# Understanding Employee Engagement in Un-Official Projects – A Conceptual Model Based On Psychological Empowerment and Constructive Deviance

by

Arne Buchwald, Nils Urbach, Magnus Mähring

WI-519

Universität Augsburg University

UNIVERSITÄT BAYREUTH

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*Research-in-Progress*

**Arne Buchwald**
University of Bayreuth
Universitätsstraße 30
95447 Bayreuth
GERMANY
arne.buchwald@uni-bayreuth.de

**Nils Urbach**
University of Bayreuth
Universitätsstraße 30
95447 Bayreuth
GERMANY
nils.urbach@uni-bayreuth.de

**Magnus Mähring**
Stockholm School of Economics
P.O Box 6501
SE-113 83 Stockholm
SWEDEN
magnus.mahring@hhs.se

## Abstract

*Un-official projects resulting from unsanctioned, bottom-up employee initiatives is a phenomenon that can cause serious resource planning problems in IT project portfolio management, such as when resources thought to be available have actually been spent on projects conducted under the radar. At the same time, such project may also give rise to innovative ideas, solutions and software of potentially great benefit to organizations. Previous research has begun to acknowledge and highlight the innovative potential in bottom-up un-official activities, but little is known about why individual professionals engage in un-official projects. We draw on psychological empowerment and constructive deviance theory to explain such engagement, identifying factors fostering empowerment as well as factors moderating whether empowerment translates into un-official project activities. Our conceptual model contributes to the theoretical discourse on un-official projects and equips practitioners with knowledge that can help them balance the propensity of individuals to engage in un-official activities.*

**Keywords:** Un-official projects, bottom-up projects, psychological empowerment, deviance theory, constructive workplace behavior

# Introduction

IT Project portfolio management (PPM) aims at maximizing the return an organization gains from its IT spending (Cubeles-Márquez 2008), determining the best choice of projects in relation to a variety of criteria, and supporting the business strategy with the project portfolio (Cooper et al. 1997). Despite the vast body of literature on how to identify, select, control, and assign resources to projects, among others, resource sharing between different projects remains a major challenge (Martinsuo 2013). When applying and practicing PPM, organizations often face resource-related challenges (Jeffery and Leliveld 2004), which Blichfeldt and Eskerod (2008) find are partly caused by the existence of un-official projects, which compete with official projects for scarce resources. This phenomenon is also present in more advanced PPM organizations (Blichfeldt and Eskerod 2008; Martinsuo 2013). Despite the fact that resources were officially assigned to a project by PPM, some of the resources turn out to be unavailable in daily practice that Blichfeldt and Eskerod (2008) attribute to the existence of various un-official initiatives. Un-official projects "have never been subject to any official evaluation process but do exist, although they are not known to or are included in the project portfolio of a company" (Buchwald and Urbach 2012, p. 2). Even though the general phenomenon of circumventing corporate decision-making structures is well-investigated in organizational research (e.g., Cyert and March 1992), there is only little research transferred to the PPM context, using different terms to describe the phenomenon, such as bootlegging activities (e.g., Brazeal 1996; Criscuolo et al. 2014; Egri and Frost 1989), un-enacted projects (e.g., Blichfeldt and Eskerod 2008; Buchwald and Urbach 2012; Buchwald et al. 2014; Mors et al. 2010), under-the-table projects (Loch 2000), or skunk works (e.g., Brazeal 1996; Cooper et al. 2004a).

