Corporate crowdactivites and participative management: How to support bootleggers and out-of-the-box thinkers to foster innovations.

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Abstract

In a technology-driven organization, the innovation process is normally organized in a prefabricated manner. In contrast, bootlegging projects use alternative and unofficial ways that are shielded from other employees and decision-makers. By developing in the shadow of the organizational innovation process, particularly bootlegging projects face different intervening conditions while surfacing and during intra-organizational transfers. Former research concerning the management of intervening conditions. During bootlegging and for intra-organizational transfer and in order to reach maturity and find internal customers bootleggers uses different strategies like targeted embedding. This can be necessary for a project to be successful and to become an official R&D project. Initial for the presented dissertation, we used data from a comprehensive qualitative embedded case study in a technology-driven organization. Results reveals a high demand of organizational supporting measures for upcoming novel projects by creative employees and participative engagement in decision-making. Our understanding about organizational supporting for bootlegging projects regarding intra-organizational transfer and the involved employees with creative and innovative mind-set, are limited. Former research shows that participative management and decision-making increase job satisfaction and autonomy. We suggest the use of corporate crowdsourcing and funding for the democratic allocation of needed resources for the development of novel and radical ideas. Furthermore, we introduce a theoretical concept for corporate crowdresourcing, for the organized utilization of unused resources through a virtual market platform. We have integrated our theoretical assumption into the participative decision-making and budgeting literature as well as corporate crowd literature. Positive aspects by involving of employees to increase their motivation and job satisfaction can be expected as well as organizational benefits regarding fostering of radical innovation and to increase performance.
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Abstract
In a technology-driven organization, the innovation process is normally organized in a prefabricated manner. In contrast, bootlegging projects use alternative and unofficial ways that are shielded from other employees and decision-makers. By developing in the shadow of the organizational innovation process, particularly bootlegging projects face different intervening conditions while surfacing and during intra-organizational transfers. Facing these intervening conditions, bootleggers have different strategies during phases like development, intra-organizational transfer and in order to reach maturity. For instance to find internal customers bootleggers use these different strategies like targeted embedding. This can be necessary for a project to be successful and to become an official R&D project. Initial for the presented study, we used data from a comprehensive qualitative embedded case study in a technology-driven organization. Results reveals a high demand of organizational supporting measures for upcoming novel projects and participative engagement in decision-making. But our understanding about organizational supporting for bootlegging projects regarding intra-organizational transfer and the involved employees with creative and innovative mind-set, are limited. Former research shows that participative management and decision-making increase job satisfaction and autonomy. We suggest that the use of corporate crowdsourcing and – funding for the democratic allocation of needed resources for the development of novel and radical ideas. Furthermore, we introduce a theoretical concept for corporate crowdresourcing, for the organized utilization of unused resources through a virtual market platform. We have integrated our theoretical assumption into the participative decision-making (PDM) and budgeting literature as well as corporate crowd literature. Positive aspects by involving of employees to increase their motivation and job satisfaction can be expected as well as organizational benefits regarding fostering of radical innovation and to increase performance.
Introduction

The literature mentions that, in the last decades, large, established organizations have struggled in their attempts to foster disruptive or radical innovations to increase their competitive advantage, enter new businesses and follow market opportunities (see O’Connor et al., 2008, for a review). Prior research has highlighted the importance by management, for a better managing of the portfolio or collection of projects (Cormican and O’Sullivan, 2004; Cooper et al., 1999; Harris and McKay, 1996; Clark and Wheelwright, 1995), to motivate employees to be more creative (Shalley and Gilson, 2004; Zhang and Bartol, 2010a, b) and that product development is “critical to the viability of firms and an important core competence” (Brown and Eisenhardt, 1995: 374). Already since the 1960s external environment of business organizations has undergone radical changes and successful companies have had to adjust to these changes in order to survive. During this period successful companies focused on effectiveness. They based themselves on rationality and hierarchical structures that were bureaucratic. Management was primarily focused on the efficiency of various important processes within organization, but in the last decades some established organization faced the so called Innovator’s Dilemma (Christensen, 1997). However, as a consequent the importance of novel product development processes to increase the advance of innovative competition has considerably increased (Tidd, et al., 1997; Kumpe and Bolwijn, 1994). To organize the development of breakthroughs and radical beneficial innovations organizations established routines and innovation processes for the collection, management and monitoring of innovative ideas and projects by facing different internal and external challenges. Great experiences in path dependency (Nelson and Winter, 1982) and established routines promotes efficiency and automation, but can prevent creativity and flexibility as organization control and monitor the internal spending of their innovation budget. On the one hand, routines can reduce organizations’ ability to cope with any manner of uncertainty and can lead them to miss innovation opportunities that could have resulted in innovative products and services. On the other hand, idea assessment process and the distribution of available research and development (R&D) budgets have to be systematically organized into routines due to the scarcity of this resource. According to Dougherty and Hardy (1996) resources should be “deliberately distributed to foster innovation” (Dougherty and Hardy, 1996: 1123). Every internal business year, however, more novel ideas by creative and innovative employees are normally presented to the decision-makers than can actually be developed, due to internal scarcity of R&D budget or other organizational resources. Coordinating the reinvestments of the R&D budget in current
internal pre-development projects is therefore essential for organizational growth. Nevertheless, based on the limitation of the available R&D budget and organizational resources, decision-makers have to choose between innovative ideas during the prioritization process, consequently rejecting some projects. Hence, the rejection of novel ideas often happen because they are seen as being too radical, weird, inappropriate, unworkable, or risky, “but these same ideas may later result in an outcome that the social context accepts as useful and breakthrough” (Mainemelis, 2010: 558). The origin of these creative breakthroughs and innovations is the idea and creativity is “the seed of all innovation” (Amabile et al., 1996: 1155). But in the end it is the individual who "develop, carry, react to, and modify ideas" (Van de Ven, 1986: 592). The inherent potential of an idea, however, is sometimes seen by only a few individuals. Individuals who believe in a novel idea often use working hours and leisure time to conduct preliminary research in order to challenge any doubts regarding their ideas and projects. And sometimes without official approval or authorization by management. They conduct this research in secret, in the ‘shadow of the organization’, alongside the formal innovation process. This can happen because an idea has already been rejected and classified as too risky or inappropriate by the management (Abetti, 1997b). Or because employees aim to prevent and protect the idea against obstacles and intervening conditions (Stephan et al. 2016) in the first months of development and during unintentional premature of the project. This phenomenon is described as bootlegging (Criscuolo et al., 2014) and define as “the process by which individuals take the initiative to work on ideas that have no formal organizational support and are often hidden from the sight of senior management, but are undertaken with the aim of producing innovations that will benefit the company” (Criscuolo et al., 2014: 1288).

