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Creating Start-up New Ventures: A Conceptual Approach

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Abstract

There has been limited research into the creation process of new venture start up firms embedded in radical innovations such as the Internet. This study attempts to develop a theoretical perspective on this process that is primarily grounded in diffusion theory but also borrows from other disciplines. The objective is to develop theory rather than test theory. The study develops a number of working propositions and then demonstrates how these working propositions can be operationalized using case data. The result suggests that the process activities over time are dependent on macro and micro activities in line with a flexible master plan rather than a sequence of unrelated linier activities and static objectives.

1. Introduction:

Process innovation represents a new or improved way of developing or providing a product or services either to an end customer or a business [1]. Process innovation can be as simple as the improvement in the way in which a particular function is performed, or as radical as developing a entire new system e.g. just-in-time or creating a new venture based on radical technology such as the Internet. Scholars have split innovation research into two broad areas of inquiry [2]. The first is an economics-oriented tradition while the second is an organisational theory-oriented tradition. Nevertheless, product development is critical because new products are becoming the nexus of competition in industries raging from software to cars. Furthermore, it is a critical means by which employees diversify, adapt and even reinvent their firms to match evolving markets [3]. More importantly, however, the theoretical question as to how and why suppliers and buyers adopt such innovations and the processes they go through are unclear. Understanding such questions will assist managers as theoretical guidance in this area is limited [6]. It can be argued that product and process innovations are not dichotomous in that process improvements are often driven by new product demands while new products frequently arise out of developments in process engineering.

This paper attempts to describe how start-up new ventures like the B2B e-market firms based on radical technology such as the Internet technology can develop new or improved ways to provide services to businesses using electronic centralised exchanges or B2B e-markets. B2B e-markets are defined as *independent new venture where business buyers and sellers perform marketing and logistics activities using the embedded technological innovation (the Internet) on which it is based* [4]. Given this definition B2B e-markets are both a ‘firm’ as well as a ‘technological innovation’. For the purpose of this paper, the focus is on the creation of such independent firms and the role of the participants there in.

Evolving high-technology markets such as those based on the Internet receives a great deal of attention as they promise to introduce technological innovations that often create a market discontinuity and lead to new markets [5]. Our understandings of management within the B2B e-market firm and of third parties who provide and develop the technology to the B2B e-market firm is incomplete [3]. There is also little understanding of the links between the creative processes by which managers within B2B e-market firms and other firms use to create an effective product concept [3].

The objective of this research is to develop theory but not test theory. As such the research develops a number of working propositions and is multidisciplinary in nature. Due to the multidisciplinary nature of the research objective, this research is grounded in *diffusion theory*. It also borrows from network literatures and hopes to contribute to new venture literature. The reason for grounding this research in a multidisciplinary context is that no one literature adequately addresses the two facets of the research, that is, the creation process and involvement of participants [6].

Diffusion theory is important to this research because (a) the aim is to understand the process of creating such new ventures by observing the nuances of planning and implementation decisions and (b) it intends to understand the roles played by the different participants in the creation process. Network literature draws on the concept of lead users. Von Hippel [7] claims that in the "high technology area, the world moves so rapidly that the related real-world experience of ordinary users is often rendered obsolete by the time a product is developed or during the time of its projected commercial lifetime". In contrast to Von Hippel [7], Biemans [8] claims that third party participants are the drivers of innovation. Building on the concept of lead users and third party participants, this study adds the concept of the involvement of network champions [9]. Network champions are likely to serve, in part, as brokers and deal makers to bring about new relationships amongst firms at multiple levels. In particular, the concept is one of a catalyst who builds new linkages among multiple firms that have not previously communicated with one another [10]. Thus this concept will be helpful in explaining the relationship of the participants in the business network. Here, a business network is defined as the participants in the B2B e-market firm and the third party participants.