While the downside of the engagement in un-official projects may include disturbances to regular organizational processes, there is also an upside, since these projects may lead to bottom-up innovation driven by employees (Kesting and Ulhøi 2010; Loch 2000). However, most previous studies looking at the upside of un-official projects only show that bottom-up un-official projects often strengthen organizational innovation (e.g., Cooper et al. 2004a; Cooper et al. 2004b), but do not thoroughly investigate which factors foster the emergence of such un-official projects, i.e., why these un-official projects occur. We argue that while some types of bottom-up un-official projects are rather harmful from an IT governance point of view (e.g., those types which lead to department-internal, separated, and shadow IT (Fürstenau and Rothe 2014)), other types of bottom-up un-official projects (e.g., innovation initiatives) might be desired from an overall corporate point of view. We focus here on bottom-up un-official projects as a source of innovation and entrepreneurship for organizations (Appelbaum et al. 2007; Galbraith 1983; Galperin 2002; Kanter 1983b), where employees can use their creative potential to improve work routines or develop innovative solutions that may ultimately be profitable to the organization (Galperin 2002). Such individual initiative has been connected to employee empowerment, a psychological state (Spreitzer 2008). However, little is known about the factors that promote employee engagement in such bottom-up un-official projects. To address this gap, we aim at gaining a deeper and more thorough understanding of one important driver of bottom-up un-official projects, namely psychological empowerment, by building on and extending previous work (Buchwald et al. 2014).

Specifically, our research question is: *Which factors lead to psychological empowerment and, ultimately, to the employee engagement in bottom-up un-official projects*?

To answer our research question, we derive propositions and develop a conceptual model as a basis for future empirical work. We draw on organizational behavior literature, particularly the deviance framework to bring the current state of research on un-official projects forward. While research on organizational deviance (or workplace deviance) has been conceptualized in a destructive manner for a long time (e.g., individuals who threaten the well-being of an organization and/or cause harm to other employees) (Galperin 2012), recent research also begins to acknowledge the positive consequences of deviating behaviors. Spreitzer and Sonenshein (2004) define positive deviance as "intentional behaviors that depart from the norms of a referent group in honorable ways" (p. 828), i.e., in the best interest of their organizations.

# Theoretical Background

## Empowerment Theory

We draw on empowerment theory to explain the engagement in un-official projects on the basis of both socio-structural characteristics and leadership support. Already more than thirty years ago, organizational scholars and practitioners ascribed empowerment (and its precursors) a decisive role in improving the performance, stimulating innovative behavior, and fostering the well-being of employees by overcoming traditional structures and by successfully shifting to more participative structures (Conger and Kanungo 1988; Kizilos 1990; Seibert et al. 2011; Spreitzer 1995a; Thomas and Velthouse 1990). The roots of research on empowerment can be traced back to the job characteristics model (Hackman and Oldham 1980) and self-efficacy theory (Bandura 1977; Bandura 1982), which eventually resulted in structural empowerment and psychological empowerment as two distinct conceptualizations of the term (Maynard et al. 2012). Especially early research on empowerment was dominated by the focus on the socio-structural perspective (e.g., Kizilos 1990) that drew on Kanter's seminal works (1977; 1983b). Structural empowerment refers to a set of boundary conditions and policies that ultimately shift decision-making power and responsibility from upper to lower levels of the organizational hierarchy (Liden and Arad 1996; Maynard et al. 2012), giving employees the formal authority to make decisions on issues within their usual realm, without having to involve their supervisors (Spreitzer 2008). Structural empowerment may include, for instance, better access to organizational resources, information, or increased supportive behavior by superiors.

The psychological perspective on empowerment was first proposed by Conger and Kanungo (1988), complementing the socio-structural perspective on empowerment (Seibert et al. 2011). They argued that the prevalent socio-structural perspective on empowerment is not sufficient, but that empowerment research needs to focus on the mechanisms through which the individual employee perceives the empowering socio-structural factors of his work. This stream on the psychological perspective is further advanced by Thomas and Velthouse (1990) on the basis of cognitive motivational theories. Spreitzer (1995b) synthesizes previous research and precisely defines psychological empowerment as "a set of psychological states that are necessary for individuals to feel a sense of control in relation to their work" (Spreitzer 2008, p. 56). The cognition of these psychological states "reflect[s] an active, rather than a passive, orientation to a work role" (Spreitzer 1995b, p. 1444), which she refers to an individual employee who strives to exert influence on his work. In a similar vein, Maynard et al. (2012) summarizes that psychological empowerment "is not an organizational intervention or a dispositional trait but rather a cognitive state achieved when individuals perceive that they are empowered" (p. 1235). Psychological empowerment has been continuously found to be a decisive mediating variable between socio-structural characteristics and behavioral outcomes across different disciplines (Spreitzer 1995a; Spreitzer 2008).

