AN INNOVATIVE BUSINESS MODEL THROUGH KNOWLEDGE TRANSFORMATION WITHIN VIRTUAL “ba”: INTERSECTION OF KNOWLEDGE MANAGEMENT AND ENTREPRENEURSHIP

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ABSTRACT: Contemporary progress in information technology, such as internet and decline in computing and communication costs, have promoted new ways to form and transfer value to stake holder. The theme of this concept paper is ‘collaborative research’ through web platform (called ‘virtual ba’) by Nonaka and Konno). The paper is grounded on literature review and discussion, with the objective to develop a business model. This business model is based on organization knowledge and leads to innovation in the form of collaborative research and problem solving, using the web platform. We formed the business canvas that shows our Value Proposition, Customer Segment, Customer Relationships, Channels, Cost Structure, Key Resources, Key Activities, Key Partnerships, and Revenue Streams. Our conceptual model displays various knowledge types (potential, tacit, implicit, explicit, and phronesis), their hypothetical relations, and how these types of knowledge approach to collaborative research within virtual ba. We end up by formulating nine propositions about the conceptual model of this study.

Besides its limitations, the suggested model in this study will not only provide a common place for geographically distant and academically diversified researchers, but also bridge the gap between academic researchers and practitioners from the corporate world.

Key terms: knowledge management, entrepreneurship, business model, collaborative research, virtual ba

INTRODUCTION

“Knowledge has become the key economic resource and the dominant – and perhaps even the only – source of comparative advantage” [1, p.190].

Contemporary progress in information technology, such as internet and decline in computing and communication costs, have promoted new ways to form and transfer value to stakeholders [2]. This concept paper is grounded on literature review and discussion. The objective of this paper is to create a business model based on a new e-business idea. This business model will use tacit, explicit and potential knowledge along with phronesis, and transform them into collaborative research. This transformation will take place in virtual ba, which will provide a common platform for researchers from different locations, domains and sectors. There exist online forums for researchers on which different researchers share their published articles. They discuss problems related to research, give opinions/guidance on particular issues, mentor junior researchers in the field, and share research material that is otherwise not easily available at search engines like Google scholar. One such forum is researchgate.com. To our best knowledge, there is no such online community for distant researchers, researchers from diversified fields, and academicians and practitioners, where they can collaborate to do research and add into the body of knowledge. Moreover as area of investigation, entrepreneurship is an early but growing discipline. This paper attempts to explain how knowledge management may be a helping hand in entrepreneurship. The suggested model in this study will not only provide a common place for geographically distant and academically diversified researchers, but also bridge the gap between academic researchers and practitioners from the corporate world.

LITERATURE REVIEW

Knowledge Management

Knowledge management (KM) is the ability of an organization staff for using knowledge resources and coupling them with other organizational resources and capabilities [3]. For Drucker [4], it is the how organizations get, use and transfer their intellectual assets. In 1995 KM was considered [5] as capability for creating new knowledge, disseminate it through the organization and express it in products, services and systems. According to [6], it is sharing information between individuals and the organization that create value for customers. It is assured [7] KM assists an organization to gain insight from its own experience. KM practices help to acquire, store, sustain and utilize knowledge for problem solving, continuous learning, strategic planning and decision making. KM also defined [8] as the progression that collects, manages and spreads employees’ knowledge all over the organization to increase effectiveness and efficiency of business process. Knowledge may present in many forms at organizations. These include: hidden abilities and interests (potential knowledge), skills possessed by individuals (tacit knowledge), documents, systems, structures, processes, and technology (explicit knowledge), and an organization’s practical wisdom (phronesis).

KM and Innovation

Katz [9, p.15] defined innovation as:

“The successful generation, development and implementation of new and novel ideas, which introduce new products, processes and/or strategies to a company or enhance current products, processes and/or strategies leading to commercial success and possible market leadership and creating value for stakeholders, driving economic growth and improving standards of living.”

Earlier studies indicate a connection between ‘new knowledge creation capability’ and ‘development of new products and services’. For instance, it was noted [10] that in organizational setup, innovation is a function of accretion of new knowledge. More precise explanation was [5] how the knowledge creation process takes a form of new products and services. They elaborated that through SECI (socialization,
externalization, combination and internalization) tacit existing knowledge is converted into explicit knowledge. They also argued: “This creative, cognitive process continues as we think of the similarities among concepts and feel an imbalance, inconsistency, or contradiction in their association, thus often leading to the discovery of new meaning” [5, p. 67].