2. Conceptual framework

2.1 Process

2.1.1 Formation of new ventures

Formation of new ventures based on innovation is composed of a set of stages or phases ordered along the

temporal dimensions of their anticipated approach [11]. The study of innovation as a process should be distinguished from the result or event approach as the latter (e.g. of diffusion or date of adoption) are related to characteristics of the organisation or its members [11] which is not the focus of this study. Zaltman, Duncan and Holbek [11] argue that when investigating the results of the innovation, both decision and implementation process become obscure. This view has been criticised because it treats innovation as a single event rather than a continually changing process [12, 13]. Rather, innovation should be viewed as an interrelated and complex set of evolving activities that shift over time [13]. Thus, in a process approach, innovation is viewed as an unfolding process consisting of several stages in a certain order of interrelated events [11]. While the Zaltman et al.[11] description for each stage is contingent upon the adoption decision, that is, a decision to adopt may be optional, consensus-based, or authority based, researchers have shown that the common pattern within organisations is consensus-based at the management level, which in turn is followed by an authority-based process at the user level [14]. However, in new venture start-up firms such as B2B e-markets, the stages are "blurred". In this environment the decision to adopt and implement innovation is a collective approach based on the experience of the decision-makers, the information the creators receive from the practitioners in the market, from technological experts and other third party firms (e.g. Internet Service Providers).

The problem with most research on organisation creation is that researchers have studied organisations only after they have come into existence [15-17]. Katz [16] suggest that organisation creation models developed by Van de Van [18] are useful because they describe micro activities. Katz [16] argues that research will benefit by understanding the combination of all activities in the creation process, for example, the activities prior, during and at the implementation stages of the new venture, that is, macro and micro activities. Macro activities are characterised as organisational changes in structure or process that are studied over time, from birth to maturity, while micro activities, characterised as organisational changes in structure or process, are studied primarily at the gestation, pre-birth and birth stages [16].

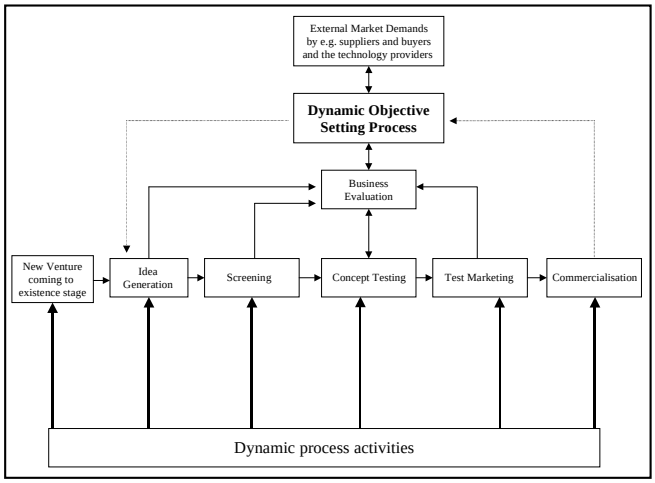
The distinction between macro and micro activity theory has been blurred in most development work [19]. In most macro long-run theories, immediate activity is only implicit and remains vague at best [19]. As a result this theory remains overly simplistic particularly in real-time situations. Micro theories, however, do not consider how immediate actions interact and aggregate into a larger context and as a result micro theories tend to have an overly simplistic view of the long run. However, both macro and micro perspectives are necessary in developing an adequate theory of innovation, because innovations are extended over long periods, yet driven through time by immediate action [18]. In order to develop theory in new venture B2B e-markets, this research includes both macro and micro perspectives in order to understand how two or more immediate activities can be combined over a time ordered sequence along with the impact of third party firms in networks. In keeping with the diffusion theory, this study extends prior research by combining macro and micro activities and supporting the research using empirical data.

2.1.2 Dynamic interrelated planning

Traditional sequential models have been criticised by scholars because of their inability to illustrate the interactions between the various stages of the development process and the assumption that each stage is completed before the following activity occurs [20]. Moor [20] overcame these shortcomings by identifying parallel activities while at the same time linking the activities to the firm's objectives. More importantly, this linking of activities with the firm's objectives indicates that the business objectives were evaluated at every stage of the development process. This loop-back feature is captured in part by [21]. In contrast to the previous models, Cooper [21] suggests a roadmap for driving a new product/project from the idea stage to product launch by providing a comparison between the second generation stage-gate process and third-generation process that overlaps fluid or conditional 'go', 'no go' stages at the gates. Although an activity based model clearly shows the tasks carried out during each stage and the intermediate forms of development, the model of Cooper [21] suggests that an ordered sequence of activities is involved, by which innovation moves though a process.