Nevertheless these projects are considered as beneficial for the organization, with the aim to become products and services market launches and / or internal process innovations. Hence, it is important to understand which organizational supporting systems are essential for the support of bootlegging projects and help bootleggers, out-of-the-box thinkers or employees with entrepreneurial mindset. In order to increase creativity and not to lose creative and innovative thinking employees, organization already created supporting systems and free time/slack-time (Gundling and Porras, 2000; Steiber and Alänge, 2013). These supporting systems currently were focus on individual creativity rather than on collective and democratic aspects such as decision-making processes and the allocation of organizational resources. Due to this lack of emphasis, the aim of this study is to gain a deeper understanding for such internal crowd supporting system. This paper aims to investigate: “How to support bootleggers and out-of-the-box thinkers to foster innovations?”
This paper proceeds as follows: first, we explain the nature of bootlegging projects, followed by a brief overview, an introduction to the literature of crowdsourcing crowdfunding, corporate crowdfunding (CCF), and corporate crowdsourcing (CCS) and participative management. We then present our propositions by discussing assumptions and indications.

For the discussion part we underlined our assumptions by using previous research results (Stephan et al., 2016) about bootlegging from an embedded a single-case study. The first analysis of the exchanges and interviews has revealed that an in-year financing concept, such as start-up, development and risk capital to produce prototypes and organize internal workshops with stakeholders was mostly required. We have assumed that specific supporting systems are needed to foster radical innovation and for intra-organizational transfers, hence, we have decided to analyze and gather views on the concepts of CCS, CCF and CCR (corporate crowdresourcing), regarding special organizational settings.

To the best of our knowledge this research is the first to present the concepts of CCS and CCF as supporting measures for bootleggers and employees with an entrepreneurial mindset. This research depicts how these support systems can help to reach a degree of maturity in order for bootlegging projects to transfer intra-organizational knowledge and technology. To consider the idea of democratization in an organization, as can be seen in the CCS concept, we have also integrated the concepts of PB and PDM. This is furthermore, first research to present the concept of CCR. This concept describes not only the allocation of financial resources, as in the concept of CCF, but also the allocation of all individual and organizational resources such as time, know-how or machines supported on an internal digital platform. We have presented a unification of participation, which was mentioned in the literature as having a positive influence job performance (Chong and Chong, 2002; Nouri and Parker, 1998), hence, this can be seen as being in line with the concept of participation in conjunction with CCF and CCR. We have provided a theoretical contribution for the organizational literature as well as practice regarding the support of nascent bootleggers and out-of-the-box thinkers.

**Bootlegging as an example for self-determination in project development and out-of-the-box thinking**

The phenomenon of underground projects in large and established organizations is not new in the literature. The term bootlegging was first presented by Knight in 1967. It describes projects that use organizational “grey zones” to bypass official processes in order to be faster, allow creativity to flow, and foster innovations. These initiatives by creative employees are mostly
unknown by their next supervisor or the management (Augsdörfer, 2005). As an example of self-determination, bootleggers make decisions autonomously during bootlegging with the goal to develop the project further and for the benefit of the organization. They have a high intrinsic motivation, “because they find it interesting, they are doing the activity wholly volitionally (e.g., I work because it is fun).” (Gagné and Deci, 2005: 334). In this vein, bootleggers starting project because they are convinced about the idea and want to protect their idea and not jeopardize the success of a project in the early stages of development or to gather the required data (Masoudnia and Szweczewski, 2012). Different reasons and motivations to begin bootlegging projects are named in literature (see Masoudnia and Szweczewski, 2012; Globocnik and Salomo, 2015, for reviews), which can be seen as the antecedents. For instance, bootleggers starts projects because formal stage-gate processes (O’Connor and DeMartino, 2006) often prematurely reject novel ideas in the standard process (Criscuolo et al., 2013). Hence, ideas that do not conform to a firm’s or department’s strategy are often rejected during the selection process, especially in large and mature companies (Knudsen and Levinthal, 2007; Criscuolo et al., 2013). Augsdörfer (2008) has suggested that R&D budgets are planned on a periodic basis, but some ideas grow between planning periods. These project ideas that do not receive a development budget sometimes becomes bootlegging projects. However, projects have gone underground even when a development budget is available between corporate budget cycles, because bootleggers wanted to detach themselves from the innovation process and avoid psychological pressure (Masoudnia and Szweczewski, 2012). Koch and Leitner (2008) found out that the purpose of developing an idea “underground” is to avoid presenting unfinished work, thus preventing the project from being killed by the management (Koch and Leitner, 2008). The overcoming of bureaucratic barriers (Abetti, 1999a), the protection from management and the disapproval during fuzzy front end (Abetti, 1997a) were found by former studies to shield projects during development process. Abetti (1997) has introduced a model of underground technological innovation process that includes different stages, activities, milestones, and critical events. In order to better describe the phenomenon, it needs to be distinguished from similar concepts like skunk works and moonlighting (Masoudnia and Szweczewski, 2012) as well as permitted bootlegging (Augsdörfer, 2008). The allowance by management for a chosen group of employees to work on a secret project describes skunk works. These are only known by management or board member(s) and were first established in 1943 by the Lockheed Martin Corporation (Augsdörfer, 2005; Rich and Janos, 1994). The concept of skunk works involves helping employees to develop products more quickly, as they are shielded from other employees in order to reduce interruptions, intervening conditions and
defensiveness against innovative ideas. Moonlighting is a clandestine activity that involves the personal interest of the employee and is not beneficial for the organization. Moonlighting is just for personal gain of the employee, who develops private projects during working hours (Masoudnia and Szwejczewski, 2012). To more systematically establish bootlegging efforts, organizations like 3M introduced permitted bootlegging, which allows employees to develop their own product and service-oriented innovation ideas during working hours (Augsdörfer, 2008).

Bootlegging projects are discussed in the literature as a positive contribution for organizations as bootleggers shift unused resources from other projects in order to develop them more quickly (Augsdörfer, 2005). This can influence organizational priorities in terms of innovation targets (Masoudnia and Szweczewski, 2012). Former authors have therefore stated, that bootlegging is a relevant bottom-up initiative by creative employees and can foster innovation (Augsdörfer, 2008; Masoudnia and Szweczewski, 2012). The literature has, furthermore, mentioned that these clandestine projects have given rise to innovations such as the series 3 touring vehicle (Augsdörfer, 2008) which turned out to be highly profitable for the organization. In contrast bootlegging projects can also be viewed negatively by management, because bootleggers use hidden or forgotten resources from other projects (Globocnik and Salomo, 2015), or just further develop a rejected idea without approval from the decision-makers. Nevertheless, Augsdörfer (2005) has described that the decisions by the management to reject or to accept an idea from a bootlegger often depends on how are competencies and internal resources available instead of strategic decisions.

In the process of expanding the confidant field and in preparation of intra-organizational transfer former research described the process by which bootlegging projects surface can take place in two steps. First: The announcement to next supervisor or direct manager and transitioning from true bootlegging to quasi-bootlegging\(^1\) (which can be seen comparable to conspiratorial bootlegging). Second: The presentation of the bootlegging project to the decision-makers, e.g. the senior management to seek acceptance for further development (Masoudnia and Szwejczewski, 2012). Masoudnia and Szwejczewski (2012) have stated that quasi-bootlegging is a kind of bootlegging in which bootleggers are supported by their supervisor (Masoudnia and Szwejczewski, 2012). This makes it more likely that, when their projects reach a certain level of maturity, bootleggers will present their projects to the decision-makers to seek acceptance.

