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Building Trust to Create Crowdsourcing Acceptance

ABSTRACT

Organisations aspire to access human capital that provides competitive advantage. Historically, organisations looked internally to access these resources. With technology and entrenched penetration of the 'internet' this aspiration has crossed the boundaries of organisations. The incentive for crowdsourcing for the employers can be attributed to strategic and economic rationale however for the crowd workers the incentives seems elusive. This paper proposes a conceptual model to understand the motivation of crowds to opt for crowdsourcing at the level of the organisation. We propose the firm size and reputation of an organisation leads to trust amongst the crowdsourcing community, moderating the relationship between participation in crowdsourcing and acceptance in the community. Our model is supported by the Exchange Theory.

INTRODUCTION

Organisations have mostly looked internally to create a competitive advantage in the market (Barney, 1991; Rothaermel, 2012). Human capital has been one of the major resources, to establish this competitive edge in the market. However, in the world of "internet" of things and proliferation of knowledge, the internal facing resource-based view becomes redundant. Sources of human capital are strewn across geographies that are enriched with the internet and organisations can initiate unhindered association with these mines of competencies. It implies that if there is need for any requisite resource or capability, this demand can be made available on a global platform, and isomorphic groups with an inclination would attempt to fulfil that demand without any ties under a chronologically isolated contract or deemed obligations in the future. Crowdsourcing is an institutionalisation of this phenomenon where organisations' boundaries are porous with respect to availability of deemed human capital. Crowdsourcing has been defined as "the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call" (Howe, 2006). The push from organisations to delve into the format of crowdsourcing for resources seems intuitive, however the motivation for hordes of individuals to contribute their cognition, skills and time is currently amorphous at the firm level. Though a modicum of literature has looked at the individual level motivation to participate in crowdsourcing (Bonaccorsi & Rossi, 2006; Lerner & Triole, 1999; Ligeon, 2012); this paper aims to explore the motivation and appeal of crowdsourcing at the level of organisations. Organisations are currently using crowdsourcing as a peripheral and spasmodic resource acquisition activity, however with the advent of the gig economy, the volatility of the millennial workforce, the impulsive speed of technological growth and the uncertainty in the competitive market, crowdsourcing as a model will have to be more strategically at the centre-fold. Ensuing that organisations need to build capabilities that are not only agile internally but also are amenable to a crowdsourcing model. It is therefore imperative for organisations to build a first-mover advantage to build their proficiency in using crowdsourcing as a robust alternative model to maintain a competitive advantage in terms of human resources. We posit that "trust" in organisations would be the foremost driver of this model. The underlying theories utilised to support our

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conceptualisation are Exchange Theory (Blau, 1964; Kelley and Thibaut, 1978, Homans, 1961) and Rusbult, 1983; Thibaut & Kelley, 1959). The Exchange Theory proposes that relationships are formed sue to mutual cost-benefit analysis and the relationship that provides maximum benefit supersedes other alternatives. The conceptual framework introduced in this paper suggests that in a crowdsourcing strategy where there is lack of any contract or protective binds crowd workers will work with organisations that impart a sense of higher degree of trust in the crowdsourcing community to attain maximum benefit from the brief liaison.

LITERATURE REVIEW

Crowdsourcing

Crowdsourcing has been borrowed from the open source philosophy which sands on the pillar of peer production where all the codes are accessible to all, and coders can voluntarily amend them. Open source is antithetical to proprietary principles and there are arguments for both the sides for furthering innovation. Open source though is not restricted to the software industry it was revolutionised by Stallman with the Free Software Foundation, which aimed at a system where everyone could access reliable software codes free of cost (Bonaccorsi & Rossi, 2006). Though it seems that such products would be inferior to proprietary products which are paid (Khalak, 2000) and unable to compete with a force of paid and skilled employees, it is surprising that they are as successful and consumed. In fact, Linux held over 20% of the market share and is known as one of the most successful & widely accepted operating system (Stackoveflow, 2016). All this is done by widely engaging a large community known as the LUGs (Linux User Groups), who own, modify, innovate & use the software (Bagozzi & Dholakia, 2006).

