

Motivation, commitment and innovation – a study of the interpersonal perspective in two Swedish network formation processes.

Work in progress

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Abstract

Strategic networking between organizations is initiated in order to generate innovation, an outcome not to be taken for granted. However, several studies show that network structures are important for innovation performance. This paper is answering the call for studies of interpersonal relationships in networks focusing on individual's motivation and relationship commitment as vital parts of network structure. Motivation theory finds individuals to be intrinsically or extrinsically motivated, implying that there are "inner" drivers like desire to be creative and act autonomously, and "external" drivers like goals, rewards and rules that affect the outcome of work-related behavior. We argue that intrinsic motivation will yield creativity and perception of autonomy in turn generating more affective relationship commitment, closer relationships and thus innovation performance. Extrinsic motivation, in turn, yields goal-fulfillment and thus calculative and moral relationship commitment facilitating innovation. Drawing from two embedded case studies focusing 94 individuals in two strategic networks situated in northern Sweden, we suggest that seeking extrinsic monetary rewards from network collaboration might come up short if this network effort is not fueled by intrinsic motivation and an affective commitment to the task.

Key words: Strategic networks, intrinsic and extrinsic motivation, relationship commitment, innovation.

INTRODUCTION

Strategic networking between differing organizations is initiated in order to generate innovation, an outcome not to be taken for granted (Waluszewski, 2004; 2006; Pesämaa & Hair, 2007; Glavan, 2008). But several studies show that network structures are important for performance in terms of innovation (Ahuja, 2000; Gilsing et al., 2008; Rost, 2011; Grund, 2012; Roxenhall, 2013). Network structure can be studied from different perspectives such as dyads, triads, egocentric and whole networks (Provan et al., 2007; Bergenholtz & Waldstrøm, 2011) and the difference between organizational and individual level. The focus of IMP-research has mostly been on studies of dyads and ego-networks then aggregated to a network level, which does not show the impact of the network structure on the whole network performance. Studies of such networks are scarce and called for (Provan et al., 2007) as is studies focusing interpersonal relationships in strategic networks (Sedita, 2008).

Individual motivation and relationship commitment are found to be vital parts of a network structure (Andresen et al., 2012). While motivation theory often are studied at individual level, relationship commitment theory derived from organizational studies of employee productivity (Hertzberg, 1966; Porter & Lawler, 1968; Morgan & Hunt, 1994; Allen & Meyer, 1996; Deci & Ryan, 1985; Amabile, 1998) are used in studies of strategic networks often conducted at an organizational level. The lack of studies of network structure and formation processes conducted at individual level is a problem for the understanding of such network processes as companies/organizations always are represented by individuals with motivation in turn affecting their relationship commitment and the network outcome in terms of innovation.

Several studies on motivation finds individuals to be intrinsically or extrinsically motivated implying that there are “inner” drivers like desire to be creative and act autonomously, and “external” drivers like goals, rewards and rules that affect the outcome of work related behavior (Amabile, 1998; Osterloh & Frey, 2000; Gagné & Deci, 2005; Mudambi et al., 2007). There are also studies showing weak or non-significant associations between creativity and intrinsic motivation (e.g. Dewett, 2007; Perry-Smith, 2006), but also studies showing that a high level of intrinsic motivation can coexist with orientations towards high levels of extrinsic motivation and generate very positive effects on creativity (Amabile, 1993). However, autonomous extrinsic motivation has not yet been emphasized in studies (gap) even though uninteresting tasks also require disciplined task engagement potentially leading to the most effective performance (Gagné & Deci, 2005). However, novelty and usefulness are found to be independent dimensions of creativity (Grant & Barry, 2011) and identified as the first stage of innovation (Baer, 2012). Autonomous motivation (relative to controlled) in turn, is identified as a dimension of intrinsic, but also of extrinsic motivation and found to generate creative performance, psychological well being, organizational trust, commitment and work satisfaction (Gagné & Deci, 2005, p. 347). Research results on intrinsic and extrinsic motivation are thus mixed and conflicting and the question is, “*what kind of relationship commitment is generated by autonomous intrinsic versus controlled extrinsic motivation?*”

Relationship commitment implies that the committed actors considers a relationship to be worth working on to ensure that the relationship lasts. The concept is found to consists of an calculative, normative obligation related and affective component (Meyer & Allen, 1991; Gruen et al., 2000; Roxenhall, 2011; Andrésen et al., 2012). While the affective component is theoretically most aligned with autonomous and intrinsic motivation (Allen & Meyer, 1996; Gagné & Deci, 2005, p. 344-345) the calculative and normative components are not yet

theoretically linked to motivational theory. Consequently, the second question is, “*what kind of performance in terms of innovation is generated by affective, calculative and normatively committed individuals?*”

