance threshold will reduce an entrepreneur’s psychological ownership.

**PO Factor Complementarities (Trade-offs)**

The central thesis of this paper argues that psychological ownership can persist apart from the objective control (i.e., equity ownership) an entrepreneur possesses over a particular venture. So, even when an entrepreneur is forced to sacrifice equity in exchange for critical resources from external constituencies, the subjective state of psychological ownership may still remain high. This occurs, we argue, because the three determinants of psychological ownership are complementary (rather than just additive), and, therefore, interact to produce the state of psychological ownership.

First, as noted above, greater insider knowledge increases the relative psychological ownership an entrepreneur feels towards his or her venture. Although control is important for the emergence of psychological ownership (e.g., Pierce, O’Driscoll, & Coghlan, 2004), in situations where the entrepreneur cedes some control of the venture to gain access to outside resources, our prediction is that psychological ownership will remain moderately high if the entrepreneur possesses substantial insider’s knowledge of the venture’s history and/or current operations. We base this argument on several factors. Earlier we defined insider’s knowledge as the tacit knowledge an entrepreneur builds up over time regarding their venture. When sacrificing equity-based control for critical resources we expect psychological ownership to remain moderately high when entrepreneurs feel they are best able to leverage their insider’s knowledge to make the most effective use of these external resources therefore weakening the inverse effect of low subjective control on governance alignment.

Second, the self-investment of the entrepreneur can also increase psychological ownership even when control is reduced. As we noted above, self-investment refers to the specific human capital investments entrepreneurs make into their organizations. Prior research also indicates these investments are positively associated with increased organizational performance/survival (Bates, 1990; Gimeno, Folta, Cooper, and Woo, 1997), opportunity identification (Shepherd & DeTienne, 2004; Ucbasaran, Westhead, & Wright, 2008), access to external resources (Cooper, Gimeno-Gascon, & Woo, 1994; Hsu, 2004) among other factors. Furthermore, to the extent entrepreneurs link organizational outcomes with their self-identity and continue to make specific human capital investments, we expect this relationship to moderate the effect of low control. Specifically, the alignment between the entrepreneur’s and organization’s goals will remain moderately high even when control is low.
Wasserman (2008) presents some anecdotal evidence for these relationships when he notes that entrepreneurial founders often believe that they are the only individuals capable of successfully running their venture. Prior literature on entrepreneur decision-making suggests that entrepreneurs tend to overweight their individual importance to the future success of their ventures (Cooper, Woo, & Dunkleberg, 1988; Busenitz & Barney, 1997; Hayward, Shepherd, & Griffin, 2006). As such, given the perceived link between organizational outcomes and the entrepreneur’s self-identity, entrepreneurs likely perceive the need to acquire external resources as a necessary step to facilitate organizational survival, but that organizational performance is still largely contingent upon their own efforts. Therefore, we do not expect the loss of control to reduce psychological ownership proportionally as long as the entrepreneur’s insider’s knowledge and/or self-investment remain high. Figures 2 and 3 included below illustrate these trade-offs.

Formally,

**Proposition Five:** Insider’s knowledge moderates the relationship between the relative control an entrepreneur possesses over a venture and their sense of ownership toward the venture such that the entrepreneur’s relative psychological ownership will increase when insider’s knowledge is high even when their objective control is low and decrease when both factors are low.

**Proposition Six:** Self-investment moderates the relationship between the relative control an entrepreneur possesses over a venture and their sense of ownership toward the venture such that the entrepreneur’s relative psychological ownership will increase when self-investment is high even when their objective control is low and decrease when both factors are low.

**DIRECTIONS FOR FUTURE RESEARCH**

**Contribution to Theory**

*Psychological Ownership Theory.* Although Pierce and colleagues (2001) propose a theoretical model in which control, intimate/insider’s knowledge, and self-investment exert additive effects on psychological ownership, they acknowledge that these factors may also be complementary. In this paper, we argue that in the context of entrepreneur decision-making, these effects are complementary during the firm creation/development process. We base this argument on several key observations. First, although several prior empirical studies testing various facets of psychological ownership theory emphasize the role of control in causing psychological ownership (e.g., Pierce, O’Driscoll, & Coghlan, 2004), as Wasserman (2008) argues, entrepreneurs creating high-growth ventures often have to sacrifice control to gain access to external resources. Second, despite relinquishing substantial control over a venture, prior research indicates the entrepreneur’s commitment to the venture remains high even after sacrificing an large equity stake (Wasserman, 2006; Arthurs, Hoskisson, Busenitz, & Johnson, 2008). Third, given the high level of commitment entrepreneurs display towards their ventures, alternative psychological factors (i.e., insider’s knowledge and/or self-investment) appear to moderate the relationship between control and psychological ownership.