\(^1\)Quasi-bootlegging is a kind of bootlegging in which bootleggers are supported by their supervisor.
Participative decision-making and crowdsourcing

Defined by Locke and Schweiger (1979) as joint decision-making or influence sharing between hierarchical superiors and their subordinates, the topic of participative decision-making has influenced organizational research in the last 50 years (Lam et al., 2002a). Individual participative efficacy (self) has been stated by Lam and colleagues (2002a) as the, “extent to which an individual believes that he or she has the ability and skills to successfully participate in decision-making processes” (Lam et al, 2002a: 906). In their study about relationship between perceived PDM and employee performance in different culture settings, they found that individual self-construal regarding allocentrism and idiocentrism and domain-specific efficacy perceptions significantly resolved the dimensions of participative decision-making effects (Lam et al., 2002a).

According to Wagner (1994), “Participation in Decision Making (PDM)” is based on the idea that participatory management practices balance the involvement of managers and their subordinates in information processing, decision-making or problem-solving endeavors. In business and management literature it is widely argued that employee participation increases employees’ involvement, motivation, job satisfaction and performance (Cotton, 1993; Hyman and Mayson, 1995; Lawler, 1986). A review of empirical studies by Cotton and colleagues (1988) has suggested that there are different types of PDM; participation in work decisions, consultative participation, short-term participation, informal participation, representative participation, and employee ownership (Cotton et al., 1988). Not all forms of employee participation have the same value and outcomes. Methodological variations such as research setting and participants’ characteristics are important factors in the ability to demonstrate the positive effect of participation on various dependent factors (Miller and Monge, 1986). Regarding participation in work decisions, a well-known topic due the importance of understanding it, is the internal innovation process. Nowadays, both sides are interested on it. The practices side and academia. For example, a frequently discussed key issue is how to effectively create innovation and product ideas (Schulze and Hoegl, 2008; Bayus, 2013). The classical approach in organization is the internal innovation and product process, which can be organized in the so called stage-gate process (Cooper, 1990). Nevertheless, a new path followed

2 “Concentrating on or interested in external objects in themselves, rather than in regard to their relation or relevance to oneself.” (https://en.oxforddictionaries.com/definition/allocentric)

3 “Idiocentric persons are less motivated to cooperate with other group members outside the context of their individual roles, and thus, collective efficacy cognitions have little primacy.” (Lam et al., 2002a: 907).
by organizations was to outsource the innovation process to suppliers or to integrate the customer through open innovation activates (Chesbrough, 2003 a, b). One of these initiatives is crowdsourcing, which involves outsourcing the task of an employee to generate innovation ideas to a larger and undefined group of externals by means of an open call via the internet in the form of, e.g. a specific question to solve an internal problem or to find new innovations (Bayus, 2013; Howe, 2008). One of the earliest examples of crowdsourcing can be traced back to 1714, when the British government proclaim a cash prize. This so-called Longitude Prize and was given to the person how found an elegant way to identify the position of a ship (The Economist, 2008; Afuah and Tucci, 2012). Examples of organizations that currently use crowdsourcing via digital platforms are LEGO (Schlagwein and Bjørn-Andersen, 2014), and SAP (Leimeister et al., 2009, Zuchowski et al., 2016; see Bayus, 2013, for a review). With the help of digital idea generation and evaluation by the crowd, external experts and non-experts can directly upload ideas and the crowd can evaluate it. Hence, the goal for the organization is, on the one hand, to receive new ideas for products and services and, on the other hand, to have direct customer feedback on whether this new product idea would be beneficial for the organization.

\textbf{Participative budgeting and crowdfunding}

Mentioned before, the decision-making process is normally define in a structured process with internal process description and process steps reducing uncertainty and failure and obtain control of decisions and resources. These process steps can also include decisions about the project budgeting. And normally, this budgeting and decision making process is directed in a hierarchical manner to have budgetary control (Otley, 1999). Therefore, “budgeting has traditionally been a central plank of most organizations’ control mechanisms, as it is one of the few techniques capable of integrating the whole gamut of organizational activity into a single coherent summary” (Otley, 1999: 370). The budgeting process in an established organization have a central coordinating mechanism function which has its justification, but some, more flexible and creative business areas need to improvement for nowadays business decisions and developments (Otley, 1999). Therefore, the term participative budgeting is defined by Shields and Shields (1998) as a process in which managers or employees are involved in the internal budgeting process. It is also named participatory budgeting and belongs to the so-called “bottom-up” budgeting processes (Shields and Shields, 1998). In an organization the budgeting

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4 The term crowdsourcing was first introduced in the Wired magazine by Jeff Howe (Howe, 2008; Bayus, 2013).
procedure is normally decided for one year (the annual budget), although it can also be organized for a shorter period (Ziegenbein, 2001; Küpper et al., 2013; Horváth, 2011). The budget furthermore has motivational aspects for the employees (Küpper et al., 2013) as it helps R&D projects to reach a degree of maturity for the intra-organizational transfer and become series production projects. In addition, a fixed amount of money can give employees a scope of action for decision-making and project autonomy (Gemünden et al., 2005). Hence, the engagement of employees in an organization’s R&D planning and budget processes can help to achieve a project’s goals and organizational performance.

The phenomenon of crowdfunding\(^5\) has become popular over the last five years, both for participants and for academic researchers. Authors have focused on factors that affect the success of crowdfunding platforms, with regard to the all or nothing principle, by Mollick (2014), and Belleflamme et al. (2013, 2014), and equity based by Ahlers et al., (2013), Cumming and Johan (2013) and geographical aspects of crowdfunding by Agrawal et al. (2011).

Crowdfunding is rooted in the concept of crowdsourcing, which refers to using the crowd to obtain ideas, feedbacks, and solutions to develop corporate activities (Bayus, 2013; Howe, 2008). In recent years, it becomes popular to fund and collect money from the crowd for investment in novel ideas in the start-up scene as well as for private projects and foundations. It is inspired by concepts such as micro-finance, where a large number of individuals is represented by the crowd instead of specialized investors (Mollick, 2014). Mollick (2014) has stated that the most critical resource for new ventures is to require financing by facing difficulties to organize it. To overcome these difficulties and barriers and start new ventures or projects, ambitious persons have used internet-based platforms as a new source of financing. The so-called crowdfunding approach provides new founders and private persons with a means to request the crowd to fund their projects and ideas (Belleflamme et al., 2014). When new founders and private persons use crowdfunding platforms, the objective is to collect secure funds instead of venture capital or other traditional sources of venture investment (Mollick, 2014). Crowdfunding helps entrepreneurs adopt new approaches to undertaking entrepreneurial projects and managing ventures, which in turn leads to new forms of business development in

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\(^5\) Defined by Mollick (2014) in an entrepreneurial context, “crowdfunding refers to the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries” (Mollick, 2014: 2).
which the “ordinary” crowd is more closely involved in these firms, as active consumers, investors, or both (Belleflamme et al., 2014). Both the entrepreneurs and the crowd are involved in the budgeting process; thus trend tendencies for products, services and new venture creations can be mapped.