Innovation implies novelty and can be conceptualized as encompassing two different activities: the development of novel, useful ideas and their implementation (Baer, 2012). The third question is thus: “*what combination of motivation and components of commitment generates performance in terms of development of novel, useful ideas and/or exploration/implementation of ideas to innovation?*”

The aim of this paper is to identify how intrinsic respectively extrinsic motivation influences the affective, calculative and normative components of commitment and finally how these combinations of factors affect innovation in terms of development of novel, useful ideas and/or idea exploitation in network settings. The study is focused on the formation and innovative performance of The BioBusiness Arena (BBA) network and The Future of Härnösand (FOH) networks both located in North Sweden.

THEORETICAL FRAMEWORK

Motivation

Intrinsic motivation

To be motivated means to be moved to do something. When intrinsically motivated a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures and rewards. Intrinsic motivation of differing extent exists within all individuals but also in the relation between individuals and activities (Ryan & Deci, 2000). Intrinsic motivation involves behaving because the activities are interesting and people need to feel competent and autonomous to maintain their intrinsic motivation (Gagné & Deci, 2005). Individuals are intrinsically motivated when they seek enjoyment, interest, and satisfaction out of curiosity, self expression or personal challenge in work (Amabile, 1993). Intrinsic motivation is catalyzed when individuals are in conditions that conduce towards its expression – feelings of competence can enhance intrinsic motivation as they allow satisfaction of the psychological need for competence. However, the feeling of competence will not enhance intrinsic motivation unless it is accompanied by a sense of autonomy as people need to experience their behavior to be self-determined if to feel intrinsically motivated (Ryan & Deci, 2000).

Intrinsic motivators are endogenous part of a person’s engagement in the activity arising from the persons feelings about the activity and bound up with the work itself (Amabile, 1993). Intrinsic motivation is regarded as driven by a desire to learn and engage in ideas of novel, unique character and exploration in terms of seeking new discoveries through activities that have the appeal of, and works in the early stages of creativity when usefulness is less crucial (Grant & Barry, 2011). Early stages of creativity may thus be associated to idea and opportunity discovery/creation processes, but not necessarily to opportunity exploitation or idea implementation as such processes assumes idea- testing dialogue with external parties (Andresen et al., 2014).

Extrinsic motivation

Extrinsic motivation is a construct that pertains whenever an activity is conducted in order to attain an outcome which is in contrast to intrinsic motivation (Ryan & Deci, 2000). Extrinsic motivation might be viewed as an external driver of exploitation/implementation. Individuals are extrinsically motivated when they engage in the work in order to obtain some goal that is apart from the work itself (Amabile, 1993). Extrinsic motivators are not a logically inherent part of the work as it includes anything from the outside source that is intended to control the initiation or performance of the work. It is extremely difficult to establish extrinsic reward systems that elicit exactly the behaviours that are desired (Amabile, 1993).

However, extrinsic motivation can vary substantially according to the degree to which it is autonomous (Ryan & Deci, 2000). Gagné & Deci (2005) outlines motivation in terms of a self-determination continuum starting in amotivation proceeding through four phases of extrinsic to intrinsic motivation arguing that motivation is influenced by factors in the social environment and the degree of individual's orientation towards intention and regulation of behavior. Regulation is indexed in terms of autonomy, control, impersonal orientation. Autonomy orientation is found to be positively related to self-esteem, ego development, personality integration and satisfying interpersonal relationships. Control orientation, on the other hand, is associated to public self consciousness, defensive functioning and emphasis on pay and rewards. Impersonal orientation is related to external locus of control, self-derogation and depression (Gagné & Deci, 2005). The self-determination continuum posed by Gagné & Deci (2005) details the process through which extrinsic motivation can become autonomous and suggests that intrinsic motivation (based in interest) and autonomous extrinsic motivation (base on importance) are both related to performance, satisfaction and trust (p. 356).

Stringent control over the conduct of individuals, rewards, recognition or evaluation-systems leading people to feel controlled are undermining the sense of self-determination and will, without adding feelings of competence or deep-job involvement, hinder development of positive synergies when intrinsic and extrinsic motivators are to be combined (Amabile, 1993). Assuming that intrinsic and extrinsic autonomous motivations are generating relationship commitment the question is what kind of commitment that may be generated by which motivator.