Reconceptualizing the effects of these psychological factors as complementary rather than additive makes several contributions to extant theory on psychological ownership. First, a synergistic joint effect between any two factors suggests that many of the positive consequences attributed to psychological ownership (i.e., commitment, extra role behaviors, etc.) can be observed at much lower levels of each individual variable. Stated differently, a smaller level of
self-investment combined with a smaller level of control may induce higher levels of psychological ownership than a higher individual level of control. This effect is important given that the negative consequences of psychological ownership are often observed when the individual factors are observed at either extreme of the scale (e.g., Brown, Lawrence, & Robinson, 2005). Second, reconceptualizing the effects as complementary rather than additive allows for high levels of psychological ownership even in the absence of one factor. For example, received theory suggests that insider’s knowledge tends to build up over time. As such, were we measuring an entrepreneur’s level of psychological ownership immediately after the creation of a venture, the relative newness of the venture would cap the aggregated psychological ownership score on the moderately high end of the scale.¹ If, however, researchers conceptualize these scores as complementary, the various dimensions of psychological ownership jointly interact to minimize the individual effect of any one dimension which may be lower due to contextual constraints.

Governance Literature. Reconceptualizing the dimensions of psychological ownership as complementary rather than additive also offers several interesting revisions to extant theory on the use of various governance mechanisms intended to increase the alignment between the entrepreneur and the organization. Specifically, extant literature on the use of governance mechanisms in entrepreneurial ventures tends to over-emphasize the role of incentives (i.e., bonding mechanisms) to compensate for a lack of control in ventures. However, prior research indicates that incentives such as bonding mechanisms in entrepreneurial ventures may be an unnecessary expense among founder-controlled ventures given the potentially high levels of psychological ownership among founders (Arthurs, Busenitz, Townsend, & Liu, 2007). By conceptualizing entrepreneurs as more psychologically complex than received theory acknowledges, potentially new avenues of research into the effectiveness of various mechanisms intended to reduce agency costs may be developed.

CONTACT: David M. Townsend; dtownsend@ncsu.edu; (T): 919-515-6957; (F): 919-515-6943; North Carolina State University, Raleigh, NC 27695.

NOTES

1. Specifically, prior researchers often use 7-point Likert scales to measure the three dimensions of psychological ownership. So, if the scores for control and self-investment were both a seven, but the score for insider’s knowledge was only a one (since the venture is so new), the aggregate PO score for the entrepreneur would be capped at 15/21—implying that the entrepreneur had a moderately high level of psychological ownership despite the fact that one two dimensions, the entrepreneur’s score was at the extreme end of the scale.

REFERENCES


Figure 1: A Model of Psychological Ownership of Entrepreneurial Organizations

PSYCHOLOGICAL OWNERSHIP

CONTROL

INSIDER’S KNOWLEDGE

SELF-INVESTMENT

RESOURCE EXCHANGES

GOVERNANCE ALIGNMENT

ORGANIZATIONAL OUTCOMES

---

Frontiers of Entrepreneurship Research, Vol. 29 [2009], Iss. 6, Art. 3

Posted at Digital Knowledge at Babson
http://digitalknowledge.babson.edu/fer/vol29/iss6/3
Figures 2 & 3: Trade-Offs Among the Causal Determinants of Psychological Ownership on Governance Alignment

<table>
<thead>
<tr>
<th>INSIDER’S KNOWLEDGE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL</td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>HIGH ALIGNMENT</td>
</tr>
<tr>
<td>LOW</td>
<td>MODERATE ALIGNMENT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SELF-INVESTMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL</td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>HIGH ALIGNMENT</td>
</tr>
<tr>
<td>LOW</td>
<td>MODERATE ALIGNMENT</td>
</tr>
</tbody>
</table>