Emerging Themes: Studies and Researches on Innovation

Noor Fazira Binti Hamid
Faculty of Technology Management and Business
University of Tun Hussein Onn Malaysia (UTHM)
86400, Parit Raja, Batu Pahat, Johor, Malaysia
noorfazirahamid@gmail.com

Eta Binti Wahab
Faculty of Technology Management and Business
University of Tun Hussein Onn Malaysia (UTHM)
86400, Parit Raja, Batu Pahat, Johor, Malaysia
eta@uthm.edu.my

Nor Hazana Binti Abdullah
Faculty of Technology Management and Business
University of Tun Hussein Onn Malaysia (UTHM)
86400, Parit Raja, Batu Pahat, Johor, Malaysia
hazana@uthm.edu.my

Abstract— Innovation is known as a major contributor to wealth creation and economic growth. As the studies on innovation become more diverse and all-encompassing, comprehension and synthesisization of the large literature become more complicated. Thus, this paper systematically reviews the literature on innovation published over the past 13 years to identify trends and debates in innovation studies. This review is based on 178 articles that have been published in journals from four major databases, namely EBSCOhost, Emerald, DOAJ, and Science Direct from the year 2000 until 2013. This review reveals the trends, the major publishers, themes of discussion within this field and the country that became the focus of innovation researches.

Keywords—Innovation Studies; Literature Review;

I. INTRODUCTION

Innovation reflects a myriad of conceptualizations. For example, the terms creativity and innovation are often used interchangeably in research studies where the distinction between the two concepts may be more of emphasis than of substance [1]. According to Isaksen and Ekvall [2], innovation is related to the production or adoption of useful ideas and idea implementation, while creativity is associated to the production of novel and useful ideas [3]. Creativity is often framed as doing something for the first time anywhere or creating new knowledge [4], while innovation encompasses the adoption of products or processes from outside an organization [5]. Researchers exploring innovation have explicitly recognized that idea generation is only one stage of the multistage process in which many social factors impinge [6]. Damanpour and Wischnevsky [7], stated that the generation of innovation is a process that results in an outcome as a product, service, technology, or practice that is at least new to an organizational population. According to Tidd and Bessant, [8], innovation types have four categories namely: (1) product innovation, which describes changes in the things (i.e., the products/services) that an organization offers, (2) process innovation, which describes changes in the ways in which products/services are created and delivered, (3) position innovation, which describes changes in the context in which the products/services are introduced, and (4) paradigm innovation, which describes changes in the underlying mental models which frame what an organization does. The father of innovation management, Peter Drucker [9] showed that an innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service. The specific tools that help entrepreneurs introduce innovation to serve and took advantage of trade and innovation as a learning and ability considered to be effective in organizations. It is capable of being presented as a discipline, capable of being learned, and capable of being practiced.

In the era of rapid changes, innovations become more important and indispensable to all countries as it contributes to economic growth. Economic growth can be derived from different types of innovation. Economic growth results from path breaking innovations, such as the computer, lasers, or new chemical entities. But innovations that are not at the frontier can also substantially contribute to growth. Economic growth can result when a firm introduces new products or processes that have already been adopted in other countries, but which need to be adapted to special national circumstances. It can occur when firms adopt processes from other countries. Both of these imitative types of innovations involve substantial novelty. Finally, economic growth occurs from more imitative innovations – when firms succeed in improving the products of those who pioneered a new product or processes but who could not develop it quickly enough. Competitive pressures that ensure good ideas become good commercial products or processes also enhance economic progress. Sometimes these changes may simply modify the product to better satisfy consumer demands. At other times, they may involve superior production processes that lower production costs and reduce...
consumer prices. Global competition and technological sophistication seen that's will change the current situation and work environment [10].

Carmeli, Meitar, and Weisberg [11] claimed that self-leadership would promote individual innovation. They refer individual innovation in the workplace as complex behavior consisting of a three-stage process. In the first stage of innovative behavior, an individual recognizes a problem and comes up with new solutions and ideas, either novel or adopted. Next, he/she seeks ways to promote his/her solutions and ideas, build legitimacy, and gets support from both in and out of the organization. In the final stage of the innovation process, the individual, who exhibits innovative behavior, realizes the idea or solution by producing a prototype or model of the innovation that can be experienced, applied, and used within a work role, a group, or the organization as a whole. In essence, the concept of innovation may refer to products, processes, creative thinking and human behaviors.

