Innovation Processes of Cymbopogon Citratus Tea in Manipur, India: An Actor Network Theory Perspective

Wairokpam Premi Devi, Central University of Gujarat, Gandhinagar, India
Hemant Kumar, Central University of Gujarat, Gandhinagar, India

ABSTRACT

By adopting Actor Network Theory (ANT) in the empirical context of Cymbopogon citratus Tea (CC Tea) in Manipur, this paper analyses the networks of key actors in the innovation process. Innovation happens when there is an interaction between actors, institutions and economic structures across the level of hierarchy. In this process, there has been a close association between human and non human. Ethnographic case study is used to understand the socio-cultural and ethnographical context of key actors in the CC Tea innovation process. Semi structured in-depth interview has been conducted to the selected areas. It concludes that ANT is highly significant to understand the networks of human and non humans associated with the innovation process thereby giving a new theoretical interpretation in the Science and Technology Studies (STS) domain in this sector.

KEYWORDS

Customers, Ethnography, Farmers, Heterogeneous Network, Human and Non Human Actor, Machinery, Partners, Science and Technology Studies, Translation, Workers

INTRODUCTION

The most important factor for entrepreneurs to increase competitiveness and create wealth is innovation as it responds to the demands and opportunities of a globalising economy (Porter, 1990). The chances of survival of small firms and success are becoming increasingly dependent on innovation. It happens when there is an interaction between actors, institutions and economic structures across the level of the system. The innovation process and practices associated with the introduction of new knowledge that leads to new technologies, or new products, or different ways of doing business such as the means to enlarge markets, create more value and turn that value into a higher revenue stream. Therefore, it is not possible to get a comprehensive overview without combining insights from several disciplines and Science, Technology and Society (STS) studies could be one. In this light, we are using an Actor-Netowrk Theory (ANT) framework to understand the innovation processes in CC Tea in Manipur, India. Moreover, ANT was developed in the empirical domain of western paradigm, and most of the literature on ANT is primarily in the global context (Busch and Juska, 1997; Suryanata, 2002; Lougheed, 2013). However, in the context of developing countries like India, few studies are adopting this analytical framework. Moreover, these theoretical contributions seem to be a missing dimension in the Northeast part of India in general and Manipur in particular. Lack of existing literature in the academic domain of ANT in India is the primary motivation for selecting this framework. Therefore, the proposed work would attempt to see the applicability of ANT analytical framework in the empirical case study in the Indian context.

DOI: 10.4018/IJANTTI.2016070102

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Also, we are trying to answer the questions like: What is the process of innovation? What is the origin and limits of the programmes of action and how players are listed to stabilise the sets of relationships? And, how is the agency in humans and non-humans manifested in these relations? These questions provide an opportunity to examine the innovation process in the food industry or beverage sector by taking the case study of CC Tea in Manipur. Thus, ANT and the sociology of translation is an appropriate framework to address the empirical context of this case and helps to identify the human and non-human entities that make the innovation successful.

Following this introduction, the paper presents a review of the existing literature on ANT in the next session where authors explore the underlying meaning of the framework. The section presents scholarly work applying ANT to know the scope of the framework and its application to the innovation processes. It further discusses the methodology, and analyses the case of CC Tea. Lastly, the authors present the conclusion section.

Understanding ANT

The emphasis on technological studies in the STS domain began in the second half of the 1980s (Woolgar, 1991). Out of several schools of the theory that emerged within STS over the last two decades, three approaches namely Social Construction of Technology (SCOT), technical determinism and ANT are useful in this context. The argument of SCOT, developed by Bijker & Hughes (1987) and Pinch (1996), is that “technology does not determine human action, but that human action shapes technology”. Technological change is seen as the only outcome of bargaining among the set of individuals (Chant & Goodman, 2000). According to Pinch (1996), the SCOT “points to technology as being through and through social”. On the other hand, technological determinism, a word introduced by Thorstein Veblen, maintains the view that the technology is a power, which forms the societal and community effects with minute influence on the character of technology (Chandler, 1996).

ANT, also known as the sociology of translation, is a sociological theory originally developed by Callon (Callon 1986), Latour (Latour, 1996), and Law (Law, 1992) as an attempt to understand the processes of innovation and knowledge creation in the field of science and technology. The fundamental aim of ANT is to explore how networks are built or assembled and maintained to achieve a particular objective. Identities (networks and actants) are established by their represented or delegated interactions, which acknowledge the importance of the inseparable socio-technical factors. Since ANT argues for socio-technical symmetry to explore actants’ (human and non-human) participation within heterogeneous network assemblages through negotiation and translation, it rejects any sundering of human and non-human, social and technical elements (Hassard et al., 1999). ANT acts as a toolkit to explore how human and non-human actors interact with one another to make sense of their world (Latour, 2005). Thus, it looks not only at humans but also at artefacts like technology, texts, symbols and things as actors that can mediate knowledge and participate in the social. The social structure is constantly changing and do not remain static (Law, 1992). As a result of translation, which is central to ANT, the framework explores the ever changing and fluctuating process of the formation of the actor-world (Callon, 1986). The process of translation has four stages namely problematisation, interessement, enrolment and mobilisation (Callon, 1986). By problematisation an entity becomes indispensable for the network. The second stage of interessement answers how the allies are fixed in respective roles or associations and locked into place. It involves making the actors interested in the roles and making them accept their roles. The enrolment stage is the result of successful interessement. Successful enrolment consists of multilateral negotiations of the interessements phase (Callon, 1986) between one set of actors imposing their will on others; and another set that is required to yield (Singleton and Michael, 1993). Callon (1986) argues that there are different possible ways such as
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