Building on these models, this study extends the activity models by arguing that objectives are flexible in a dynamic new venture B2B e-market firm. Figure 1 depicts process activities as dynamic in nature and demonstrates that the external environment and technology may affect on the objective setting process of a B2B e-market firm.

Figure 1: Dynamic process activities and objective settings process



Source: Adapted from Moore (1984) "Control of New Product Development in UK Companies" *European Journal of Marketing,* Vol.18 6/7.

In a process approach, the stages are interrelated, as mentioned before. However, process models suggest that each stage is planned and executed in sequence. This is not realistic to the extent that dynamic planning activities can and do take place over time and may not be executed in sequence. Planning activities in some instances may depend on market demands, where the capabilities of the firm and its resources can be configured or reconfigured to match market change [22].

Dynamic capabilities are the antecedent organisational and strategic planning routines by which managers alter their resource base, acquire and shed resources, integrate them together and recombine them to generate new value creating strategies [22-24]. Scholars [25, 26] have described dynamic capabilities in vague terms, such as 'routines to learn routines', that have been criticised as being tautological [22]. Yet, a dynamic capability actually consists of identifiable and specific routines, such as product development, that often have been subject to extensive empirical studies [22]. One can argue that in a B2B e-market environment, however, the creation process must 'fit' the requirements of the market. Dynamic changes could be triggered either by the product (e.g. new software in the market or limitations of the software) or the requirements of the sellers and buyers. More importantly, high-velocity markets (e.g. real-time marketplaces) involve the creation of new, situation-specific knowledge in order to focus on market situations that are fluid (not static) and use simple routines to address strategic planning [22].

Arguably, the B2B e-market environment is not a moderately dynamic market structure; rather it is a high-velocity market structure. As such, planning routines that focus on organisational changes in structure or processes are simple and flexible. Furthermore, the literature reviewed seems to suggest that the objective needs to match the market demands over time. In order to match market demands and the capabilities of the innovation (e.g. computer programming limits of the software) the macro and micro activities need to be flexible. In other words, *the formation of new venture B2B e-market firms* depends on *dynamic planning of macro and micro activities* and a *constant review of objectives* rather than *a sequence of unrelated events based on fixed objectives* in order to match market demands. Therefore, planning routines focus on events to match the market changes (over time) by using simple routines that are not completely unstructured, so that managers can act in highly uncertain situations where it is easy to become paralysed [22]. The preceding arguments based on literature suggest the following working proposition.

WP_1: The formation of new venture B2B e-market firms is dependent on a dynamic interrelated planning of macro and micro activities and a review of objectives, rather than a sequence of unrelated events based on a static objective.

2.1.3 Decision to adopt or reject an innovation

Decision processes play an important role in innovation because decision-makers in the organisation are faced with choices such as to innovate or not, to select from different innovations or to use different methods of implementation [11]. Taylor [27] argues that decision making usually involves four steps, (a) the generation of some subset of alternative courses of action available, (b) a set of consequences attached to each alternative (c) preference ordering in an attempt to rank the consequences of various alternatives and (d) the decision-maker's selection of the first alternative that meets some minimum standard of satisfaction. However, scholars have suggested that decision making is depended on the condition of technical uncertainty [28, 29]. Schon [29] however, states that uncertainty attributes can be further classified into technical, novelty and marketing uncertainty. Technical uncertainty focuses on the question of whether the innovation is technically feasible, novelty uncertainty focuses on the question of other firms' approach to the innovation and marketing uncertainty focuses on the question of marketability of the innovation.

These attributes of the decision process are relevant to this study. The B2B e-market firms are based on innovation and therefore dependent on technology uncertainty and, being a new phenomenon, will be dependent on novelty and marketing uncertainties. As such, the decision to adopt an innovation such as in the case of B2B e-market firms is shared amongst the functional areas to address uncertainty as each functional area makes a decision on a particular aspect of the creation process and then argues the merits of the decision with other functional areas.

