OPEN INNOVATION AND SMEs SUSTAINABILITY

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Abstract: In this study, researcher has interviewed 35 CEOs and 15 R&D heads of SMEs in Pune city for tracking the use of open innovation methods and how they related to their sustainability in the industry. The main question for the research was: "how open innovation in SMEs is related to their organizational sustainability in the industry?". Researcher has adopted inductive qualitative research design to investigate what various kinds of open innovation methods SMEs are using for developing new product and sustain in to the market. The study revealed that SMEs are using open innovation methods and have benefited the firms to be more innovative. And hence making firms competitive and sustain. The study's main contribution to the field is generalized model of open innovation for SMEs which enlists various methods of OI for both manufacturing and services firms. The methods of in the models are inductively arrive from the innovation process of firms though they are already presented by other researchers and practitioners, thus helps researcher to conform and generalized the model. Finally the study found that firms are becoming more open and innovative to survive in the market and creating win-win situation for partners involved in OI

Keywords: Open innovation, Sustainability, SME

INTRODUCTION:

Open innovation (OI) has developed rapidly as a new wave of research in innovation management; most insights are based on individual cases of large manufacturing firms. Open innovation has been studied mainly in large, multinational enterprises, of which most have large internal R&D departments or operate in technology intensive industries. Henry Chesbrough (2003) defined the concept of open innovation using case studies of large, technology savvy firms. Open innovation in small and medium-sized enterprises (SMEs) has received much less attention. Thus urgent need exists to study the relation of open innovation with SMEs for sustainability.

Small and Medium Enterprises (SMEs) contribute to economic development in various ways such as creating employment opportunities for rural and urban population, providing goods & services at affordable costs by offering innovative solutions and sustainable development to the economy as a whole. SMEs in India face a number of problems - absence of adequate and timely banking finance, non-availability of suitable technology, ineffective marketing due to limited resources and non availability of skilled manpower.

SMEs are more innovative than larger firms, due to their flexibility and their ability to quickly and efficiently integrate inventions created by the firms' development activities. But today, many small companies are confronted with harsh market conditions. Changing market conditions thus force smaller firms to adapt or reinvent their business through new technologies or unique value propositions. At the same time, small firms face several constraints in differentiating their products and changing their business model. A major liability is that small firms lack the required internal financial resources and technical capabilities. They therefore must collaborate with external partners to innovate successfully, to develop new sources of income, and to reach more profitable positions in the competitive landscape. Open Innovation is thus a logical step for many SMEs to take

In this study, researcher has interviewed 35 CEOs and 15 R&D heads of SMEs in Pune city for tracking the use of open innovation methods and how they related to their sustainability in the industry. The main question for the research was: "how open innovation in SMEs is related to their organizational sustainability in the industry?". Researcher has adopted inductive qualitative research design to investigate what various kinds of open innovation methods SMEs are using for developing new product and sustain in to the market. The study revealed that SMEs are using open innovation methods and have benefited the firms to be more innovative. And hence making firms competitive and sustain. The study's main contribution to the field is generalized model of open innovation for SMEs which enlists various methods of OI for both manufacturing and services firms. The methods of in the models are inductively arrive from the innovation process of firms though they are already presented by other researchers and practitioners, thus helps researcher to conform and generalized the model. Finally the study found that firms are becoming more open and innovative to survive in the market and creating win-win situation for partners involved in OI.

OBEJCTIVES:

The term open innovation is relatively new to the Indian researchers and practitioners and hence one of the objectives of the research is 1. To study different open innovation practices. This forced researcher to investigate existing literature on open innovation. The main objective of the research is 2. To find out how open innovation is related to sustainability

of SMEs. Thus, arrived at the main question for the research: "how open innovation in SMEs is related to their organizational sustainability in the industry?"

The second objective is again divided into sub-objectives:

a. To investigate various open innovation methods adopted by sampled SMEs
b. To link the OI methods to sustainability of SMEs.