Relationship commitment

Commitment is commonly defined according to the perspective from which the concept is studied, which may be social exchanges (Cook & Emerson, 1978), marriage (Thompson & Spanier, 1983), organisations (Meyer & Allen, 1984; Meyer & Allen, 1991), business relationships (Morgan & Hunt, 1994) and strategic networks (Andrésen et al., 2012; Roxenhall, 2011). Commitment may generally be regarded in terms of a lasting wish to retain a relationship considered valuable (Moorman et al., 1992). Relationship commitment has implications for the closeness between the actors (Sharma et al., 2006) here defined as firms. Many studies demonstrate that commitment is a crucial factor if contacts between firms are to lead to long-term business relationships (Dwyer et al., 1987; Morgan & Hunt, 1994; Sharma et al., 2006; Seppanen et al., 2007) and that cooperation fails in many networks due to weak commitment (Pesämaa & Hair, 2008; Johanson & Roxenhall, 2009; Roxenhall, 2010). Strategic cooperation are connecting firms and organizations through their representing individuals and, when these are committed to the network, their willingness to invest their

time, effort, and attention on behalf of it increases (McEvily et al., 2003) as does their willingness to cooperate.

Commitment can be classified as behavioural or attitudinal-based. Behavioural commitment is demonstrated through action (Mowday et al., 1982) and refers to the overt manifestation of willingness to continue a relationship with all its associated investments, which include developing and allocating human, financial, and physical resources (Sharma et al., 2006). Attitudinal commitment is related to a person's attitude or intention towards committing himself/herself in a certain relationship. However, definitions of attitudinal commitment differ, ranging from considering commitment an implicit or explicit pledge of relational continuity between exchange partners (Dwyer et al., 1987) to considering it an enduring desire to maintain a valued relationship (Moorman et al., 1992). However, regardless of definition, marketing researchers appear to view commitment as a psychological condition that links the partners in a relationship (Fullerton, 2005; Sharma et al., 2006). It might have different profiles depending on whether it is oriented towards the network and project management or towards the companies in the network (Roxenhall & Johanson, 2009).

The dominant attitude in the literature of behavioural science is that commitment consists at least of an calculative, normative obligation related and affective component (Meyer & Allen, 1991; Gruen et al., 2000; Roxenhall, 2011; Andréßen et al., 2012). Common to the three components is that they describe a psychological state characterising the relationship between two committed persons crucial to whether the committed persons wishes to continue or end the relationship. Despite these similarities there are quite significant differences between the three components

Calculative commitment

The calculative component is about the perception of being compelled to continue a relationship (Meyer & Herscovitch, 2001; Sharma et al., 2006), or about perceiving future gains of value (Sharma et al., 2006; Bansal et al., 2004). The calculative (continuance commitment) component implies a persons perception of being more or less compelled to continue a relationship due to the costs (both economic and social) that may arise related to ending the relationship. Consequently, the committed person see no other choice than to continue, and thus feels locked in (Meyer & Herscovitch, 2001; Sharma et al., 2006). There are two dimensions of the calculative component – the negative and positive. The negative dimension is related to locked-in values, such as the awareness of relationship-specific investments potentially beeing lost, or new costs arising related to relationship-specific investments needed to be made ('switching costs') if the relationship is ended. The positive dimension is about future values or gains in terms of time, effort, money, knowledge etc. (Sharma et al., 2006; Bansal et al., 2004). Studies are indicating that the committed persons feeling of beeing locked-in combined with a perceived lack of alternative relationship partners, may generate calculative commitment (Bansal et al., 2004).

Normative commitment

The normative component is about a feeling of moral, duty and responsibility for the relationship (Meyer & Smith, 2000). The normative component is linked to a persons feeling of moral, duty and responsibility for the relationship (Meyer & Smith, 2000) and a strong normative commitment implies continuity of the relationship for such related reasons (Bansal et al., 2004; Gruen et al., 2000). The sense of obligation further implies that an individual cannot either change or influence the relationship beyond the implicit formal and informal

rules, regulations and social norms due to expectations put upon them from people in their surrounding (Sharma et al., 2006). Consequently, it will be quite easy to end a relationship for business reasons (the calculative component), but all the more difficult to end a relationship formed on basis of social pressure (the normative component) (Gilliland & Bello, 2002; Sharma et al., 2006).