The literature names a variety of goals for crowdfunding, e.g., to seek small amounts of capital (under 1000USD) for a one-time project, in which funds are often made available by friends and family (Mollick, 2014). New firms have been created that were financed by crowdfunding project campaigns and led to entrepreneurial firms. Another goal is to create interest in new projects in the early stages of development and serve a marketing purpose that could be especially important for industries in the complementary product ecosystem. By presenting projects on a platform before their final release other developers can write applications for these products. This helps to improve the idea or product; hence, it increase a project’s competitive advantage - even before it is released to the costumers (Belleflamme et al., 2014; Mollick, 2014). Nevertheless, the concept of crowdfunding already found his way in organizational context. As one of the first organization IBM implemented CCF (Muller et al., 2013b). Muller and colleagues (2013b) and Feldmann and colleagues (2013; 2014) have published results of the approach, which appears to be promising for the internal use of crowdfunding.

**Methodology**

We focused in the study on the promising concepts of CCA for the support of employees in corporates. Hence, as a starting point, we used data from two embedded single case study in a technology and productive-driven organization in Germany about bootlegging. In the first instance we identified the interview partners and, former and active bootleggers, by using pyramiding (von Hippel et al., 2009). This method helps to identify persons with a strong interest in a topic as well as a significant level of a given attribute in a population. We conducted 19 face-to-face interviews with initiators of bootlegging project as well as team members. The semi-structured interview (Yin, 1994) guideline contained sundry question about, for example, the process a project and the importance of bootlegging project in the organization. For this research we used data from the answers to the questions about the importance of supporting systems for nascent bootlegging project. We therefore asked interview partners: “Which supporting system did you miss or require for developing as well as for achieving a presentable
maturity level as a bootlegging project, for intra-organizational transfer and to become an official R&D and/or series project?”. Nevertheless, for a validation we did with the internal crowd and users a survey regarding the benefits of an internal CCS in the organization where the first study and interviews took place.

First results showed that a high request by employees and bootleggers exist about the implementation of supporting tools and systems in the organizations. We built on these interview results by doing an extensive literature review about CCS, CCF, PDM and participative budgeting, because active participation, autonomy and democracy was mentioned points in the interviews. Further, we valid our assumption with results from an internal survey with internal accelerator program participants.

Findings

From literature we found added value to focus the research question to present a framework of CCR to underline the idea of supporting systems. As an empirical background of this study we focusing on bootlegging in a technology-driven organization. Prior studies already mentioned that bootlegging projects usually "comes up" in two steps to become an official project and transferable. First, the bootlegger can communicate the idea of the project and its first results to his or her supervisor, i.e. take the step from true bootlegging to quasi-bootlegging. Second, the employee can show the project, after further development and first prototypes to management and decision-makers. In doing so, he or she want to receive acceptance and further support for the development (Masoudnia and Szwejczewski, 2012) and intra-organizational transfer. We sought to answer the question; “how to support bootleggers and out-of-the-box thinkers to foster innovations?”

Hence, we present in the up-coming part of the study the analysis of supporting systems and tools by introducing the concepts of i) CCS and participative decision-making and ii) CCF and PB to test our assumptions. We then presented a framework to support bootlegging projects in the early stage by allocating internal resources as an expansion stage. This concept of corporate crowdresourcing (CCR) are strongly supported by the idea of resources sharing in an organization and the participation of different internal stakeholder. Once this concept has implemented with the internal support of co-workers by e.g. idea rating and exchanges like CCS, financing like CCF and organizational resources sharing such as machine parks and project spaces, projects with a radical and disruptive nature are more likely to achieve an
adequate maturity for further development and to become official R&D and/or series production projects.

**Internal transfer and maturity of projects**

As mentioned above, bootlegging projects are internal projects by employees without formal approval from the senior management. Employees develop novel ideas during working hours and during their leisure time with the aim of increasing group performance. During the project’s development in the shadows bootleggers face intervening conditions (Stephan et al., 2016) than during the transfer. We have used the term intra-organizational transfers in this context, as the overall project transfer to become an official R&D project, partly transferred and idea implementation. Nevertheless, in the emergence of a bootlegging project an adequate project maturity level seems to be important for it to (i) be convincing enough to others to become an official project or (ii) be accepted for further development and intra-organizational transfer by the management (Stephan et al., 2016). Prior to this, bootlegging projects mostly face different intervening conditions at three levels. At the market or sectoral level there is a lack of competitive pressure, hence, if the customer base show no demand for the bootleg product or services, the management may be skeptical, resulting in the restraint of the bootlegger or rejection of the project during transfer (Stephan et al., 2017). At the organization and department level, there is competition with formally assigned roles or projects; however, the bootleg project can fill the gap of an official project in the designated department or be a technical solution and substitute a new product or service. Furthermore NIH syndrome (Katz and Allen, 1982; Antons and Piller, 2015) can arise and impede the intra-organizational transfer to the designate department or team for further R&D development or series production.

Results revealed that, at an individual level, the inability and the ability of the bootleggers and team manager to convince others can be decrease and increase the success of the transfer. Convincing other colleagues in the unofficial time of the project and receiving resources for further development is therefore connected to personal social influence skills and personal setbacks.

At a project level, it is important for the project to suit the overall organizational strategy (Stephan et al., 2016) in order for it to gain acceptance by the decision-makers and achieve intra-organizational transfer.

As we know from the knowledge transfer literature, intra-organizational knowledge transfers are a key player in the development of innovation in an organization. It leads to the development
of new product development (Miller et al., 2007) and processes (Roper, Du, and Love, 2008) in addition to have positive effects on growth (Fern and Cardinal, 2007). Knowledge is, furthermore, an important driver in project-based organizations (Blindenbach-Driessen and Van den Ende, 2006).

Considering the findings and results above, bootlegging projects face different intervening conditions during development and transfer. For the transfer and to be accepted by the different stakeholder groups such as specialized departments, decision-makers and controlling a maturity of a transferable project is necessary.

Sources/Quotations

We thus derive:

Propositions 1 (P1): To transfer a bootlegging project, a certain level of project maturity is necessary.

Corporate crowdsourcing and participative decision-making

The idea behind CCS and CCF is to use established and proven open innovation initiatives for the internal innovation process to support the internal innovation development process and projects. Regarding the internal use of digital platforms, as supportive for employees for the sharing of ideas, the voting and engaging in decision about the uploaded ideas the known concept of CCS is presented. Primarily CCS is organized via an internal platform with similar aim like the external version. Zuchowski and colleagues (2016) have mentioned that organizations such as Deutsche Telekom (Rohrbeck et al., 2015) and Deloitte (Riemer and Scifleet, 2012) already used the CCS approach to digitally generate and evaluate ideas. Confidential issues and competitive topics are furthermore addressable to an internal crowd, which could not be done with an external crowd. Hence organizations can be certain to have a transparency of the ideas, because of internal confidentiality agreement with the personnel. Nevertheless also internal issues can arise, because of process change management or the “NIH” (not-invented here) syndrome (Katz and Allen, 1982; Antons and Piller, 2015) if the idea later follows the established development process. But it may be possible that this would happen with less concern from the transferable specialized department because the idea was already published and communicated on the internal platform, and after attaining a high rating, was voted by the crowd as being valuable for the organizational innovation portfolio. Internal
Culture management skills are also important topics for organizations that use CCS (Zuchowski et al., 2016). Therefore, as beneficial for employees and companies the open call can be send out to all employees or a specified group of employees, where some can be seen as Embedded Lead Users (Schweinfurth and Raasch, 2015). In this vein, the quality of expert knowledge of the internal crowd can be assumed to be higher than the external crowd. The democratic approach to corporate decision-making can likewise be increased by the use of a CCS platform, which provides transparency and possible discussion functionalities for exchange and connectivity.