RESEARCH METHODOLOGY

Research Design

Researcher employed an inductive qualitative research approach, as most appropriate given the limited literature on the emergence of collective, field level identity. Because there is some existing work on open innovation in SMEs, however, researcher used inductive approach to generate a generalized model for OI in SMEs. This approach aligned well to conform the OI practices adopted by sampled SMEs to the existing methods of OI. Exploring the relatively new phenomenon of OI, initially few interviews of CEOs has been conducted and designed the instrument for data collection.

Data Collection

Researcher relied on both primary and secondary sources of data, including semi-structured interviews with CEOs and R&D heads of selected SME firms including both manufacturing and services firms involved in the innovation processes. Few conferences and training programs have been attended to pick out innovative firms who are adopting open innovation practices. Primary data collection spanned more than two years beginning from December 2015 to December 2017. Overall researcher conducted 50 formal interviews of CEOs and R&D heads comprised of 30 of manufacturing SMEs and 20 services SMEs Sources for secondary data included the various website, blogs, and peer-reviewed as well as research articles pertaining to open innovation.

Interview and Sampling Technique

A general interview guide approach (Patton 1990) was adopted by researcher for the study. An interview guide is prepared in order to make sure that basically the same information is obtained from number of people by covering same material. The interview guide provides topics or subject areas within which the interviewer is free to explore, probe, and ask questions that will elucidate and illuminate that particular subject. Researcher initially identified 200 SMEs comprising both manufacturing and services from MCCAI, Pune (Mharatha Chamber of commerce, agriculture and

industry). Subsequently, researcher employed purposeful sampling (Patton, 1990) and snowball sampling (Lincoln & Guba,1985) to identify final list informants—especially CEOs and R&D heads of firms. The sampling continued until the study achieved theoretical saturation; that is, the data collected from new informants or archival data ceased to yield any new conceptual categories or insights.

Data Analysis

For the present study, researcher has analyzed the data using an open-coding approach (Strauss & Corbin, 2008), which involved selecting, categorizing, and labeling direct statements (i.e., first-order, informant-centric codes) that we could assemble into more theoretical perceptions (second-order, researcher-centric themes), and which later could condense into more general theoretical concepts (overarching dimensions). Researcher began first-order coding by reviewing interview transcripts and archival data and identifying "thought units"- words, lines, or passages that represented a fundamental idea or concept. Where possible, to preserve informant-level meanings, used "in vivo" labels (terms actually used by informants). In other cases, researcher assigned labels adequate at the level of meaning of the informant to capture first-order observations (Spradley, 1979) to keep labels as close as possible to the informants' own language. To enable the eventual construction of a cross-level model, researcher also noted explicitly whether identified codes reflected member-level or collective- level processes. We used constant comparative methods to compare and contrast data over time and across informants and sources to establish and maintain analytic distinctions among the codes. As we worked through the data, we compared thought units with previously identified codes and either categorized new data under existing codes or created a new code if it was analytically distinct. Through this iterative process, we identified 84 first-order codes. The second-order analyses involved axial coding (Strauss & Corbin, 2008)—synthesizing and clustering first-order codes into higher-order themes.

Again, using constant comparative methods and comparing data over time and across codes, we aggregated the 84 first-order codes into 23 second order themes that were level specific (i.e., either field- or organization-level). Eleven of these themes pertained to relation of OI with sustainability of firms. The final phase, theoretical coding, involved assessing the semantic relationships among these themes, a process that generated eight overarching dimensions, which were associated with the sustainability of SMEs. Finally, we arrived at the generalized model of OI for SMEs sustainability by OI practices and tracing sequential and interactive relationships among them. To affirm the findings, researcher used member checks (Lincoln & Guba, 1985) with a key informant at various stages in the study.