2.1.4 Linear and fixed innovation-decision process.

The decision models rest on the premise that the product development process can be split into a number of decision actions and, as such, the process is divided into several stages, separated by evaluation points [8]. At every point, a decision on ‘go’ or ‘no go’ must be made in order to go on to the next stage of the decision making process. However, in a B2B e-market environment, once the initial decision to commit resources to the development process is made, a number of decisions are dependent on subsequent process activities such as, by third parties. For example, selections of appropriate software or decision on selecting the systems design to meet the needs of suppliers and buyers. Furthermore, Rogers’ [30] model suggests that the decision process is a sequential activity, yet in a B2B e-market environment the decision process could be a parallel set of activities with inputs by different actors and consequently the model is not flexible.

Generally decision models are easily constructed by taking the stages of the activity-stage model and linking them by evaluation points [8]. Based on Cooper’s [31] decision stage model a more elaborate model that distinguishes between technical/production activities and

marketing activities was developed. Calantone and di Benedetto [32] provide empirical validation of Cooper's [31] decision process model that identifies the strength of the relationship between technical and marketing activities. This model suggests that the "needs" of the market (held by sellers and buyers in a B2B e-market environment) and the technical resources provided by third party technology suppliers have a strong or positive effect in contributing to the success or failure of the commercial product.

Arguably in a B2B e-market each stage of the decision process may have an evaluation point at which the decision to adopt or reject an innovation can take place. Furthermore, in a focal business network, suppliers and buyers may affect the design decision of the procurement documents or the process in completing these documents. In such situations, the technical and managerial personnel require input from the users of the system. Because of that, *the decision to adopt or reject an innovation* can occur at *any point in the decision process of adopting an innovation* rather than *at a particular point in the process.* This leads to the following working proposition.

WP_2: The decision to adopt or reject an innovation can occur at any point within the linear innovation-decision process rather than at a fixed stage of this process.

2.1.5 Implementation of innovation

The interest in diffusion theory for this study is in its consequences for the implementation process. This study seeks to understand implementation not as an outcome of a process but the process itself. In broad terms, the implementation or commercialisation stage of an innovation can be defined as the execution or commercialisation of the innovation where it is put to use [30]. Klein and Sorra [33] observe that innovation scholars have ignored research on innovation implementation. However, cross-organisational studies of determinants of innovation adoption are abundant (see [34]). More common are qualitative case studies that focus on single-site implementation of innovation [33]. Although these studies describe parts of the implementation process, an integrative model that captures and clarifies multilevel phenomenon of innovation implementation is largely missing [33]. Klein and Sorra [33] claim that researchers have neglected the implementation. Furthermore, researchers have neglected the phenomenon that an innovation can be changed or modified by the user [35]. Observations made during the initial interview of the B2B e-market firm suggested that in a B2B e-market environment, suppliers and buyers may request changes, for example, to the "procurement screen" so that it is more user friendly and contains standardised information.

Management scholars have developed an integrative model describing the determinants of the effectiveness of organisational implementation [33]. However, that model does not focus on the process of implementation. Rather, it identifies a number of dimensions of effectiveness and urges researchers to understand implementation across organisations, using longitudinal data. Its authors believe that a number of single-site studies (e.g. [36]) have rich descriptions of the variety of innovation, implementation, organisational and managerial practices, and characteristics that may influence innovation. However, the use of information from across organisations in a network (e.g. B2B e-market environment) will provide a valuable understanding of the implementation process using longitudinal data [33].

This study focuses on understanding the implementation process of an innovation that can be changed by the user over time in order to meet the requirements of the user of the innovation. In so doing, this study will map the process of how a technological innovation is implemented in a B2B e-market firm over time.

2.1.6 Feedback and redesign

Feedback and redesign refers to the process by which information is collected about a new technology and redesign activities are initiated to enhance the operations of the innovation [37]. The basic assumption is that any new technology will evolve in structure, process and outcome [37]. The authors posit that the evolution is driven by (a) the perceived benefits of the technology (b) the benefits drawn from economies of scope and (c) the technology is subject to change as new opportunities are envisaged over time. Goodman and Griffith [37] argue that empirical evidence supports Goodman's [38] use of feedback and redesign in sustaining change. Leonard-Barton [39] also studied the concept of technology evolving over time to meet the changing needs of different user groups. Due to the lack of empirical data, this study focuses on gaining an in-depth understanding the implementation process in one organisation.