## Deviance Framework

Previous research finds that psychological empowerment may reduce counterproductive work behavior, and calls for expanding empowerment theory by establishing linkages to other organizational theories focusing on individual work behavior (Seibert et al. 2011). Since our research is concerned with workplace behavior that is not approved, may be against corporate policies, yet has the organization's best interest in mind, we use the deviance framework that we link to empowerment theory. Deviant behavior was traditionally seen unequivocally as negative or destructive, but has recently been broadened to also include positive deviant behavior (Galperin 2012). Negative deviance concerns behaviors such as stealing, unauthorized absence from work, or executing transactions that need a third party's approval (Robinson and Bennett 1995).

Supplementing this view of deviance, Dodge (1985) called for a new research stream on positive deviance in that "sociologists are overdue to acknowledge the empirical existence of positive deviance and to incorporate the positive deviance into a broader, more general study of deviance" (p. 17). Positive deviance is defined as "intentional behaviors that depart from the norms of a referent group in honorable ways" (Spreitzer and Sonenshein 2003, p. 209). According to Spreitzer and Sonenshein (2004), three characteristics needs to be fulfilled to assess an employee behavior positive deviant: First, the behavior needs to be intentional and voluntary; second, the behavior needs to divert from behaviors regularly expected of the reference group; and third, the behavior needs to be honorable that the employee pursues

with the explicit intention to benefit the organization. Although the employee may bypass or violate policies or regulations of an organization, the employee attempts to facilitate the objectives of the organization (Robbins and Galperin 2010). Since psychological empowerment may help reduce counterproductive work behavior (Seibert et al. 2011), we argue that, vice versa, psychological empowerment may facilitate constructive deviant behavior. Appelbaum et al. (2007) summarize that "organizations have a vested interest in increasing some types of positive deviant workplace behaviors within their walls by empowering their employees" (p. 596), and Galperin and Burke similarly argue that "employees who voluntarily violate the organizational norms may be important sources of innovation and entrepreneurship" (Galperin and Burke 2006, p. 331).

## Conceptual Development

Having described empowerment theory and the deviance framework as the theoretical foundations of our work, we now focus on the derivation of propositions to explain the engagement in bottom-up un-official projects. We focus on the individual level, and the unit of analysis is thus the individual employee. Furthermore, drawing on Warren (2003), the reference point against which deviant behavior is compared should be made explicit. The reference point in our study is a manager's perspective as to what is regularly expected and permitted employee behavior. This perspective is distinct from behavioral expectations of other parties, such as peers or customers.

Before we derive and explain all propositions in detail, we briefly introduce the major constituents up-front in this paragraph. We build upon the theoretical models of Spreitzer (1995a; 1995b; 1996) who extensively investigated psychological empowerment, its determinants and consequences, in the workplace. While Spreitzer studied *managerial effectiveness* and *innovative behavior* as behavioral outcomes, we are interested in whether our antecedents, mediated through psychological empowerment and moderated by two organizational proxies, lead individual employees to engage in bottom-up un-official projects. To conceptualize our dependent variable, we draw upon Galperin (2002) in focusing on the positive aspects of deviant behavior (e.g., Galperin 2002; Robbins and Galperin 2010) and include a specific adaptation, namely *the engagement in bottom-up un-official projects* as the behavioral outcome of interest. In line with previous research, we propose *psychological empowerment* as a mediating variable to the behavioral outcomes. The construct psychological empowerment comprises the four dimensions *meaning*, *competence*, *self-determination*, and *impact*, as discussed above. Furthermore, we propose that the relationship between psychological empowerment and engagement in un-official projects is moderated by two organizational variables: *perceived organizational bureaucratization* and *perceived organizational* complexity. In terms of organizational determinants of psychological empowerment, Spreitzer includes socio-structural characteristics, which comprise access to strategic information, access to resources, role ambiguity, and sociopolitical support. Next to socio-structural antecedents, leadership is often related to psychological empowerment. Thus, we include another factor, *supportive leadership*, as antecedent to psychological empowerment.