Some of the popular open source products are application software like Inkscape, Mozilla Firefox, NASA World Wind; Operating systems like Linux, Android; programming languages like PHP, Python and Server software like Apache, Drupal, Moodle, Wordpress, Jhoomla etc. Not only in the software segment but other in segments products like istockphoto a photo accessing website, Simputer a computer, beverages like Open Source Colas, Wikipedia, Khan Academy etc. are also highly prominent

in the consumer market. Crowdsourcing as a phenomenon has become "the biggest paradigm shift in innovation since the [the] Industrial Revolution," (Wendy Kaufman, 2008 as cited in Felstiner, 2010). In fact, crowdsourcing as a practice has been in use since centuries (Wexler, 2011). One of the first examples documented is that of the British Government in 1714, announced the Longitude prize to anyone who could devise a way of locating the position of ships at sea and they did get a practical solution from the crowd (Dash and Petricic, 2000; Quill, 1963 as cited in Wexler, 2011).

Process of crowdsourcing

Though an employment activity, there is no physical office space or organisational rules to bind the workers in a crowdsourcing work set up. The workplace is dotted by anonymous workers completely in the cyberspace (Felstiner, 2010). The workflow is extremely fluid (Banks & Humphreys, 2008) and it is a challenge for HR to ensure that there is no abrasive collision (Banks & Humphreys, 2008) while enmeshing crowdsourcing in a traditional set up. Like open sourcing it completely depends on the social & financial concept of co-creation (Banks & Humphreys, 2008; Ligeon, 2012). The word co-creation was introduced by Prahalad & Ramaswamy, (2000) to describe the mutual relationship between producers & consumers to innovate & progress. Building on this concept, consumers are more like co-workers who take part in the production of the product being consumed blurring the boundaries between consumers & producers (Kleemann, Voß, & Rieder, 2008; Ligeon, 2012). However, this social & financial value enhancing relationship ultimately remains under the control of the company. The origin of customers being a part of the products that they are consuming can be traced back to self-service & McDonalisation of products where a portion of control rests with the customer (Kleemann et al., 2008).

To understand crowdsourcing, we can think of proprietary forms as "cathedrals" (Zeitlyn, 2003) and crowdsourcing as "Bazaars" (Barley & Kunda, 2006; Khalak, 2000; Zeitlyn, 2003). In the former, they are planned right in the beginning & carried out as planned. In the bazaar model, an informal forum is present where like-minded people congregate, exchange information & material. Some of the other models to describe crowdsourcing would be through Social Capital – where more than economic gains are assessed, Kinship Amity – where the community considers themselves as a family and derive identity from this association (Zeitlyn, 2003), Tragedy of Commons – where certain people contribute

but everyone benefits from the common pool of resources and the cooking pot where there is a mixture of products free available for all to use (Khalak, 2000).

Motivation for crowdsourcing

In crowdsourcing there are two major stakeholders along with the vendors who provide crowdsourcing platforms - the organisations who outsource and the workers who take on the jobs (Felstiner, 2010). The crowdsourcing community displays certain aggregate behaviours such as a collective conscience that all the members of the community feel towards each other and the distinction that they feel who are not members, shared rituals & traditions, their ideology and the usage of colloquialisms and a sense of obligation toward the whole community (Bagozzi & Dholakia, 2006). Though the economic rationality model suggests extrinsic motivation for motivation, however it was found that there is no correlation between the motivation (operationalised through, number of people opting for crowd-work and quality of output) and the amount being paid (Deci, 1975; Ipeirotis 2010; Mason 2009; Rogstadius et al., 2011). Though, money offered does increase the accuracy as well the swiftness of completion, it does not explain the quality of work or the willingness to send higher amounts of time to solve the problem introduced (Chandler & Kapelner, 2010; Rogstadius et al., 2011). Additionally, the type of work (Chandler & Kapelner, 2010) and the skill variety required also determine the motivation of the crowd-workers (Kaufmann, Schulze and Veit, 2011). The significance that humans attach to the work, affects the degree of motives for performing. Most of these factors have been reflected in the employee-employer scenario as well. Conversely, the relationship embodied in crowdsourcing is non-contractual and ephemeral, hence additionally there is a pure altruistic motive that might be omnipresent, which exemplifies the intrinsic kernel of motivation. The extrinsic factors other than money seem to be the chance of association, peer community, competition and reputation (Leimeister et al., 2009; Hossain, 2012). At an individual level the major clusters of motivational factors as articulated by Ke & Zhang (2010) are external motivation (financial or any other personal gain), introjected motivation (recognition, reputation enhancement and the opportunity to be acknowledged), identified motivation: (identification with the community), integrated motivation (Value based, pro-open source and anti-proprietary mechanisms) and lastly, intrinsic motivation (intellectually