Therefore, CCS can be supportive for the development of bootlegging projects, because a CCS challenge is a platform to present first ideas – if radical, disruptive or incremental – to the entire dedicated internal crowd. Hence, radical and disruptive ideas become a platform for presentation and fruitful discussion. Due to that, these ideas can be seen by more than just the normal decision-making board, committee and senior management. And it can increase the information exchange, which includes the exchange of knowledge, work-related information, and ideas (Gong et al., 2012; Johnson et al., 2006). And Amabile and Khair (2008) mentioned that information exchange supports creativity because it affords cognitive resources for creativity (Gong et al., 2012) and can support the decision process.

As mentioned before, in a hieratically organization just a few decision-makers, mostly from the management and senior management, can normally decide about upcoming and further developments of ideas and projects. Especially if the idea is novel, radical and disruptive decision-makers can be more conservative, when no or less customer commitment and market demand exist. As we know, one reason why bootlegging projects are starting is the market uncertainty, to develop secured further (Masoudnia and Szwejczewski, 2012), or the rejection by management because of market uncertainty. The internal crowd, i.e. employees from different resorts and departments, have different angles, just like customers do. As Erickson and colleagues (2012) mentioned, crowds also have diverse knowledge and skills, which can have different value for the organization (Erickson et al., 2012a) and are therefore valuable for the democratic development and decision-making. And as mentioned in literature the quality of crowd (customer) ideas during a crowdsourcing challenge are sometimes immature and vague, thus to the lower extent of specialized knowledge and elaboration (Magnusson 2009, Di Gangi and Wasko 2009, Di Gangi et al. 2010, Bayus, 2013). Nevertheless, the notion that employees’ participation can increase their involvement, motivation, job satisfaction and

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7 Former scholars have also used the term knowledge sharing regarding the exchange of information and knowledge (e.g., Cummings, 2004).
performance is likewise supported by former scholars as well (Cotton, 1993; Hyman and Mayson, 1995; Lawler, 1986).

In conclusion, individuals who are influenced by high and low self-efficacy and high and low levels of collective efficacy are more likely to use participative decision-making mechanisms and systems. Thus, individuals with a high level of self-efficacy and of collective efficacy are more likely to use supporting tools/systems such as CCS, both to achieve what they want and to increase the group’s performance. It can be assumed that these individuals are similar to bootleggers, hence, CCS with and as a form of participative decision-making would help such employees.

In sum, the use of CCS which can be a form of participative decision-making, can have a positive effect on individual performance and efficacy for example to increase group performance, and therefore foster radical and disruptive projects.

From this we deduce:

**Proposition 2 (P2):** Participative decision-making, in the form of corporate crowdfounding, can be supportive for the development of bootlegging projects, employees with entrepreneurial mindset and organizational performance.

**Corporate crowdfunding and participative budgeting**

Corporate crowdfunding, also known as enterprise crowdfunding or internal crowdfunding (Feldmann et al., 2014), is a relative new topic in literature. Its core concept is built similar to crowdfunding on the internet, but in this case it is established in the organization. One of the first organization to implement CCF to in order to use crowdfunding opportunities inside an enterprise was IBM, with its platform “iFundIT” (Muller et al., 2013b). Muller et al. (2013b) and Feldmann and colleagues (2013; 2014) have published the results of this approach, which appears to be promising. In “iFundIT” regulations the allocated budget was given to staff members on a virtual “use it or lose it” principle. This meant that, if not invested, the money was gone after the trial (Muller et al., 2013b). Moreover, it was neither possible to exceed the funding goal of a project as it was closed after reaching its defined goal (all-or-nothing principle), nor to use the budget for other purposes outside “iFundIT” (Muller et al., 2014). The roles of proposer, user and supporter, introduced in the previous chapter, can also be applied to the CCF. In addition, Muller et al. (2013b) have defined the functionalities that users at IBM
were able to employ which comprise propose, invest, volunteer, comment, follow or view a project (Muller et al., 2013b).

After considering the current state of research, CCF can be regarded as a tool containing the idea of participative budgeting (PB). Concerning Shields and Shields (1998), they have defined PB as a process in which managers or employees are involved in the budgeting process, which has a positive influence on employee’s motivation (Shields and Shields, 1998). Participative budgeting, furthermore, describes the idea of involving of responsible employees in the budgeting processes. CCF also focuses and encourages employees of all organizational levels to participate in the budgeting processes, with respect to innovative projects. CCF supports, maybe, not the overall budgeting process, but can be supportive to the R&D budget allocation process for fostering innovations.

The official process, for new ideas to become radical or disruptive innovation in established and technology- and productive-driven organization is the development and implementation of a project in the R&D departments. For project planning and development, a committee in the organization normally decides about the further development of an R&D project. A guaranteed budget is furthermore necessary for internal and external achievements therefore decisions on the internal development budget.

Participative budgeting is often said to increase employee’s commitment to budget goals in addition to its informational function. Hence, it can positively influence job performance (Chong and Chong, 2002; Nouri and Parker, 1998) and according to Shields and Shields (1998) some studies have investigate the link between PB and motivation without including motivation as a dependent variable. The commitment to budget goals, can therefore be linked directly to an increase in motivation and job satisfaction (Mia, 1988; Chong and Chong, 2002; Shields and Shields, 1998). Mia (1988) has revealed that motivation has a significantly moderating effect on the relationship between budget participation and job performance (Mia, 1988).

The second main objective, the informational function, mentioned by Chong and Chong (2002) as the moderating effect of information between budget participation and job performance, has also proven to be positive and significant (Chong and Chong, 2002). Shields and Shields (1998) have highlighted information sharing and coordinating interdependencies as being important, while the informational function has been related to the agency theory (Eisenhardt, 1989). The agency theory deals with problems that occur due information asymmetries between a principal (e.g., a manager) and his agent (e.g., the employee) (Shields and Shields, 1998). On this account, agents usually have an advantage in knowledge, which can either be beneficial or
unfavorable for the principal. The agency theory depicts a model that aims to explain how people act in hierarchy systems. Participative budgeting represents one opportunity to diminish this principal-agent problem, or the information asymmetry respectively. The theoretical model of Chong and Chong (2002) supports this theory because, both, the commitment to budget goals and budget participation have a significant positive influence on the availability of job-relevant information for managers. Shields and Shields (1998) have also listed informational aspects as some of PB’s most important functions (Shields and Shields, 1998). In this regard, it appears plausible, for the involvement of employees in budgeting procedures to enhance the exchange of information or, at least, alleviate the information asymmetry between agent and principal with is helpful for project development. Moreover, Heinle and colleagues (2014) have compared top-down and bottom-up budgeting processes and have indicated, that bottom-up approaches preserve truth-telling between principal and agent, thus, improving the quality of work output (Heinle et al., 2014).