### Engagement in Bottom-Up Un-Official Projects

The dependent variable in our study is a specific adaptation of constructive deviance, the engagement in bottom-up un-official projects. We draw on the innovation management literature for the definition of this variable: On the basis of West and Farr (1989), Kleysen and Street (2001) define innovative employee behavior as "all individual actions directed at the generation, introduction and or application of beneficial novelty at any organizational level" (p. 285). We adapt this definition, constrain it to the context of the un-official projects, and thus define our construct, the engagement in bottom-up un-official projects, as the extent to which all intentional individual engagement in un-official projects directed at the generation, introduction and or application of beneficial novelty at any organizational level although such behavior is not part of the job description of the individual employee. In previous research, Buchwald and Urbach (2012) find very different manifestations of bottom-up un-official projects, depending on its objectives and depending on whether the means to achieve the objectives are immediately available to the employees. In an IT organization, for instance, employees developed IT interfaces, whereas employees in a financial services organization could only develop conceptual ideas but lacked access to IT systems. (Buchwald and Urbach 2012)

## *Psychological Empowerment*

Based on the works of Thomas and Velthouse (1990), Spreitzer (1995a) develops a multidimensional intrapersonal measure of empowerment in the workplace that is used in this study. These four dimensions, namely, *meaning*, *competence*, *self-determination*, and *impact* are fundamental building blocks of psychological empowerment which is why the absence of any of these reduces the power of the measure (Spreitzer 1995b; Thomas and Velthouse 1990). The four-dimensional measure of psychological empowerment receives strong support (Seibert et al. 2011) across different disciplines (Spreitzer 2008) and countries (Maynard et al. 2012) and is found to be used by all, except for one, individual-level psychological empowerment studies (see review, Maynard et al. 2012).

### Meaning

Meaning refers to "the value of the task goal or purpose, judged in relation to the individual's own ideals or standards" (Thomas and Velthouse 1990, p. 672). In other words, it assesses whether there is a fit between the individual's work role and the individual's intrinsic motivation for it. Thomas and Velthouse (1990) further summarize that individuals who cannot relate meaning to their work roles become apathetic and detached. In turn, they describe that individuals who relate a high meaning to their work roles are more committed to and involved in them.

### Competence

Competence, or self-efficacy (Bandura 1977) that is specifically directed to an individual employee's work role (Spreitzer 1995a), refers to "one's belief in one's capability to perform a specific task" (Gist 1987, p. 472). The higher the individual employee's perceived self-efficacy, the higher the individual employee's objectives and the higher the individual employee's dedication to achieve the set objectives (Bandura 1989). Furthermore, Bandura (1989) summarizes that challenging objectives also lead to increases in motivation as well as in performance.

### Self-Determination

Self-Determination refers to the individual's experience of a "sense of choice in initiating and regulating one's own actions" (Deci et al. 1989, p. 580) in the work role. In other words, it describes the extent as to whether the individual employee has the choice to engage in certain work behaviors (Spreitzer 1995b). Previous research shows that self-determination is built upon the three factors (1) support for autonomy, (2) non-controlling positive feedback, and (3) acknowledging the other's perspective (Deci et al. 1989).

### Impact

Impact refers to whether "the individual has input into or influence over strategic, administrative, and operating decisions" (Ashforth 1989, pp. 207-208). While self-determination indicates as to whether the individual employee has control over his work, impact relates to whether the individual has control over his organizational unit (Spreitzer 1995a). In other words, the impact dimension describes whether the individual employee feels able to exert influence on his organizational unit in his desired way.