stimulating). There have been several studies espousing the hedonic value of participating in crowdsourcing (Sun et al. 2011). These studies explain the motivation of crowd-workers towards the idea of crowdsourcing. From the perspective of competitive advantage how firms should mould their strategies to ensure that the preeminent portion of this labour pool is driven to specifically work with them has been completely disregarded by several researchers. This study therefore aims at understanding how organisations can identify the motivators to enhance their crowdsourcing strategy. Though, previous literature hints that the type of job posted, the extrinsic value deemed, and the cognitive abilities requested would affect the strategy at the organisation level to impact motivation levels, we will explore the merit of "trust" as an endemic factor that will influence the motivation to work with a firm. The role of trust as a pull-factor has also been explored in several studies however mostly deliberating trust in the crowdsourcing platform (Hsu et al., 2007; Martinez, 2017; Ye & Kankanhalli, 2017). Utilisation and building of organisational trust as a competitive advantage in the crowdsourcing communities using exchange theory has been generally overlooked.

BUILDING A CONCEPTUAL MODEL OF TRUST

Organisational Trust

Trust has been researched and examined at various levels across multiplne disciplines (Rousseau, Sitkin, Burt and Camerer, 1998). Trust has been looked at the individual level from the lens of conflict (Fichmen, 1997), from the economic oint of view (Williamson, 1993), from the psychological perspective (Deutsch, 1962; Rotter, 1967; Tyler, 1990), as a social construct (Grannovetter, 1985) and at the instituitional level (Zucker, 1975). In this paper we will look at trust at the instituitional level between organisations and the nebulous crowds that form pool of human capital. Though trust is mostly a demonstration of vulnerability (Mayer, Davis and Schoorman, 1995), Rousseau et al., (1998, p. 395) have define it as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intention or behaviour of another". In our context, considering that crowdsourcing is mostly an altruistic-collective activity extracts talent from the crowdsourcing community at almost zero cost, the organisations can leverage and even exploit the vulnerability of the crowdsourcing crowds. Crowds are susceptible to their ideas and contribution being

purloined by the opportunistic intentions of firms (Feller et al., 2012). Crowds are taking huge risks when they agree to share their intellectual capital with amorphous entities on crowdsourcing virtual platforms (Ye & Kankanhalli, 2017). Therefore, if organisations need to build their capabilities and strategically use crowdsourcing as a robust alternative resource-based model, *trust* assumes a significant cog in the functioning of this paradigm. In a crowdsourcing environment, were there is no tangible contract or relationship, no accountability and no human interaction, the role of trust in the organisation becomes highly pertinent. Trust would be present somewhere between complete ignorance embodied by exact information skewness or perfect information symmetry (Simmel, 1964), either of the two extremes however are not possible. Consequently, organisations need to signal information such that trust in their organisational task is garnered. Trust additionally would cumulate on a virtual platform, by semaphoring reliability, dependability and competency (McAllister, 1995). Trust though has arduous precursors, that would require effort and intent in an uncertain short-term milieu, it would still be beneficial for organisations to build competencies in building trust in the crowdsourcing space. As shown below in Figure 1, when organisations build crowdsourcing capabilities, in an environment where they can develop a relationship of high-trust with their crowdsourcing environment, it will lead to a stable crowdsourcing framework which would become progressively become stronger as the usage and the loop of trust becomes more resilient. Consequently, if the organisation in unable to build a relationship of trust in their crowdsourcing milieu, there will be eventual dissolution of crowd. Additionally, crowdsourcing within a particular format is based on word of mouth, and credibility and reputation are highly internalised and specific within the community. Once trust is diminished, trustworthiness of the organisation would be adversely affected. Analogous to employer branding, reputation within the crowdsourcing community is palpable for a competitive crowdsourcing strategy. Considering that crowd workers perform purely on the basis of the organisational trust that they deem on the organisation, it is critical that organisations behave and strategize to ensure the development and maintenance of the trust, which can be derived not only from the invisible sense of benevolence but also from factors of authenticity and competency in addition to integrity (Mayer, Davis & Schoorman, 1995; Scholtes, 1988). Organisational trust would allow crowd workers to assume character,

competency, fair communication, sense of justice and communication when there is no formal or psychological contract (Starnes et al., 2010).

Insert Figure 1 here

As mentioned, crowdsourcing as a phenomenon is growing and futuristically organisations would scramble for the limited cognition and time of the crowdsourcing community. The challenge for organisations is how to handle a large group of invisible people with whom there is no communication or contact. All previous votive models would fail in this case since it is not a typical employer-employee relationship, even though organisations are extricating "work", possibly for a small sum of money.