Considering the impact of PB on job performance, the link between these two has been stated as being complex (Yuen, 2007; Nouri and Parker, 1998). Due to that, Yuen (2007) has suggested that budget participation can only have a positive impact on job performance, if the members involved are keen to participate (Yuen, 2007). This is in line with the findings by Mia (1988), who has also highlighted a favorable work attitude by employees (Mia, 1988). Although research does not provide a clear statement on whether PB has a positive or negative influence on job performance, the idea, nevertheless, has proven to enhance employee’s motivation, increase information and performance, at least in most of the cases considered.

Aside from the described studies, Niemeyer and colleagues (2015) have quite recently dealt with PB as a tool for democratic decision-making (Niemeyer et al., 2015). They have considered the combination of PB and crowdfunding as a way to enhance the process of PB (Niemeyer et al., 2015). However, CCF and PB might be a promising joined approach for companies as well, in order to utilize the positive facets of PB such as improved goal commitment by employees or the reduction of information asymmetry during budgeting process between managers and subordinates. Furthermore, PB can support strategy building and sustain survival as Mahlendorf and colleagues (2015) mentioned in their review about antecedents of participative budgeting. They depicted that “participative budgeting might also be used to improve strategy formation (similar Parker & Kyj, 2006), a notion that meshes well with studies (e.g., Bartlett & Ghoshal, 1993; Simons, 1995) noting companies’ heavy reliance on the creativity and innovation of midlevel managers to secure their survival (Marginson, 2002)” (Mahlendorf et al., 2015: 15).
Building on the above former studies’ results, the use of PB in form of CCF as a joined approach and as a mechanism to support bootleggers and employees with entrepreneurial mindset for long-term and sustain strategic supporting can be assumed. Hence, this form of PB can have a positive impact on the transferability of a bootlegging project. If bootlegging projects can be encouraged with a democratically allotted budget, on the one hand, the acceptance of the transferable specialized department can increase, because e.g. the specialized department employees recognize the willingness and request from the internal crowd to have this kind of innovation. Which can also decrease the NIH syndrome, because of the transparency during CCF challenge. Although, the crowd commitment in the form of budget for a novel idea can also convince the management to approve the further project development, because they see the commitment and positive voting in form of budget allocation by experts and employees. On the other hand, the project has desired maturity, which is important for the intra-organizational transfer (Stephan et al., 2017). Study has revealed, that the intervening conditions during the transfer have been handled by bootleggers in the form of the ability to keep the project in the underground as long as possible – until it an adequate maturity stage was reached (Stephan et al., 2017). Thus, the implementation of CCF in the organization can be supportive and accelerate the development of bootlegging projects by using the budget to reach a presentable maturity.

In sum, CCS and CCF can be useful internal supporting systems to allocate ideas and funding to vote for high potential ideas via a digital platform and emphasize the idea of PB and decision-making. These mechanisms can have an impact that translates into a greater internal transparency in the internal innovation process, positive feelings related to job performance and increased employees job satisfaction. In addition, CCS and CCF can help employees which normally struggle with the internal R&D and innovation process, regarding the presentation of ideas and to find internal supporters but it is important to take care of the usability of the systems. Therefore we point out that to use CCS and CCF a functional, intuitive and user-friendly digital platform have to establish to upload projects with idea content that can be shared and ranked by the internal crowd. Nevertheless by introducing CCF through PB, the internal budget approval and decision-making process can be become more democratic and decentralized, thus becoming a system for democratic decision-making (Niemeyer et al., 2015) which has been found to have positive and significant impact on job performance (Chong and Chong, 2002). The designated budget can be used as a judging mechanism, as internal controls and decision-making processes can also be decide on the basis of the crowd’s decision on which idea and/or project should receive further budget allocations.
We derive from this:

**Proposition 3 (P3):** Participative budgeting, in the form of corporate crowdfunding, can be a mechanism to support employees with an entrepreneurial mind-set and bootlegging projects for the intra-organizational transfers.

Thus, if look closely at the previous one there are beneficial systems and tools to allocate ideas and opinions for decision-making and budget allocation on a digital platform. But why not provide other organizational (unused) resources like machine park, special knowledge, time, and project space on such an internal digital platform to increase performance?

**Further implications for the CCA concept**

As mentioned above employees, as the internal crowd, normally have different knowledge and skills, which can be of a different value for the organization (Erickson et al., 2012a).

Furthermore, as depicted by former research about the resource-based view of the firm theory, the transferability of a firm's resources and capabilities should be recognize as a critical factor of its capacity to entrust a sustainable competitive advantage (Barney, 1986; Maurer et al., 2011). In this way we know that different resources existing in the organization, which are used and unused, and partly can be available. If looking at resources it is known that resources also have an external dependency and different industries uses different resources. Drees and Heugens (2013) have stated that in the language of the Resource dependence theory (RDT) organizations are “constrained and affected by their environment and act to attempt to manage these resource dependencies by setting up different forms of interorganizational arrangements” (Pfeffer and Salancik, 2003: xxxiii). These interorganizational arrangements normally organized in different processes (Casciaro and Piskorski, 2005). Such mutual dependencies are important but can therefore cost time to organize the interorganizational arrangements. Hence, one solution can be to use and share of internal resources, which already existing but sometimes are unused or unidentified. The concept of using internal unused resources more efficient and shared, can be faster and less bureaucratic because of confidentiality. It can also be seen as the use of internal asset, in compare of the organization of new external resources.

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8 RDT is the theory that all organizations critically depend on other organizations to organized resources with a mutual dependency (Drees and Heugens, 2013). Nevertheless such dependencies are important and kinds of interorganizational arrangements, such as joint ventures and mergers and acquisitions are also important for organizational growth.
Framework of Corporate Crowdresourcing

Previously, different internal concept exists for the allocation of resources in form of CCS and CCF, which are useful tools for the allocation of internal resources. But why not provide other organizational resources like machine park, special knowledge, time, and project space on such an internal digital platform to increase performance?

Therefore, we introduce the term of corporate crowdresourcing (CCR). This new approach has the focus not only to allocate a specific internal resources, like budget, on an internal digital platform. It focus on the allocation of all available internal, industries specific, resources which are partly not used or unidentified in the organization for sustainable use and optimization. In doing so different stages have to be organized in order to establish CCR. By building on the literature above and interview results we demonstrate the concept in the framework of CCR (see Appendix 1). It presents at procedure and different possible resources that could be provided via a digital internal platform. First of all, a demand is created for e.g. a R&D project or series project regarding a new product, a new process and a new services. The resource provider are given in the form of (i) an employee/ or team, (ii) top-level management, (iii) employee and tools such as test stand or machine park, (iv) specialist departments, (v) former/retired employees and (vi) the organization. The resources from the providers can include financing (through the internal budget), time, know-how, tools/machines and project space. A project’s demand can be defined on an internal virtual platform and the providers appropriate resources can be “matched” for the allocation of resources. After the resource demand match, the further development of the project be dependent on its achieving level of maturity for the internal transfer. The level of participation can be regulated by a dedicated team or be self-regulated through the match of demand and provisioning.