Summarizing, in a recent meta-analytic study, Seibert et al. (2011) only finds weak support for the discriminant validity between the four dimensions of the psychological empowerment measure which is why they conclude that the unitary construct comprising the four dimensions should be used in studies on empowerment. Peterson (2002) summarizes that "deviant behavior may be best predicted based on a combination of personality variables and the nature of the workplace situation" (p. 49), i.e., psychological empowerment and perceived organizational-level constraints. Psychological empowerment, essentially, "involves increased individual motivation at work through the delegation of authority to the lowest level in an organization where a competent decision can be made" (Seibert et al. 2004, p. 332) and "likely enhances performance because people go above and beyond the call of duty and are more influential and innovative in their work" (Spreitzer 2008, p. 62).

An individual's perception of psychological empowerment (higher levels of meaning, competence, self-determination, and impact) will lead to employees who take more decisions within their usual realms compared to non-empowered employees who rather refer such decisions to their supervisors. Despite any level of psychological empowerment, however, an employee's work role has a certain position within the overall organizational structure, i.e., certain decisions are beyond the scope of a psychologically

empowered employee. In case the innovative idea exceeds the decision-making authority of a psychologically empowered employee such that a decision would actually need to be referred to a supervisor (not even necessarily the individual's supervisor if the innovative idea falls into the decision-making authority of some other organizational unit), the individual may opt for the means of an un-official project to achieve the objectives before an official evaluation (e.g., by a supervisor) takes place. We argue that individual employees who, on the one hand, feel psychologically empowered in their regular work roles, but who, on the other hand, realize that the scope of the innovative idea is not encompassed in the psychologically empowered employee's room for maneuver but is beyond its scope, may start to explore their ideas in un-official initiatives. Thus, we propose:

*P1: A higher level of psychological empowerment leads to a higher level of engagement in un-official projects.*

## Socio-Structural Antecedents

### Access to Strategic Information

Drawing on Kanter (1986), access to strategic information is defined as the degree to which "information about organization and work unit strategy and performance" is available to members of an organization (Spreitzer 1995a, p. 607). Examples of strategic information that may be shared with employees are details on the performance of an employee's business unit, data on an organization's strategic goals and its long-term mission, as well as data on the competitive environment (Spreitzer 1995a; Spreitzer 1995b). These information increase employees' perceived level of psychological empowerment because these information help them understand in which direction the organization heads and thus equip them with the necessary means to act proactively (Kanter 1983a; Lawler 1992; Spreitzer 1995b). Several previous works (e.g., Galperin 2002; Kanter 1983b; Spreitzer 1995b) show that employees develop innovative thoughts in organizations which openly share strategic information with its employees. In contrast, Kouzes and Posner (1987) outline that employees who perceive a lack of information do not show particular efforts to use their creative potential for their organizations. Overall, we argue that access to information increases an employee's feeling of psychological empowerment and helps an employee to identify relevant organizational issues. Thus:

*P2: A higher level of access to strategic information leads to a higher level of psychological empowerment.*

### Access to Resources

Access to resources is defined as the degree to which there are "multiple sources of loosely committed funds at local levels [...] to find the money, the staff, the materials, or the space to proceed with an entrepreneurial idea" (Kanter 1983a, p. 169). Such access to resources helps employees to accomplish their work goals because it eases the daily job routines (Kanter 1977; Spreitzer 1995a) and creates a sense of self-determination in their work roles (Spreitzer 1995a; Zimmerman 1995). Overall, we posit that access to resources increases employees' sense of control over their work roles and thus propose:

*P3: A higher level of access to resources leads to a higher level of psychological empowerment.*