Size of firm and trust

Trust at the institutional level is derived from the sense of security that is ingrained in the structure of the organisation (Shapiro, 1987; Zucker, 1986) and Cognition based trust is derived from the perceptions of organisation in the market (Meyerson et al., 1996). This indicates that the more positive is the perception of the brand the higher will be the attraction for crowds to align themselves with this organisation (Leana & Van Buren, 1999). Large brands with a positive image in the market would therefore naturally attract larger crowds at lower transaction costs (Wasko & Faraj, 2005). Working with substantial and reputed organisations would also allow crowds to construct their identity through their association with these brands even if it might be limited to their online community (Gefen, Karahanna, & Straub, 2003). Without a formal and continued relationship formation of trust is vague and untenable. Firm size is an important indicator that suggests authenticity, reputation and stability since they are more impervious to uncertainties in the environment and mostly enjoy bargaining power over their competitors (Chandprapalert, 2000; Park & Luo, 2001; Pfeffer & Salancik, 1978; Trevino & Grosse, 2002; Xin & Pearce, 1996). Therefore, firm size does positively influence the degree of trust amongst suppliers and customers (Doney & Cannon, 1997; Jiang et al., 2011). Additionally, reputation is a key factor in the online community for businesses to function. Most online communities trade and interact with companies that are deemed to be reputed since the degree of deceit is more plausible

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(Jøsang, Ismail, & Boyd, 2007). Consumers, suppliers and partner organisations derive trust on the basis of the reputation created online and otherwise (Casalo, Flavián, & Guinalíu, 2007; Doney & Cannon, 1997). Therefore, in an environment where the concerned party has only part visibility, size of the firm and reputation are both proxies for trust-worthiness (Jarvenpaa, Tractinsky, & Vitale, 2000). Similarly, we can extend that reasoning that firm size and reputation lead to the perception of trust among the crowdsourcing community.

We therefore posit:

> *Proposition 1a: The larger the size of the firm the higher the trust of the crowds in the organisation.*

> *Proposition 1b: The more positive the brand reputation of the firm the higher the trust of the crowds in the organisation.*

Impact of trust

Trust is crucial to create a space in the crowdsourcing labour market. Though most literature has looked at trust as an integral tool for organisations to filter the quality of work provided by the crowds, we look at how exactly would trust impact the crowdsourcing capabilities. The concept of dynamic capabilities (Prahlad & Hamel, 1990) suggests that the more the organisation would work and utilise a strategic intent, the more they will develop capabilities in it. It has been shown that crowds are not passive spectators anymore and would want to participate more actively with the platforms (Zhao & Zhu, 2012). Additionally, any form of crowdsourcing is a collaborative pursuit (Stantchev, Prieto-González, & Tamm,2015), however the possibilities of exchange are exiguous and purely dependent on the scope of the platform. Therefore, engagement using the boundaries of the platform become pertinent to build a relationship with the crowd. Additionally, the quality of the interaction and the overall strategy of crowdsourcing depends on the management of the initiative by the organisation. It has been shown that the more seamless the interaction in terms of payments, control and communication, the lesser are the issues of trust (Jain, 2010). Therefore, the more familiar the organisations with crowdsourcing as a strategy the more they would be aware that increased participation would lead to a better relationship

thus inducing a feeling of trust amongst the crowds. As organisations initiate utilisation of crowds/ crowdsourcing for their strategic intent (e.g. the case of US Navy) the more proficient they would become and therefore the assumption is higher will be the acceptance of the crowdsourcing community. We therefore propose that:

> *Proposition 2b: The higher the participation of the firm in crowdsourcing the higher will be the acceptance of the organisation by the crowds.*

It can be suggested that despite high participation levels, there might not be high acceptance from the crowds. The crowds belong to a crowdsourcing community and therefore the relationship of the firm with the community would eventually impact the success of their strategy. This acceptance therefore would be moderated by the trust that the crowds will have on the organisation. The more the trust the crowds have, the higher will the acceptance by the crowds. We therefore propose that:

> *Proposition 3: Trust will positively mediate the relationship between participation by the firm and the acceptance by the crowds.*

