Technological Exchange Perspective on Transnational Corporations: Theoretical Propositions and Exploratory Evidence

Vipin Gupta[1] Nancy M. Levenburg[2] Sandhya Mahadevan[3]

ABSTRACT

With the rise of the emerging market transnational corporations (TNCs), there is a need to revisit the traditional theory of foreign direct investment (FDI). In the traditional theory, FDI is interpreted as the transfer of sophisticated technological capabilities to other nations, and creating internalization advantages by protecting them from spillovers. In case of the emerging market firms, FDI is often based on generic technologies which involve transformation of a set of inputs into a set of outputs in ways that add value. The emerging market TNCs use generic technological capabilities as a basis for acquiring new technological learning from various overseas markets. In this paper, we advance the technological exchange perspective on TNCs, based on the recognition of both the benefits of technological learning as well the costs of technological spillovers. We develop theoretical propositions on the interactive nature of this exchange. Specifically, the benefits of technological learning are contingent on prior and continuing investments in absorptive capacity. Similarly, the costs of technological spillovers may also generate indirect benefits. We explore evidence on our theoretical propositions using the historical experiences of Chinese Overseas Family Businesses (OFBs), as a special form of TNC.

KEYWORDS: Technology Exchanges, TNC, FDI, Chinese OFB.

JEL CLASSIFICATION: O30, 053, F23

1. INTRODUCTION

In recent years, with the rise of the emerging market TNCs, scholars have sought to revisit the traditional TNC theories that explained the rise of the Western and other industrial market TNCs (Gupta & Qui, 2013; Ramamurti, 2012; Rugman, 2010). The traditional paradigm emphasized the importance of the firms having unique ownership advantages, and targeting regions that offered unique locational advantages. It also emphasized the role of internalization advantages in situations of market and institutional failures. The newly emerging paradigm of TNC theory, based on the experiences of the emerging market firms, gives a more central role to the possibilities of acquiring learning through foreign direct investments (FDI). Based on this new paradigm, FDI can be seen as a passport to strategic windows of opportunity for technological growth. However, it is also important to recognize that FDI is also accompanied by technological challenges, risks and costs. For example, the most significant technological cost from FDI is the unintended diffusion and spillover of a TNC's knowledge into local geographies and networks, to local players, and to other global players connected to local geographies. For a fuller understanding of the TNCs and their FDI, in this paper, we articulate a technological exchange perspective. The technological exchange perspective implies recognizing both the benefits of technological learning as well the costs of technological spillovers. Such technological exchange is associated with both developmental challenges as well as developmental gains. Specifically, the benefits of technological learning are contingent on prior and continuing investments in absorptive capacity. Similarly, the costs of technological spillovers may also generate indirect benefits of developing vendor and customer network that is committed to the technological solutions offered by a TNC. Thus, technological exchange is an inherently interactive process that – if strategically managed – can aid TNCs to build their technological capabilities in an ascending order. On the other hand, inadequate strategic commitment will result in misalignment between absorptive capacity and technological learning opportunities, and/or between knowledge spillovers and network development opportunities. In such conditions, the technological capabilities are likely to suffer from entropy and erode the competitive advantage of the firm.

In the conventional studies of TNCs, the concepts of technological capabilities, technological learning, and technological spillovers are interpreted primarily in the context of advanced technology domains (Dunning, 1993). These studies are based on an idea that the TNCs from the industrial markets have advantages of sophisticated knowledge that they seek to exploit in other nations, while simultaneously striving to protect this sophisticated knowledge from leaking to the other firms (Dunning & Lundan, 2009). When applied to the emerging market TNCs, it is important to adopt a broader interpretation of technology, because such TNCs have been found to rely on generic knowledge and technologies for competing in the international markets especially during their early years (Ramamurti, 2012; Rugman, 2010). We therefore suggest their technological capability is better interpreted as the capability for transforming a set of inputs into a set of outputs, in ways that add value. This technological capability is not confined only to the advanced technological domains where most industrial market TNCs strive to compete, but is pertinent to all domains of economic activity, including labor-intensive agriculture, textiles, mining, and other lower value-

[1]Vipin Gupta, Ph.D., Professor and Co-director, Global Management Center, California State University San Bernardino, USA.
[2]Nancy M. Levenburg, Ph.D., Associate Professor, Management Department, Seidman College of Business, Grand Valley State University, USA.
[3]Sandhya Mahadevan, Manager, Abbott Industries, USA.