2.1.7 Sequential activities

Adoption-decision models claim that the implementation stage occurs sequentially after the completion of the decision stage [30]. In a start-up new venture like the B2B e-market, the implementation stage also occurs after the decision stage to go ahead with the innovation. However, the implementation stage is subject to constant feed-back loops and refinements that will match the requirements of the users of the product (B2B e-market) and will be subject to further redesign as the market demands over time. Extant literature does not provide adequate information on the sequence of implementation activities [14, 40, 41].

Arguably the *implementation of innovation process* follows a set of steps and each step is dependent on it being *evaluated and redesigned through feedback loops* in order to implement an innovation and perform implementation activities simultaneously rather than as a *linearly sequential*

chain of activities. This leads to the following working proposition.

WP_3: The implementation of an innovation follows a set of sequential steps where each step interacts with the previous step through feedback loops, rather than a linearly sequential chain of activities.

2.2 Participants

2.2.1 Direct and indirect impact of champions in networks

The network approach implies two theoretical extensions [8]. First, although the relationship between focal network participants is important (i.e., the relationship between the manufacturers or sellers of raw material and the business buyers), there are other participants that may influence the activities of those within the focal network. A direct relationship may consist of the manufacturer and its immediate suppliers and immediate business customers. A new process that may influence the activities of the buyer firms with its suppliers and business customers constitutes an indirect relationship. Indirect relationships are of importance because (a) given the strategic situation, they influence the direct relationship and (b) changes in the strategic situation can change the buyer's position with regard to both the direct and indirect relationships. As firms are increasingly outsourcing various functions to other firms, third party involvement is a powerful alternative to traditional vertically integrated firm structures; one that can affect the existence and strength of direct and indirect relationships [42]. Direct and indirect relationships are crucial in the context of innovation because participants in these relationships affect the creation process [8]. The second theoretical extension relates to the kind of relationships. This relates to firms having a certain position in a network that can be defined by (a) the function performed by the firm for other firms (b) the relative importance of the firm in the network (c) the strength of the relationship with other firms in the network and (d) the identity of the firms with which the focal firm has a direct relationship [8].

The concept of champion has been documented in the product innovation management literature and is defined as the person, not organisation, who is spirited, almost independent and fully capable and willing to pursue the risk of creating a new venture [43]. In the new venture creation process a number of champions are involved. New venture creation champions are those who are directly involved with the new venture at a management and entrepreneurial level. The implementation champion is characterised as the one who is intimately familiar with the aim of the new venture and has the required skill and experience of the technology and co-ordinates the activities between the new venture and the third parties to achieve fruition of the new venture. This review of literature suggests that in the primary task environment, *network champions* may have a *direct or positive relationship with third party participant firms, new venture champion and new venture implementation champion* but *an indirect or negative relationship with supplier and business buyer firms.*

WP_4: In a B2B e-market context (in contrast to EDI), network champions attempt to create direct relationships with new venture champions, product champions and third party participants rather than attempt to maintain direct relationships with suppliers and business buyers.

2.2.2 Influence of champions on potential participants

A study on innovation reveals that champions influenced top management's acceptance of a project by making apparent the strategic importance of such projects [44]. Burgelman [44] mapped the activities involved in Internal Corporate Venturing (ICV) onto the process model above. While Burgelman's [44] work provides a good foundation to this research as it identifies the importance of product and organisational champions, the study is limiting as it evaluates conditions in one organisation rather than across organisations. Yet the process can occur across organisations, especially in a network environment [8].

This research adapts and extends Burgelman's [44] model by allowing it to (a) operate at an inter-organisational rather than an intra-organisational level of analysis and (b) include the impact of network champions on the process model. In particular, the concept of network champions extends the work on product champions and the organisational champion concept [44], although it is more closely related to the latter than it is to the former. The product champion is one who creates, defines or adopts an idea for a technological innovation and is willing to accept the risk, whilst an organisational champion is a decision-maker. According to Woodside [10, p54] "… network champions are likely to serve, in part, as marriage brokers and deal makers to bring about new relationships amongst enterprises at multiple levels who must interact for the adoption of new ET (electronic technologies) in a manufacturing process". Woodside and Wilson [9] admits that such conclusions are the result of preliminary exploratory study and that detailed description through in depth case study is required of specific networks that emerge in the adoption of new technology. Arguably, in a B2B e-market environment, a network champion works across firms in order to bring about new relationships amongst enterprises at multiple levels.