There are various factors that are commonly associated with effective product and process innovation. For example, an organization requires an organizational climate which encourages idea generation and promotes access to various sources of innovation [12] in order to be innovative. However, the innovation process includes identifying the needs of the market, strategy formulation as a reference for innovation, developing or acquiring solutions, prototyping, testing, production, and availability of products and new or improved services to the market [8]. According to Martins et al., [13] and Ahmed [14], there is a need to align behaviors in the organization to build a culture of innovation. In addition, new ideas and knowledge for new product innovations could only be a commercial success with collaboration partners [15, 14]. Technological capability and organizational restructuring would also facilitate innovativeness [16]. According to Tohidi and Jabbari [17], organizational learning consists experience, risk, connection to the real world, dialogue, and community cooperation that could improve innovation and talent.

Hence, innovation is not only work related, but also for development and evolution. This has spurred many studies on different facets of innovation with numerous insights. Augmentation of literature has various implications which include apprehension among novice researchers. Thus, this paper aims to enlighten the current trends and patterns in studies related to innovation.

II. METHODOLOGY

Online search was used to conduct the systematic literature review. This method is very popular in the year 2000 until now [5]. All the required information was collected and classified according to the purpose of the study using an online search via international database website of Tunku Tun Aminah Library Universiti, Tun Hussein Onn Malaysia (UTHM). The data collection for this study consists the following steps:

1. Keywords search from the four major online databases, namely, EBSCOhost, Emerald, Science Direct, and DOAJ was carried out. A selection of these databases is based on accessibility and their reputation as premier databases in the world.

2. Keywords such as innovative behavior, employee innovativeness, organizational innovation, and organizational innovativeness were used to perform advanced data searches.

3. Relevance of articles was first determined by looking at the titles of the articles. Next, the abstracts were read in detail and analyzed. Abstract search was only based on the keywords of the research.

4. Lastly, classification of the results was presented and discussed.

In the process of data collection, the selection of keywords is very important. This keyword selection can help to ensure that data can be collected based on the research objectives.

III. RESULT

A. A Trend of Innovation Researches

Figure 1 presents the number of academic articles, particularly in the areas of innovation research that have been published between the years 2000-2013. Generally, it has been found that over the period of 13 years, a total of 178 articles on innovation were published. A total of 45 articles were published in 2012, as compared to only 3 articles in 2003. It is observed that during the first nine years (between 2000-2008), the number of articles on innovation never exceeds 14 annually. The increase in the number of articles published is most evident in 2011 with a total of 48 articles published, compared to only 20 articles in 2010. It can be concluded that innovation is gaining more attention, especially for the past 3 years. It is expected that studies on innovation would increase and remain strong in the future.

![Fig. 1. Trend of Innovation Researches](image)

B. Journals Advocating Innovation Studies

Figure 2 shows a total of 10 journals, with a total of 98 articles that focus on innovation. The top journal in publishing innovation articles is the Journal of Business Research with a total number of 15 articles. This is followed by the Journal of Innovation Management, and Procedia Social and Behavioral Sciences, which has published 11 articles each respectively. Technovation (TVN) is at the fourth place with a total of 8 articles published. Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as...
secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as “3.5-inch disk drive.”

C. Innovation Research Themes

Table I shows the themes associated to innovation studies. Entrepreneurship is the most frequently discussed with 25 articles. This is followed by sustainable development, adoption and adaptation, and knowledge management with 22 articles published for each theme. Only 20 articles were published in technology diffusion and transfer, while new product development received less attention. This indicates a gap in the innovation literatures with regard to new product innovation.

TABLE I. NUMBER OF INNOVATION RESEARCH THEMES

<table>
<thead>
<tr>
<th>No.</th>
<th>Themes</th>
<th>No. of Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Entrepreneurship</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Sustainable Development</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>Adoption and Adaptation</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>Knowledge Management</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>Technology Diffusion and Transfer</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Institutional and Support</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Historical Perspective</td>
<td>12</td>
</tr>
<tr>
<td>8</td>
<td>Innovation System</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>New Product Development</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>Others</td>
<td>22</td>
</tr>
</tbody>
</table>

D. The Countries with Focus on Innovation

Table II shows eleven countries that have been used as the research context in the studies related to innovation. However, only countries with five articles and more are included in Table II. Spain and Turkey are countries with the highest number of innovation studies (15 studies each) conducted. This is followed by Taiwan with 13 articles, and USA and Netherland with 11 articles each. Similarly, China and India each recorded the same number of 9 articles. Germany and Iran also each recorded the same number of 7 articles. This trend indicates the importance of innovation is not segmented to only developed countries, but in developing countries as well.

IV. CONCLUSION/RECOMMENDATIONS

In conclusion, the topic of innovation is very broad with various conceptualizations. This might hinder comprehensive understanding of innovation itself. Thus, this paper would enlighten many novice researchers in terms of the trend, basic themes, and championing countries in studies and researches related to innovation.

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