### Role Ambiguity

Based on the work of Kahn et al. (1964), role ambiguity is defined as "(1) the predictability of the outcome or responses to one's behavior [...], and (2) the existence of clarity of behavioral requirements [...] which would serve to guide behavior and provide knowledge that the behavior is appropriate" (Rizzo et al. 1970, pp. 155-156). In case the individual is not aware of the specific tasks and responsibilities of the job role, "[role] ambiguity should increase the probability that a person will be dissatisfied with his role, will experience anxiety, will distort reality, and will thus perform less effectively" (Rizzo et al. 1970, p. 151). More precisely, role ambiguity is found to be connected to negatively valued conditions, which include tension, low satisfaction, and low job involvement (Jackson and Schuler 1985; Schuler et al. 1977). In turn, individual employees may only perceive psychological empowerment if they can relate to the objectives of their work and if they understand how their individual work role relates to the larger organizational context (Spreitzer 1995a). We conclude:

*P4: A higher level of role ambiguity leads to a lower level of psychological empowerment.*

### Sociopolitical Support

Based on Kanter (1983b), sociopolitical support is defined as the degree to which employees receive "endorsement, approval, and legitimacy from various organizational constituencies and is typically gained from membership in organizational political networks" (Spreitzer 1995a, p. 608). Such organizational networks help employees to establish connections with important organizational constituents and ultimately supports employees to work efficiently (Spreitzer 1995a; Spreitzer 1996). Furthermore, the membership in different social networks helps employees form or extend relationships to other members and increase their influence eventually (Bahrami 1992; Kanter 1983b). Members of social networks may be direct peers, subordinates, or other coworkers. Overall, we argue that sociopolitical support increases an individual's perception of psychological empowerment which is why we propose:

*P5: A higher level of socio-political support leads to a higher level of psychological empowerment.*

## Leadership Antecedents

### Supportive Leadership

Supportive leadership is defined as the degree to which "leader behavior can be characterized as friendly and approachable, and considerate of the needs of subordinates" (Bearden et al. 2011, p. 528). Examples for supportive leadership behavior may include a leader's curiosity about the subordinates, a leader's responsiveness to facilitate the fast resolution of subordinate's issues, or a leader's personal ties with subordinates. The leader has a strong influence on subordinates because "the leader, functioning as an agent of reinforcement and punishment, can influence subordinate behavior through the control of positive and negative stimuli" (Ashour and Johns 1983, pp. 603-604). The relationship between a leader and a subordinate employee can be explained by drawing on the leader-member exchange (LMX) theory (Dansereau Jr et al. 1975). Those subordinates with whom the leader has high-quality exchanges enjoy more leeway, more reciprocal influence, and more appreciation, among others (Graen and Uhl-Bien 1995; Schriesheim et al. 1999). Concluding, we propose:

*P6: A higher level of supportive leadership leads to a higher level of psychological empowerment.*

## Moderators

In this section, we explain the two moderating variables of our model. In their meta-analytic study on psychological empowerment, Seibert et al. (2011) conclude that "there is evidence that additional moderators may operate for virtually all of the relationships observed in our study" (p. 996). In a previous study on un-official projects, Buchwald and Urbach (2012) stress the importance of organizational constraints as influencing variables of the occurrence of un-official projects. Related to the behavioral outcome of our study, the engagement in bottom-up un-official projects, we thus propose *Perceived organizational bureaucratization* and *Perceived organizational complexity* as variables moderating the relationship between psychological empowerment and the engagement in bottom-up un-official projects. While these organizational constraints could possibly serve as negatively-related antecedents to psychological empowerment, we are specifically interested in the extent to which these organizational constraints influence such behavior of psychologically empowered employees. We argue that employees who perceive to be psychologically empowered in their regular work roles but who experience organizational constraints in terms of bureaucracy or complexity, may deviate, in particular, from official processes.