The effects of this novel approach can help to increase further participation in the decision-making and budgeting processes, internal exchanges, reduce of silo thinking within the organization and sustainable use of resources. This can increase job satisfaction and motivation through transparency for the demand asker and the valuable utilization of unused resources; increase the awareness and viability of radical ideas; reduction nascence of bootlegging projects, acceleration the development process; and change the innovation and organization culture to increase connectivity, transparency, trust, openness and the democratization of the innovation process.
Nevertheless we assume, CCR can have positive impact for the organization by increase job satisfaction, performance and reduce information asymmetry.

**DISCUSSION AND CONCLUSION**

Due to the radical changes undergone since the 1960s, successful organization have had to handle these changes in order to survive and be effective. A bureaucratic structure in the form of high rationality and hierarchically was established. In some cases, established organizations subsequently faced the so-called Innovator’s Dilemma (Christensen, 1997, Christensen, 2006), and firms like Kodak lost revenue by missing new product trends in the 1990s (Lucas and Goh, 2009). Kodak was still focused on its deep knowledge as global player in physical, chemical-based film and innovation in areas such as photo finishing and color photography, but missed digital photography streaming and lost market revenue and share (Lucas and Goh, 2009). Indeed, established organization should focus on novel product development processes, tools and systems to increase the advance of innovative competition (Tidd and Trewhella, 1997; Kumpe and Bolwijn, 1994). To organize the development of breakthroughs and radical beneficial innovations, organizations already established routines and innovation processes for the collection, management and monitoring of innovative ideas and projects, by facing different internal and external challenges. Great experiences in path dependency (Nelson and Winter, 1982). These established routines promote efficiency and automation, but prevent creativity and flexibility through organization controlling and monitoring. Nowadays, organizations have established innovation supporting initiatives such as internal acceleration hubs for example by Merck, Microsoft and Telekom (see Kanbach and Stubner, 2016, for a review) or 3M and Google have established slack time slots for employees to work on their new ideas (Gundling and Porras, 2000; Steiber and Alänge, 2013). For the next step, we focused on the concept of CCA with supporting systems like CCS, CCF and CCR on digital platform, in order to focus the possible offer of contemporary and demand-based measures to employees.

**Contribution to hidden-project and nascent bootlegging literature**

For the collection of the first data regarding organizational situation and support of bootleggers, the organizational context studied was considered reliable. On the one hand, due to the fact that bootlegging projects have been taking place for years, they are well known by employees and management, with market breakthroughs being developed with this method. On the other hand, the organization have become established by producing high-tech products and services with a
development time of years. Different development stages are needed to screen knockout criteria for the growth of the project to ensure high development standards and product quality. In this respect, the organization implemented a stage-gate process (Cooper, 1990) with different development steps for R&D projects and to control organization-wide the official R&D program, idea assessment, project prioritization and the series production. These official process steps also influence the development of projects in the underground as well as the announcement of bootlegging projects regarding the intra-organizational transfers to become official pre-development or series project. Prior research has found this tactic of producing and to presenting prototypes or implementing workshops with stakeholders to be a mechanism that has helped bootleggers to convince internal customers (e.g. specialty department and series production) and decision-makers. Furthermore, the unofficial organization of project budgets is seen as an intervening conditions (Stephan et al., 2016) for bootlegging projects and can be handled by the project owners. By handling these intervening conditions, former bootleggers have organized budgets, for example, by booking project budgets and time on an official project, using internal achievements by colleagues or utilizing unused resources such as technical tools and machines during spare time. Bootlegging is an unaccredited stage in an organization’s formal innovation process and can be an importance step for the success of the bootlegging project. In contrast, management and decision-makers can view this behavior critically, because bootleggers deviate organizational orders (Mainemelis, 2010) by using the budget from other projects and further developed rejected projects and ideas (Abetti, 1997b).

And it is known that decisions by the management to reject or to accept an idea from a bootlegger has its dependency often on the available number of competencies and internal resources instead of strategic decisions (Augsdörfer, 2005). But bootleggers and team members are masters of improvisation (Augsdörfer, 2005) to organize resources by themselves to have for example enough development budget for the success of the projects and the situation of limitation of R&D budget, which is usually planned on a periodic basis, can be the driver of bootlegging projects (Augsdörfer, 2008). Also other, official, projects are coming up between planned periods and want to use internal resources. Normally the appropriation of funds, in an innovation and R&D process and for new product development (NPD) (Pons, 2008), are limited and represent a bottleneck. Decision-makers have limited resources available, like budget, for the selection of some potential candidates and, hence, have to forsake others (Pons, 2008). More innovative and novel ideas typically arise than budget are available. As mentioned above, an organization with a high complexity in the development of the products, service and processes have established appraisal and prioritization systems as well as a stage-gate process (Cooper,
2009) to monitor deployment (O’Connor and DeMartino, 2006). It can be conclude, that resources are an important engine to develop projects and especially bootlegging projects with are sometimes faster than official once (Stephan, 2016). Therefore nascent bootlegging projects or individual proactive creativity (Alexy et al., 2015; Criscuolo et al., 2014) can be more supported by (i) using CCS regarding decision-making and transparency of novel ideas, by using (ii) CCF for the allocation of the designated R&D budget to the best ideas allotted by the crowd, and (iii) CCR by the overall allocation of unused and available internal resources on a virtual platform, in combination with CCS and/or CCF. Thus to that bootleggers and out-of-the-box thinkers can be more concentrated on the project development and less by the “unofficial” organizing of resources. In doing so vacant creative energy can the utilized for the development process of the projects to receive maturity. This efficient new product development model, the “bootlegging model”, is found as new method to develop with the freedom to consult the first data and MVPs. Organizations can also signal employees that organizational management are trust them, if the crowd have the influence for the allocation and deciding of internal resources, which can increase job satisfaction and innovation power. This can also lead to a decrease of nascent bootlegging projects and underground projects, because employees have opportunity to start with projects directly and don’t have to wait until budget prioritization rounds and committees, which was named as one motivation to start bootlegging projects. In addition, with the use of unused resources and share of decision power creativity can further encouraged, because in-year allocation of resources for novel projects are available. As mentioned by Vecchio and colleagues (2010) decision-makers and leaders whom share decision power with subordinates normally supports the progression of job satisfaction and performance. In this vein, managers who give their subordinates more autonomy can increase their well-being, productivity, and personal satisfaction (Stone, Deci, and Ryan, 2009).

In conclusion for organizations which have already implemented process structures for the transfer of R&D developments have the opportunity to increase their efficiency and reputation by introducing further new CCA or processes to support novel and democratic resources allocation and budgeting practices. Furthermore, bootleggers and out-of-the-box thinkers can be encouraged, still be creative with the peace to continue. Therefore, this can lead to a positive signal internally and externally.