Affective commitment

The affective component is the one of identification with, emotional attachment to and involvement in the organization (Allen & Meyer, 1996; Gagné & Deci, 2005, p. 344-345) and thus related to common values, trust, benevolence and relationships, but also to loyalty (Gilliland & Bello, 2002). It occurs when committed persons feels psychologically bound to each other in relationships (Bansal et al., 2004; Fullerton, 2005; Gruen et al., 2000). This component implies that the economic and rational advantages continuing the relationship may be hard to value, but involvement feels right for emotional reasons in a way that makes the committed person want to preserve the relationship (Meyer & Allen, 1991). Trust is generating affective commitment (Garbarino & Johnson, 1999; Gilliland & Bello, 2002; Morgan & Hunt, 1994) between parties who in turn are satisfied with the relationship (Garbarino & Johnson, 1999). Trust has also been found to have a strong impact on when affective commitment is to be developed (Meyer et al., 2002).

The relationship between the components and motivation

The three components is thus to be regarded as components and not as different types of commitment (Anderson & Weitz, 1992; Martin, 2008; Rylander et al., 1997) as the same person may have elements of all the components at one and the same time. As for example may the commitment of a person include elements of emotional (affective) and business (calculative) character related to continuance of a certain relationship, but may at the same time not include elements related to moral duty (normatively).

There are studies suggesting that the affective component is stronger and plays a more important role in long term relationships than the other components (Meyer & Allen, 1991; Sharma et al., 2006). The affective and normative components are also found to correlate as development of emotional ties will generate a sense of responsibility and a feeling of duty (Martin, 2008). A committed person may thus be calculative and emotional committed in order to retain a relationship, but at the same time not feel morally bound.

While intrinsic autonomous motivation is aligned with affective commitment, extrinsic moderately autonomous (identified regulation) motivation may be aligned with normative commitment. The calculative commitment component is suggestingly aligned to autonomous (integrated regulation) extrinsic motivation.

Innovation performance

Innovation is an outcome of creativity which in turn is a function of three components: expertise, creative-thinking skills and motivation. Studies show that motivation driven by an inner passion (intrinsic) to solve the problems at hand leads to far more *creative solutions* than do external rewards (extrinsic), such as money (Amabile, 1998). The feeling of passion is related to affective commitment, but it takes more than creative ideas to develop an innovation as the concept refers to the outcome of an innovative process (Ojasalo 2008), and

to the “*exploitation* of new ideas to produce new products, processes, services or best practices” implying usefulness (Pittaway et al. 2004, p. 49) as well as recombining old ideas in a unique approach (Ingemansson, 2010).

The relationship between motivation, commitment and innovation – the model

When linking the motivation of individuals to differing kind of commitment and innovative performance we propose:

Proposition 1: Autonomous intrinsic motivation will yield creativity and in turn generating affective relationship commitment, closer relationships facilitating idea generation and innovation.

Proposition 2: Autonomous extrinsic motivation will yield goal-fulfillment and calculative relationship commitment in turn facilitating idea exploitation/implementation and innovation.

Proposition 3: Moderately autonomous extrinsic motivation will yield idea implementation and normative commitment in turn enabling innovation.

METHOD

The methods used in this paper are multiple, quantitative, qualitative, longitudinal, comparative and case related. The case study method was selected as “networks are embedded in different spatial, social, political, technological and market structures and thus somewhat unique and context specific” (Halinen and Törnroos, 2005, p. 1286). The BBA and FOH networks were selected as they started at the same time, in the same region, for growth and development related reasons that emanated from perceived crisis. Data was gathered during September 2013 and June 2014.

Data collection

Data was gathered by means of six telephone interviews conducted in September 2013 with one of the individuals in the BBA, five from the hub and one participating consultant in the FOH. The questions were semi-structured and focused on describing the network structure in terms of actor composition (companies and individuals in BBA and only individuals in FOH), resources, activities (process) and the innovative performance generated.

Participatory observations and a follow up dialogues were furthermore conducted during ten group meetings held between November 2013 and June 2014 (five each) with the hubs of both networks and four whole network meetings.

Interviews were also conducted with the hub of BBA and FOH in April 2014 focusing the network mobilizing processes in terms of actor composition (individuals and companies), resources, activities and performance such as innovation, new business establishments and initiation of collaborative projects. The interviews were conducted in groups of two or three individuals and were following the differing themes of the networks.

A survey was distributed in the end of May 2014 to 157 individuals in the FOH network and 38 individuals in the BBA network. The survey was web-based with questions about the motives of these individuals related to their participation and commitment in network collaboration (an individual perspective). 42% (66) of the FOH and 74% (28) of the BBA

participating individuals chose to answer the survey. Data has also been gathered from memorandums of differing quality, extent, and form such as memos, project applications and grant decision documents.