### Perceived organizational bureaucratization

Based on the work of John (1984), Moorman et al. (1993) define *perceived organizational bureaucratization* as "the degree to which a user views his or her organization as managed primarily through formalized relationships and a centralized authority" (p. 85). The construct thus comprises two core components, the degree of formalization and the degree of centralization of decision making in an organization. Formalization is defined as the extent to which "rules define roles, authority relations, communications, norms and sanctions, and procedures" (Deshpande and Zaltman 1982, p. 18). In previous research, the relationship between structural characteristics and innovation is investigated and formalization, among others, is found to impede innovation (Arad et al. 1997). Centralization of decision-making is defined as the extent to which "power is distributed among social positions" (Hage and Aiken

1967, p. 77), which refers to an organization's locus of authority (Damanpour 1991). Analyzing organizational structures, Thompson (1965) reveals that centralized decision making both inhibits creativity and finally precludes innovation. While psychological empowerment has frequently been shown to be positively related to various types of extra-role performance (e.g., Alge et al. 2006), we argue that psychologically empowered employees who perceive a high degree of organizational bureaucratization not stifle their constructive behaviors, but rather decide to bypass the perceived official bureaucratic processes and pursue their ideas as un-official projects.

*P7: A higher level of Perceived organizational bureaucratization increases the strength of the relationship between psychological empowerment and the engagement in bottom-up un-official projects.*

### Perceived organizational complexity

*Perceived organizational complexity* is defined as the degree to which an employee perceives "structural differentiation within a social system" (Price and Mueller 1972, p. 70), such as an organization. These authors further summarize that "a highly complex organization [...] is characterized by many levels of authority, a large number of occupational roles, and many subunits (divisions and departments)" (p. 70), while the degree of complexity often varies between different functional areas of an organization (Hall 1977). Most organizations are complex in some respect, particularly large organizations as size and complexity are related (Hall 1977). Furthermore, Hall (1977) stresses that higher levels of complexity lead to more problems in terms of coordination and control. The behavior of complex organizational systems is unexpected and difficult to be anticipated because of the nonlinear interaction and feedback loops in the systems' parts (Anderson 1999; Daft and Lewin 1990). Wherever possible, employees in organizations reduce complexity by eliminating what they perceive to be unnecessary or negligible (Anderson 1999). We posit that psychologically empowered employees who perceive their organizational system to be complex circumvent official processes if these seem to be unnecessary or negligible to the employees. We conclude:

*P8: A higher level of Perceived organizational complexity increases the strength of the relationship between psychological empowerment and the engagement in bottom-up un-official projects.*
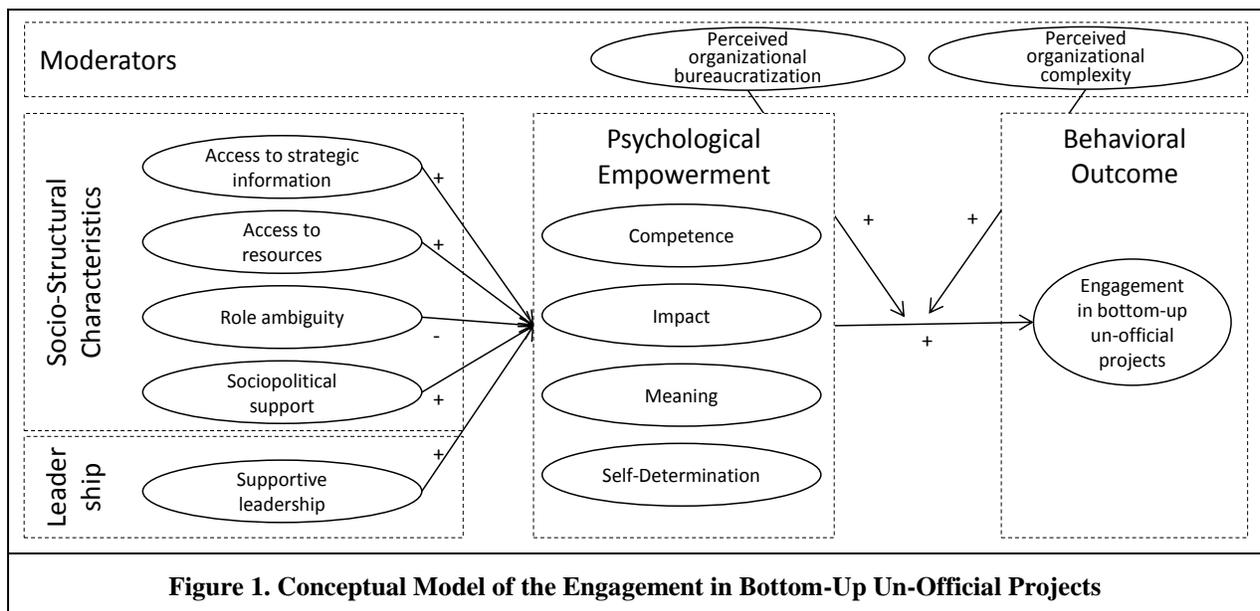
### Model