One can conclude that the *likely acceptance of an innovation* is dependent on *the involvement of network champions who can support potential participants to "buy into" the innovation.*

WP_5: The involvement of network champions who persuade potential participants to "buy into" the innovation, results in the likely acceptance of the innovation.

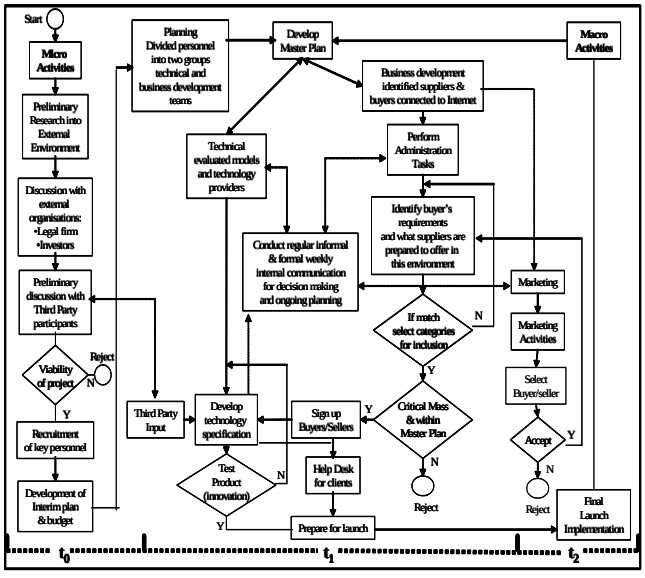
3. An example of operationalizing the first working proposition

Based on data captured during preliminary interviews an integrated flowchart (see Figure 2) was developed from the various functional areas. The integrated flowchart depicts the micro and micro activities over a longitudinal time frame. The concept of the master plan developed suggests that the functional areas used the master plan a guide: *"we had a very much integrated master plan where we basically managed the (creation) process…..we got together (weekly) and reviewed the objectives, strategies that we were developing"*. From the time of its conception to its final launch the objectives changed which was possible due to the flexible nature of the firm and is captured by the following extract: *"the beauty of running a start up firm is that it's constant evaluation of alternatives…..the flexibility that a small agile company gives you, you (can) translate (this flexibility) directly into changes you require to meet the needs"*.

One can argue that the master plan was an integral part of the planning process and the macro and micro activities were a consultative process between the functional areas. Therefore, the formation of new venture B2B e-market firms is dependent on the consultative process of macro and micro activities in line with the master plan. In turn this master plan is dependent on it being flexible in order to meet the changing nature of the objective over time. The refined proposition to WP_1 is stated below:

P^1: The formation of the new venture B2B e-market firm is dependent on a consultative process of macro and micro activities in line with a master plan that has the flexibility in changing the objective over time, rather than a sequence of unrelated events based on a static objective.

Figure 2: Flowchart of process activities as interpreted from the CEO's interview



4. Future Direction and Limitations

Concerns of external validity will be traded off against opportunities to gain insights into a new phenomenon [44]. The caveats pertaining to field research described by Kimberly [45] will be taken into account. Further, a cross-site analysis process will be developed to compare data gathered from different sources in order to triangulate the findings.

New venture B2B e-markets have been widely touted as a revolutionary mechanism for more competitive and efficient operations of business marketing and procurement systems. Yet, many such B2B e-markets are experiencing start-up problems and slower than expected growth. This paper offers a set of working propositions that suggests how the creation, commercialisation, decision and implementation take place for such B2B e-markets. In addition, the working propositions suggest how several key classes of participants can facilitate particular aspects of e-market exchange structure and its acceptance as a technological and organisational innovation. These working propositions are subject to further refinement and development, which will be the focus of future research.

Preliminary observations and interviews offer tentative support although case study evidence in itself will not provide a definitive test of any of those theoretical propositions. It will, however, establish constructs and attributes and contribute to the refinement of theory in the literature on new ventures.

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