**Contribution to participative management literature**
In terms of the literature in the field of participative management, the present work is an important contribution to how participative management can be implemented in order to become empirically measurable with the support of CCA. On the one hand in the form of participative decision-making for project management encouraged by CCS and on the other hand of participative budgeting in form of CCF. Both conceptual assumptions suggest that the expansion of virtual platforms for the innovation process can be helpful to a large corporation. This promotes democratization and decentralization, which accelerates project development while forming a building block for the dissolution of the principal agent situation. Participative decision-making can be define as joint decision-making (Locke and Schweiger, 1979; Lam et al., 2002). Lam and colleagues have mentioned two types of participating during working regarding decision. First participation efficacy (self), which is defined as the extent to which a person “believes that he or she has the ability and skills to successfully participate in decision-making processes” (Lam et al., 2002: 906). Second participation efficacy (collective), which is depicted as the extent to which the members of a group “believes that their group has the ability and skills to successfully participate in decision making” (Lam et al., 2002: 906). The organizational process and structure can also influence the extent to which they can participate. Hence, employees and groups can have the possibility of participating in organizational decision-making processes in cases of CCA, which we presented.

**Managerial implications**

The requests by new generation of employees for new working methods and processes such as lean start-up and so-called internal skunk works or “speedboats”, which increase the speed of projects with a dedicated team, have continuously arise, as has the competition for the best talents. In order to retain creative and passionate employees, be faster at the market launch, and to reduce admit and bureaucratic effort to foster innovative ideas, management should think about appropriate supporting systems. Not only for the new generation of employees but also for long-term employees that have been doing bootlegging projects for years, should be further supported and recognized for the past work and successes. Nevertheless, organizational HR management and innovation management already established in different branches supporting system to increase employees’ creativity. To support employees’ creativity CCA can help to increase the information exchange, which includes the exchange of knowledge, work-related information, knowledge, and ideas (Gong et al., 2012).
The literature the skunk works model of innovation are mentioned, as an introduced model to protect radical innovations from influences and resistance which can occur in organizations (Fosfuri and Rønde, 2009). Skunk works, which allowed a select group of project members to work on a secret project known only to the management, were, firstly established and named by the Lockheed Martin Corporation in 19439 (Rich and Janos, 1994). Fosfuri and Rønde (2009) have named different organizations that had, established the skunk works model, such as IBM with the development of to develop the revolutionary PC, Ericsson Mobile Communications with Bluetooth technology, and large innovative organizations such as HP, Apple or Intel, which foster radical ideas (Fosfuri and Rønde, 2009). Innovative organizations also introduced percent models to work on innovative ideas freely, like 3M’s 15% rule (Gundling and Porras, 2000) or Google’s 20% rule (Steiber and Alänge, 2013). Augsdörfer (2008) has mentioned this rule as “permitted bootlegging research”, where innovative organizations have established supporting measures for creativity. Management hope to invent profitable innovations for the organization (Augsdörfer, 2008). Nevertheless, the presented concepts of CCS, CCF and CCR can be beneficial for the organization in two ways. Firstly, by supporting creative and autonomous employees during the creative phase and decision-making process and as mentioned above autonomy can lead to increase effectiveness and internal work motivation (Langfred and Moye, 2004). Secondly, by supporting the organizational decision-making process to increase democracy and employees workplace satisfaction.

Thirdly, and mentioned above, for the traditional use of the crowdfunding concept one goal is to create interest in new projects in the early stages of development. Presenting a project in the early stage on a platform, before their final release, other developers can write applications and improvements for these products. This helps to improve the idea or product; hence, it increase a project’s competitive advantage (Belleflamme et al., 2014; Mollick, 2014). This goal is also adaptable to the CCS approach. Hence receiving of feedback from co-workers can be supportive for further development.

Furthermore, as a result of the latest user survey of an internal CCS challenge platform, where 117 user participated, showed that nearly 80 percent agreed, that the CCS challenge platform contribute and supports the innovation power of the company. And 72 percent of requested users felt that they could more contribute through CCS. The results of the survey also showed that the most benefit of the CCS platform was to help users to establish interdisciplinary

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9 A windowless facility built by Lockheed at the airport of Burbank, California, during the Cold War was known as the skunk works. There, secret military projects were developed. The term is borrowed from Al Capp’s comic strip Li’l Abner, which was popular in the 1940s (Rich and Janos, 1994).
relations between departments and in compare the most answered users (24.8%) attuned just partly to the notion that the feedback they received on the CCS platform was helpful for my idea. And 30 percent did not answer the question. As an assumption the internal expert crowd should more involved like embedded lead users to give uploaded idea a better feedback as well as usability to give feedback and receive feedback for the ideas should be improved.

Therefore, as the survey results and literature showing supportable internal online platforms can improve project development, increase democratization, and establish interdisciplinary relation and autonomous working behavior in order for organizations to remain competitive in the fast-growing digital economy for sustainable long-term growth. They can also increase diversity and independence in established organizations and open a fruitful discussion about the development of products and services and the work environment. As James Surowiecki mentioned in his introduction: “Diversity and independence are important because the best collective decisions are the product of disagreement and contest, not consensus or compromise.”

Limitations and future research

As a starting point for a continuing fruitful discussion, we presented a conceptual study about the support of employees with CCS, CCF and CCR in relation to participative management literature. As a next step, we propose further empirical research about crowd activities in established organization, which was not the focus of this study. Especially for CCR measures, which are a new concept for internal resources allocation, interdisciplinary working measures and to increase job satisfaction, empirical studies are needed to prove the theoretical assumptions. Upcoming studies should focus on the acceptance of such resources allocation and on the environmental and digital transformation in established organizations. A focus on the influence of leadership on decision-making could be a fruitful research topic.

Conclusion

One of the leading topics in the 70er and 80er academic literature were leadership, management skills and empowering. It describes the sharing of power and control with subordinates to increase productivity and for managerial and organizational effectiveness (Conger and

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10 James Surowiecki (2005), The Wisdom of Crowds (Introduction xix)
Kanungo 1988; Kanter, 1979, 1983; McClelland, 1975). To be self-decided and self-efficacy employees already found creative autonomy ways of power and control during bootlegging. But to support bootleggers and out-of-the-box thinkers the sharing of power by e.g. decision-making are still missing. We mentioned three propositions, all three of which were positively related to our notions. In doing so, we showed benefits between the concept of CCA, such as CCS and CCF and participative management in form of participative decision-making and budgeting. By answering the research question we presented the concept of CCR as a joined concept and extension of the CCS and CCF approaches. CCR supports the allocation of unused resources by providing internal organizational resources on an internal digital platform to give employees the freedom to focus of the creative project development instead of the unofficial allocation of internal resources. Hence to use this, in former time creative mindset for the allocation of resources, for the execution of the project to become a series and market launched product or service. Therefore, we conclude that management should give employees freedom to be creative and support employee’s creativity in form of supporting tools and systems, because employees’ creativity contributes to organizational effectiveness, survival and innovation power (Amabile, 1996; Shalley, Zhou, and Oldham, 2004), which is vital for competitive advantage and organizational growth.
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Web:

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