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Insert Figure 2 here

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Internalities of the firm

Organisations' external indicators such as their size as well as their reputation have always predicted their position in the customer, supplier and even crowdsourcing market, however there are variables internal to the organisation that seem to have a huge impact as well. The external indicators might pull crowds however, the internal parameters would sustain the relationship. The internal parameters such as innovative practices, crowdsourcing capabilities, integrative strategic crowdsourcing policy all contribute towards the firms' capability to induce and sustain crowdsourcing processes (Sieg et al. 2010; von Krogh, Wallin, & Sieg, 2012; Lüttgens, Pollok, Antons, & Piller, 2014). Therefore, the more the contribution of organisations towards their structures, processes and human resources to build crowdsourcing competencies the more the organisation would the more the organisation will be able to reach out to larger crowds outside their traditional boundaries using crowdsourcing platforms (Pollok,

Lüttgens & Piller, 2015). As organisations build more competencies, they could either succeed or they could fail in their attempts. We suggest that in organisations that can generate high-trust amongst, the crowdsourcing strategy would reach progressive capabilities, however despite investment in processes, in a low-trust environment there would be dissolution of crowds. Therefore, trust becomes a pertinent aspect that organisations would want to leverage on to be able to exploit cyber crowds. Before that we the more the enduing in capabilities the higher will be the acceptance of the crowds. We can thus propose that:

Proposition 4: Internal crowdsourcing capabilities impact the success of crowdsourcing strategies (acceptance), while being mediated through participation and trust generated.

Our model thus becomes more enhanced while combining the internal parameters of the organisation as well. Figure 3 expounds the conceptual framework including the internal capabilities of the form as well.

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Insert Figure 3 here

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Role of crowdsourcing platforms

A crowdsourcing platform is the medium that connects the crowds with the organisation (Ford, Richard & Ciuchta, 2015). It also consequently shapes the norms and the systems that govern the crowdsourcing processes across organisations (Zhao & Zhu, 2012). Platforms allow organisations to build and create their crowdsourcing strategy. The credibility of a crowdsourcing platform not only depends on the user interface for both the crowds as well as the organisation but also the degree of utilisation. The better the interface in terms of features, format, layout, frame attributes, resolution and dexterity across technology medium (Mea, Maddalena & Mizzaro, 2013) the higher will be the degree of usage and increased penetration amongst its users, the precocious will be the trustworthiness of the platform. Therefore, the role a crowdsourcing platform becomes highly pertinent.

CONCLUSION

The labour-capitalist dichotomy exists in crowdsourcing. Researchers have often said that cyber workers are a cheap source of labour and are exploited and given low wages. However, researchers also state that this is a voluntary and mostly altruistic activity and that no one has forced these crowds to take up these tasks. The whole idea of an open source philosophy is collectivism or joint ownership. To understand this paradoxical dichotomy, we propose a conceptual model that uses trust as the central force to comprehend this phenomenon. The Exchange Theory supports this conceptualisation considering that "trust" is the proxy that drives crowd workers to work with altruistic and pro-social intentions assuming they will receive status and practical usage of their skills in the crowdsourcing community.

From an HRM practices perspective, this conceptualisation framework reminds HR strategists about both control as well as uncontainable factors. While developing a talent recourse strategy that traverses the boundaries of their organisation, wherein traditional intrinsic and extrinsic factors of motivation are limited, HR practitioners and leaders this theoretical guideline would assist in understanding and assessing their current stratagems.

The limitation of this model is that crowdsourcing though popular is still in the fringe organisations' resource strategies and therefore we have not arrived at the scale that would allow to build constructive empirical data to test these propositions. However, it is also assumed that organisations that would build crowdsourcing capabilities sooner than later to ensure they don't miss the bandwagon of competitive edge in the talent market. Additionally, we cannot envisage the applicability of this model in the long term, since several predictive antecedents suggested might not have the elasticity an impact over a period of time.

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https://insights.stackoverflow.com/survey/2016#technology-desktop-operating-system