Data analysis

The data will be (more yet to be done) analyzed qualitatively and quantitatively in to steps – first qualitatively using an iterative abductive-like approach (Dubois & Gadde, 2002; Järvensivu & Törnroos, 2010), moving back and forth between theory and empirical data analyzing the network development processes. This step is a manual process that will be conducted by one of the participating researchers in which the network participants (individuals), their activities and performance will be identified. A chronological narrative of the two cases will then be constructed based on data from the interviews. We will then iterate between the narrative, the data, and theory to develop a deeper understanding of, and evidence for, aspects that consistently appeared pertinent. In order to ensure construct validity (Seale, 1999), the results will be further explored during informal talks at meetings with the coordinating hubs.

The second step will be to quantitatively analyze results from the survey following and testing (yet to be done) the outlined propositions in turn related to intrinsic and extrinsic motivation, calculative, normative and affective commitment and innovation performance.

In a majority of the research on network formations the chosen analytical level is of the company and its dependence on scarce resources as the explanatory variable for networks. In contrast, this paper sets out to illustrate and explain network formation as initiated by the motives of the participating individuals, spurred by their commitment, if and what kind of innovative performance this in turn may yield.

CASE PRESENTATION

The networks were started in 2013 by resourceful individuals and are both focusing regional growth through innovation.

The Bio Business Arena Network (BBA)

The BBA network was initiated by Åkroken Science Park located in Northern Sweden as a result of crisis in the pulp and paper industry and the need to cooperate on grant applications and R&D projects.

The Future of Härnösand Network (FOH)

The FOH network evolved organically as a result of a crisis caused by the local university, moving to a neighboring city.

(narratives yet to be developed)

FINDINGS

Some preliminary results from the studies of the BBA and the FOH networks related to the research questions focusing motivation, relationship commitment and innovation performance suggests:

Table 1: Motivation, commitment and strategic/innovative activity within the BBA and FOH networks.

	The Future of Hårnösand Network (FOH)	The Bio Business Arena Network (BBA)
Motivation	Autonomous intrinsic	Controlled extrinsic
Relationship commitment	Affective	Calculative, Normative
Strategic activity	Exploration	Exploitation
Innovative activity	High	Low

DISCUSSION AND CONCLUSIONS

There is a lack of research focusing on the interpersonal relationships within holistic strategic networks (Provan et al., 2007; Sedita, 2008). This paper serves to investigate how individual motivation, relationship commitment and strategic intent of actors influence the innovative activity within strategic network endeavors.

The findings from the study indicate a relationship between autonomous intrinsic motivation and affective relationship commitment in the network participating individuals. Feelings of enjoyment, personal interest, and curiosity (Amabile, 1993; Gagné & Deci, 2005) motivated the individuals involved in the FOH network. This was in turn associated with feelings of loyalty (Gilliland & Bello, 2002) and relational emotive commitment (Bansal et al., 2004; Fullerton, 2005; Gruen et al., 2000). The BBA network, however, showed a higher motivation stemming from external sources other than the work within the network itself (Amabile, 1993; Ryan & Deci, 2000), such as access to new resources, marketing possibilities and the procurement of new customers. These motivational factors related with the commitment within the network stemming from a hope of receiving future financial rewards for the individual firm and economic return of time invested. Also, the individuals in the BBA network showed commitment on the basis of believed external pressure from their business partners expecting future participation in the network. Extrinsic motivation subsequently allied with calculative and normative commitment in the BBA network.

The calculative and normative components are not yet theoretically linked to motivational theory. Consequently, the second question is, “*what kind of performance in terms of innovation is generated by affective, calculative and normatively committed individuals?*” Preliminary findings from the present study indicate that affective commitment will generate creativity and new ideas, but for these to become innovations the intrinsic motivation will have to be combined with extrinsic motivation (Integrated Regulation and perception of importance) as suggested by Gagné & Deci (2005) and thus calculative commitment.

Previous research posits that intrinsic motivation is linked to exploration and the early stages of creativity (Baer, 2012; Grant & Barry, 2011). Still, early stages of creativity may not necessarily lead to opportunity exploitation (Andresen et al., 2014). The two studied cases in this paper suggests that the network that showed the highest outcome in terms of innovative activity also showed high explorative strategic intent, while the network with less innovative activity was driven by an exploitative intent. A focus upon exploration and creativity hence seemed more conducive towards innovation than focusing upon opportunity exploitation. This suggests that a focus on exploitation can

stifle creative endeavors if not supported by an explorative strategic foci. Seeking extrinsic monetary rewards from network collaboration might subsequently come up short if this network effort is not fueled by intrinsic motivation and an affective commitment to the task, especially if this task concerns undertaking creative and innovative endeavors.

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