CONCEPTS EVOLVED

The findings of the study presented in two parts:

1. First part pertaining to OI practices followed SMEs shown in fig 1 and fig 2.
2. Second part reveals the findings by framing generalized model of OI for SMEs sustainability. (fig 3)

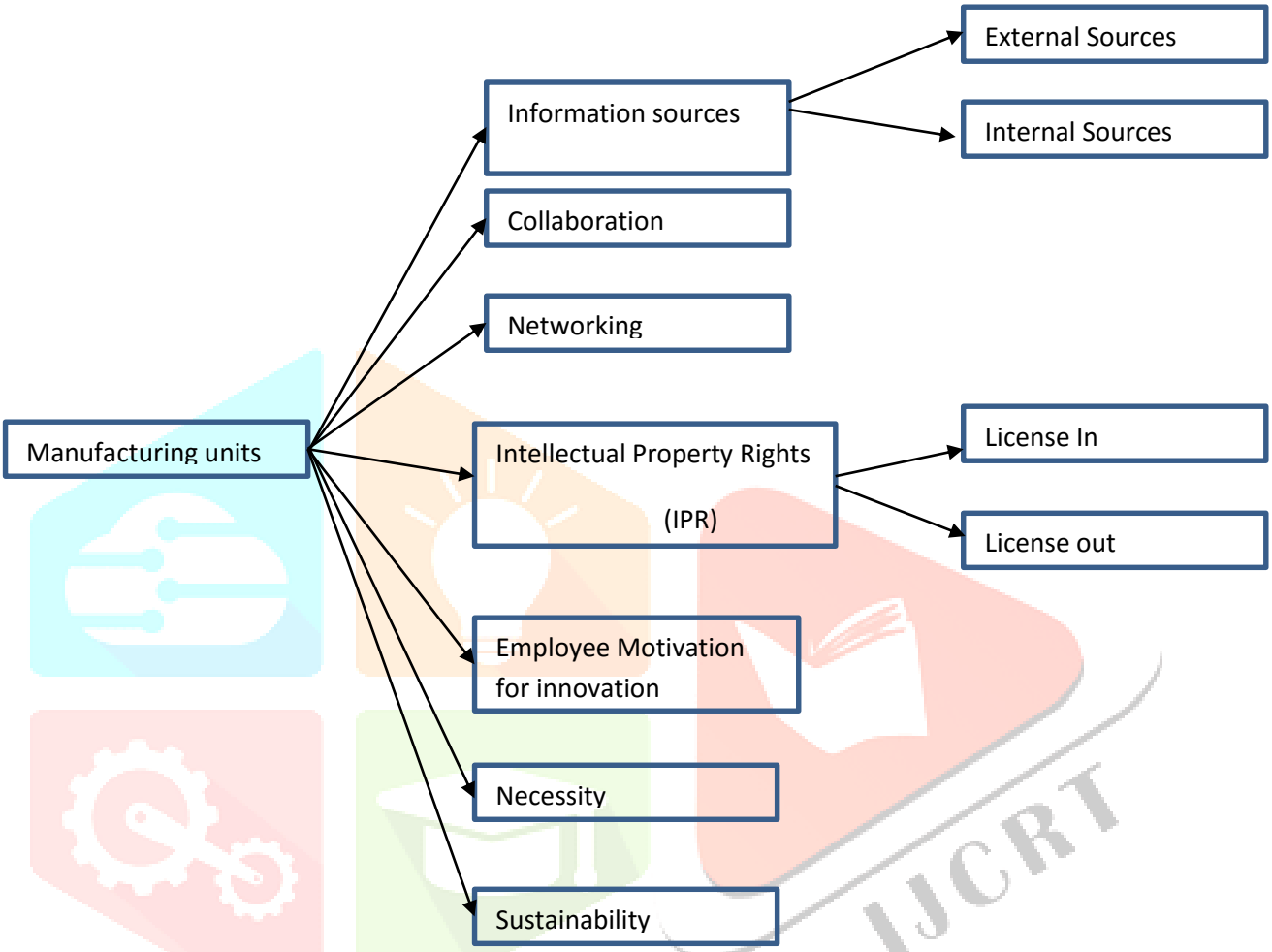

Fig. 1 OI practices adopted by manufacturing SMEs

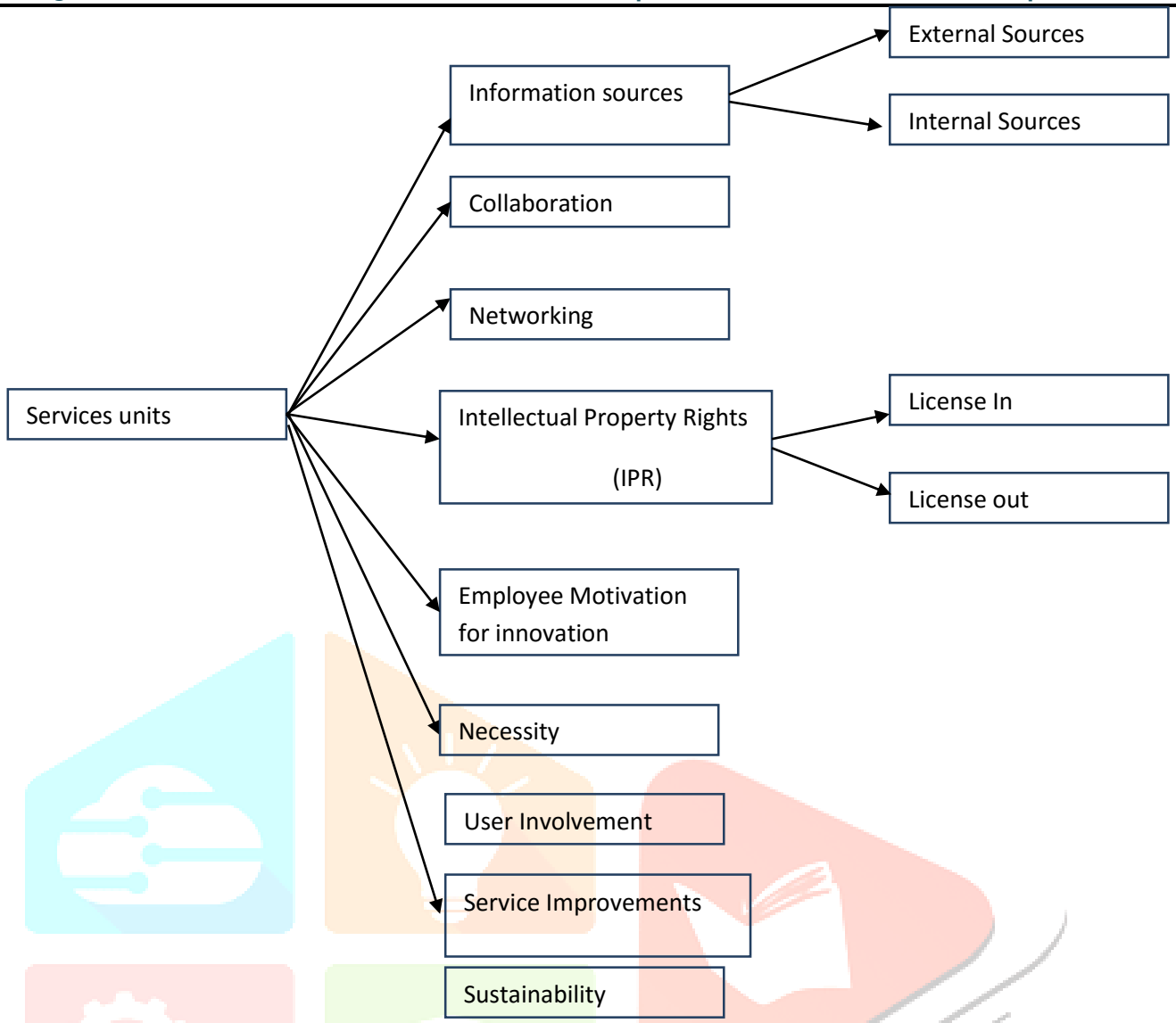

Fig. 1 OI practices adopted by services SMEs

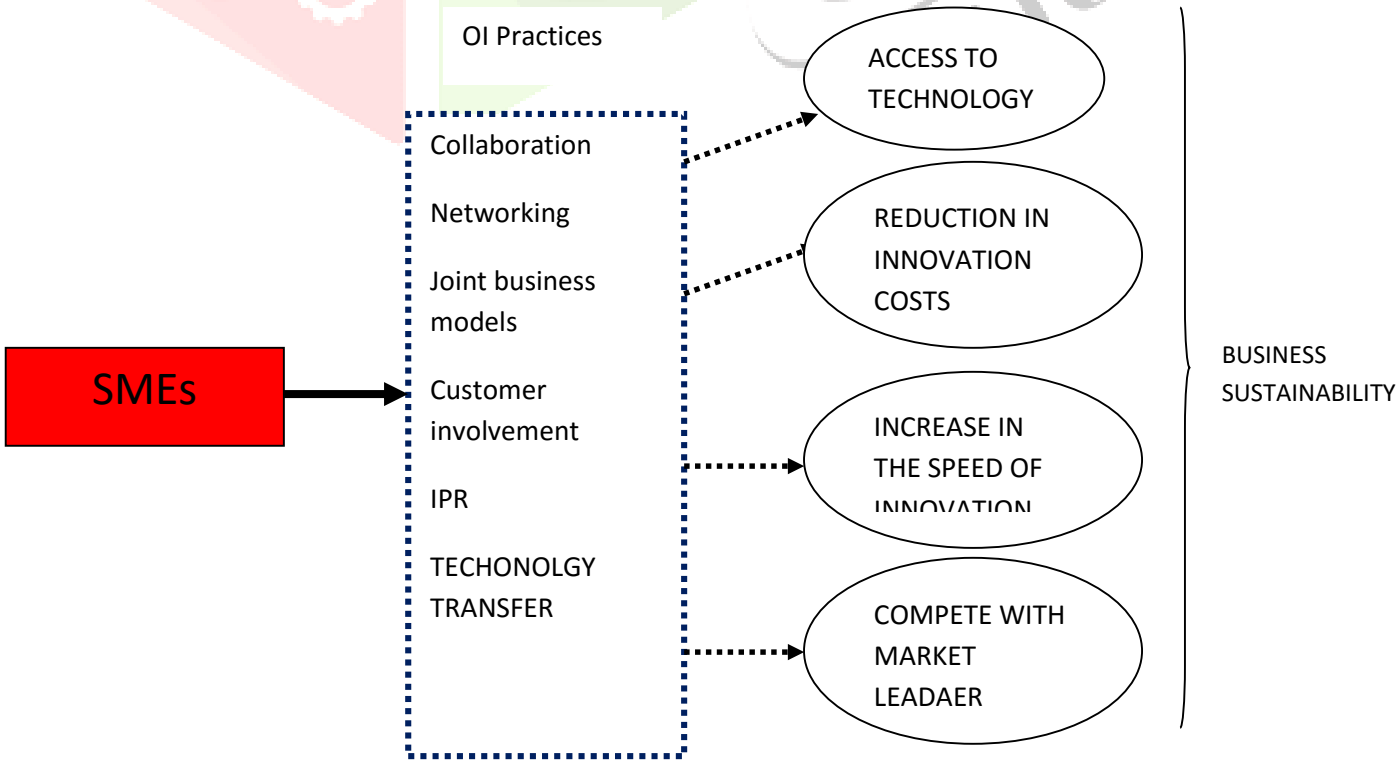

FIG 3. Generalized model of OI for SMEs sustainability

DISCUSSIONS:

Till date, many researchers have presented concepts of open innovation through case studies of specific industry, large companies as well as SMEs. This study also attempts to affirm the OI practices adopted by Indian SMEs with the existing OI practices. The findings revealed that firms are using OI but they are missing explicitness of process. Many firms see OI as gathering information from external sources only and didn't find the platform to exploit the internal information. Again firms are widely engaged in Licensed-in when it comes to IPR or technology transfer. The study enlists the OI practices for both manufacturing and services firms. And the findings suggest that services firms are using user involvement as major OI practice.

The main contribution of this study is generalized model of open innovation For SMEs sustainability; and how OI practices leads firms to compete in the market and survive. Using open coding system for analysis the second order themes evolved indicates that OI Practices leads SMEs to access to technology, reduction in innovation cost, increase in the speed of innovation, and enable to compete with market leader. And thus, allowing the firms to sustain in the market.

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