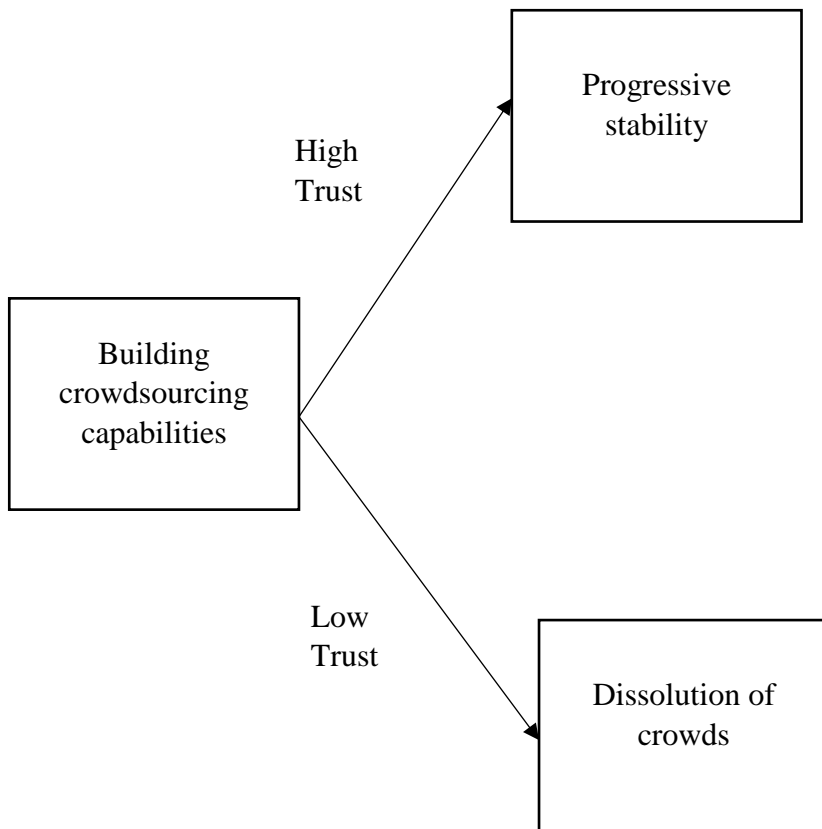**Figure 1: Conceptual role of trust in building crowdsourcing capabilities**

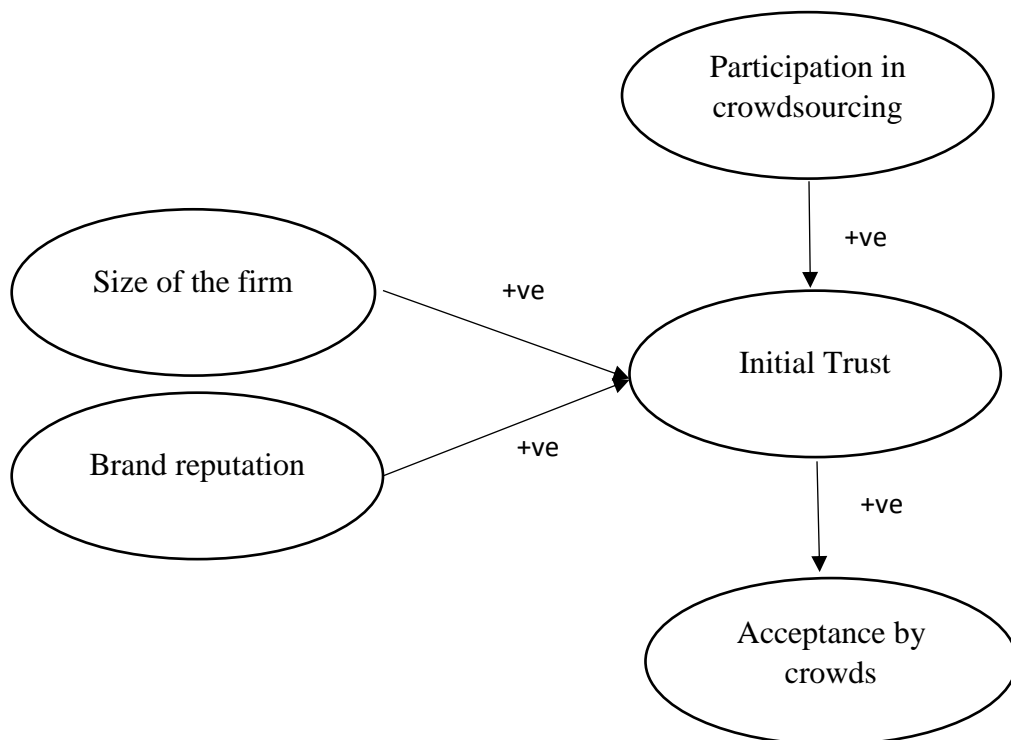**Figure 2: Relationship between the firm and trust**

Figure 3: Incorporating internal capabilities of the firm

Internal crowdsourcing capabilities

Participation in crowdsourcing

+ve

Size of the firm

+ve

Brand reputation

+ve

Initial Trust

+ve

Acceptance by crowds