**Figure 1. Conceptual Model of the Engagement in Bottom-Up Un-Official Projects**

## Outlook and Future Research

In this study, we set out to develop a conceptual model that aims at explaining the engagement in bottom-up un-official projects. While previous literature called for more un-official projects to foster

organizational innovation or briefly described the existence of un-official projects (Blichfeldt and Eskerod 2008), this study puts forth a deductively derived conceptual model by drawing on psychological empowerment and workplace deviance as the theoretical frameworks. Particularly, we draw on the notion of constructive deviance to explain the engagement in innovative bottom-up un-official projects as the behavioral outcome of psychological empowerment. While we clearly acknowledge that not all bottom-up un-official projects can be subsumed as constructive deviance from an organization's point of view, some of them are a key source of innovation and entrepreneurship and are thus important to organizations (Galperin 2012). In terms of the future research process, the next steps entail the development of a measurement model and a survey instrument, before empirical data can be collected and analyzed using partial least squares structural equation modeling (Urbach and Ahlemann 2010). Previous research already suggested measurement items for the majority of constructs in our model (e.g., Spreitzer 1995b; Spreitzer 1996; Wayne et al. 1997), all of which will ease the subsequent empirical validation of our model.

The first limitation of our study is that, so far, it only entails a conceptual model; while the model is theoretically derived, the validation remains. Second, our model focuses primarily on one group of antecedents to psychological empowerment and only includes two perceived organizational constraints as moderating variables. Future research may consider extending our model to incorporate (1) other antecedents of psychological empowerment and (2) other moderators to the engagement in bottom-up un-official projects. Third, while our model proposes antecedents of the engagement in bottom-up un-official projects on theoretical accounts, it does not distinguish between "good" and "bad" bottom-up un-official projects. To tackle this limitation, we suggest further focused research on the nature of bottom-up un-official projects as soon as its determinants will be known.

Keeping the limitations of the study in mind, our results contribute to both theory and practice. First, our theoretically-derived conceptual model paves the way for future empirical analysis of bottom-up un-official projects. Such empirical validation may consider and capture different natures of bottom-up un-official projects (e.g., IT software-related, process-related, function-related). Second, our results advanced the theoretical discourse on the concept of un-official projects, and third, by relying on psychological empowerment and constructive deviance as theoretical lenses, our study is one of the first that applies these reference theories to the field of information systems in general, and more particular to the domain of IT project portfolio management. From our point of view, psychological empowerment and organizational deviance, with a positive and negative notion, seem to be promising perspectives to explain similar phenomena or other IT governance-related issues. From a practical point of view, we expect our model after a thorough empirical evaluation to be a beneficial instrument to evaluate and predict bottom-up innovative project employee behavior. Having identified the primary levers (psychological empowerment, perceived organizational bureaucratization, and perceived organizational complexity) for the employee engagement in such un-official projects, responsible practitioners, subsequent to an empirical validation, will know (1) whether and to which extent psychological empowerment of employees results in more employee engagement in bottom-up un-official projects, (2) whether and to which extent organizational constraints further increase employee engagement in bottom-up un-official projects, and (3) to which extent each of the socio-structural conditions stimulates a sense of psychological empowerment in employees.

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