**KM and Entrepreneurship**

The growing importance attached to entrepreneurship in the (economic) exploitation of knowledge [11] which, according to [12], occurs on both an individual basis and a more collective basis as individuals and groups of inter-organizational membership work together to commercialize innovation. Other authors [like 13, 14] elaborate entrepreneurship as the “process of creating a new business. On the whole, the main concern of managers is to secure competitive advantage in this business environment. Management scholars believe that organization knowledge base is the only basement for keeping and improving competitive advantage. From their view, innovation is the cause of competitive advantage and knowledge base is the cause of innovation [15]. Our adapted model from [16] shows relationship between knowledge management, entrepreneurship, innovation and competitive advantage that collaborative research tends to be more highly cited than singly authored research [20, 21, 22]. Others have shown that the best journals, the core journals, not only have the highest impact factors, but also the highest percentages of collaborative papers. An argument by [23] is interdisciplinary research is necessary to integrate theoretical models from other disciplines. That leads to innovative business models. Collaborative research is an effective interaction for shared working between researchers and practitioners [24]. Teamwork with practitioners, as observed [25, p.802] not only “enhances the relevance of research for practice but also contributes significantly to advancing research knowledge”. Collaborative research “may serve. . .to produce a type of scholarship that bridges the gap between theory and practice” [26, p.420]. To the editors of the Handbook of Collaborative Management Research “the only effective way to rapidly close the knowledge-relevancy gap is through closer collaboration between the academics and management communities” [27, p.626].

In search of a common platform of research between academicians and corporate researchers (practitioners), [28, p.110] studied three perspectives of cooperative research. Their findings are summarized as:

“Cooperative research perspective of the practitioners:
1. Actionable research results
2. Opportunities for personal and professional growth
3. Strengthening relationships with a particular researcher and/or university
4. Contribution to the advancement of knowledge

Cooperative research perspective of the practitioners:
1. Getting high quality organizational data
2. Opportunities for top ranked journal publications
3. Impacting management practices
4. Developing useful relationships with leaders in organizations”

**Dual concern model for academic researchers and practitioners**

![Figure 2. Dual concern model](image)

Key points of the dual concern model are:
- The horizontal dimension (x) is about importance of research as scientific contribution. More the contribution, more the research would be of academic nature.
- The vertical dimension (y) is about relevance of the research for the organization. Higher the relevance, more the research would be corporate oriented.
- Less important and irrelevant research is of no use both for academics and corporate sector (No Research).
• Important but less relevant to the organization, the research will be Academic Research.
• Less scientific contribution but more relevant to the organization, the investigation will be considered Organization Consulting.
• A study that is partly divided into academics and corporate sector would be a compromise between academic researchers and practitioners.
• Finally the research which adds value as scientific inquiry and that is relevant with the organization will lead to Active Research Collaboration.

THE BUSINESS IDEA

The focal point of business idea in this paper is collaborative research. It revolves around developing a business model that is based on organization knowledge and leads to innovation in the form of collaborative research and problem solving, using a virtual environment (ba). We delimit collaborative research for this model in four ways:

1. This study considers collaborative research as research done by two or more individuals who are geographically at distant locations.
2. This study undertakes collaborative research as research done by two or more individuals who are from diversified fields.
3. This study assumes collaborative research as research jointly executed by academic researchers and practitioners.
4. The collaborative research will be accomplished through our web platform.

Model’s web platform is consisting of a website that will mainly provide place for collaborative research and will invite other researchers from (1) distant locations, (2) different back grounds, and (3) from academics (universities, research centers, centers of excellence etc.) and corporate sector to take active participation in undertaking research projects.

Besides this, the business idea takes under consideration other activities which are described in the upcoming subsections.

Scope/Products of the Business

Scope of business includes:

• Articles/research papers
• Co-writing/collaborative research
• Online expert opinions/questions-answers
• Business solutions/problem solving

Business Canvas

Ascertained by [29] that any business model can be fully characterized in nine dimensions – or building blocks, being: Customer Segment; Value Propositions; Channels; Customer Relationships; Revenue Streams; Key Resources; Key Activities; Key Partnerships; Cost Structure. Our business canvas is shown in Figure 3.

CONCEPTUAL MODEL AND PROPOSITIONS

Figure 4 highlights conceptual model of the study.

Figure 3. Our business canvas

Figure 4. Conceptual model
Informal knowledge is personal however, it is the differences explicit knowledge can be implicit knowledge can be converted - - - - - - - - - - - ". Explicit knowledge is converted into implicit knowledge can be converted le im - - - - . Tacit knowledge can be converted to explicit knowledge (and vice versa) through SECI model [5]. Tacit Knowledge The knowledge base of an organization cannot simply be described as formal knowledge that can be found in contexts, training programs, dealing with customers or formal information. It is also informal, tacit and taken for granted [33, 34]. Informal knowledge is personal and reflects the education level, experience, and tacit understanding of individuals. Informal knowledge can be developed and shared if there is trust, commitment, respect and loyalty between employees [33, p.19]. Therefore, organizations should support the social communities to build up these ethics [34, p.991]. Tacit knowledge can be converted to explicit knowledge (and vice versa) through SECI model [5]. Implicit Knowledge Categorization of information (system-based knowledge) as explicit knowledge while capacity and attitude (people-based knowledge) as tacit knowledge was made by [35]. He pointed transformation of implicit knowledge into explicit knowledge a success factor. Although tacit and implicit knowledge seem close to each other, yet both are different in the sense that tacit knowledge cannot be documented, while implicit knowledge can be documented when required [36]. From the above discussion of tacit and implicit knowledge, we conclude that:

- Like tacit knowledge, implicit knowledge is also embedded in people.
- Both tacit and implicit knowledge can be converted into explicit knowledge, and
- Tacit knowledge cannot be codified; however implicit knowledge can be codified

Therefore, we assume that tacit knowledge is converted into explicit knowledge via implicit knowledge (and vice versa). In our conceptual model (figure 4), implicit knowledge is shown by dotted rectangle representing transition stage of knowledge transformation from tacit to explicit and back again. We propose:

Proposition 2: Tacit knowledge is converted into explicit knowledge through implicit knowledge
Proposition 3: Implicit knowledge is a transition between tacit and explicit knowledge
Proposition 4: Explicit knowledge is converted into tacit knowledge through implicit knowledge

Explicit Knowledge

Explicit knowledge is a tangible concept which can be documented and distributed to others such as guidelines, reports, procedures, strategies and databases [37]. Explicit knowledge is articulated and stored in certain media [38]. This suggests that explicit knowledge can be transferred through more technology-driven, structured processes such as information systems [39]. There are certain differences between tacit and explicit knowledge. However, distinctive categories of knowledge are hard to explain because of its very general nature [40, 41, 42].

Phronesis

A way was illustrated [43] to apply tacit and explicit knowledge by a firm and they observed such processes thrived in organizations led by individuals (virtuous artisans) who personify explicit and tacit knowledge in their own behavior. Often translated as “practical wisdom,” phronesis is the ethical yet pragmatic frame of mind held by those who can sense the essence of a situation and respond with creative and timely judgments [44]. According to them, it is the ‘high-quality tacit knowledge acquired from practical experience’ that enables one to make prudent decisions and take action appropriate to each situation, guided by values and ethics. In general, “phronesis is the practical knowledge of ethical, social and political life, which accounts for its development first in the field of political science. Politics is an art of future determination through talks and collaboration. Phronesis as political intelligence is the tendency to create future possibilities based on mutually agreed goals and actions [45]. From the above discussion two important points are deduced.

- Phronesis comes from both tacit and explicit knowledge
- Phronesis is a high-quality tacit knowledge acquired from practical experience

Which could be translated as phronesis (practical wisdom) is a combination of both tacit and explicit knowledge over a certain period of time, yet the main stimulus of phronesis is tacit knowledge. This is reflected in our conceptual model (figure 4) where link between tacit knowledge and phronesis is shown by solid arrow while link between explicit knowledge and phronesis is shown by dotted arrow. We assume:

Proposition 5: Phronesis (practical wisdom) comes from tacit and explicit knowledge

Collaborative Research

Phronesis (practical wisdom) helps an organization performing its strategic functions. The central theme in our business model is collaborative research. Therefore, we hope:

Proposition 6: Phronesis helps doing collaborative research

Organization’s explicit knowledge assets (documented processes, information management systems, databases and other knowledge stores) will be supportive for doing collaborative research. Moreover, in a closed loop, the research done in collaboration will become the part of organization’s tangible knowledge assets, as well as will increase the understanding and experience of employees (researchers and other concerns). Hence we claim:

Proposition 7: Explicit knowledge supports collaborative research
Proposition 8: Collaborative research enhances tacit and explicit knowledge

Ba/Virtual Ba

“Ba can be thought as a shared space for emerging relationships. This space can be physical (e.g. office, business space), virtual (e.g. email, teleconference), mental (e.g. shared experience, ideas) or a combination of them. Ba provides a platform for advancing individual and/or collective knowledge. Thus Ba is considered as a shared space that serves as a foundation for knowledge creation.” [37, p.40].
As our business model will function in a virtual ba, we assure:

**Proposition 9:** All the above mentioned exchanges (proposition 1 to 8) take place in virtual ba

### CONCLUSION AND LIMITATIONS OF THE STUDY

The study was aimed to develop a business model that is based on organization knowledge and leads to innovation in the form of collaborative research and problem solving, using a virtual environment (ba). Business canvas was formed that shows our Value Proposition, Customer Segment, Customer Relationships, Channels, Cost Structure, Key Resources, Key Activities, Key Partnerships, and Revenue Streams. Our conceptual model displays various knowledge types (potential, tacit, implicit, explicit, and phronesis), their hypothetical relations, and how these types of knowledge approach to collaborative research using a web platform (virtual ba).

A summary of our propositions is presented in table 1. Future research may entail feasibility analysis of this business model. A prototype of virtual ‘ba’ could be used to test the applicability of this new business idea. However, this paper takes an important step forward by detailing how this new business model can be formed by knowledge sharing and knowledge creation processes. The above limitation may pursue others to conduct empirical research in this area and encourage management initiatives to promote knowledge sharing to create and implement this intersection of entrepreneurship and knowledge management.

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