# Chapter 15 Heterogeneous Inter-Organizational Social Capital in University-Industry Collaboration for Technology Transfer

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# ABSTRACT

The phenomenon of university-industry partnership (UIP) has become a valuable research endeavor. However, examining UIP-related literature shows limited understanding from a social capital (SC) perspective, albeit its relevance. Likewise, it is noticeable that research on inter-organizational SC has been predominantly conducted from the perspective of homogenous organizations (i.e., have consistent expectation, mission, and culture). However, the perspective of social interaction between heterogeneous organizations (i.e., belong to different sectors thus inherently different) is limited. The authors address these two gaps by investigating the idiosyncrasy of SC development in the setting of UIP, as a unique context for heterogeneous inter-organizational SC. They contribute to the literature by exposing the various facets of SC dynamics as evolve in this uncommon domain. Also, the identify four factors as moderating the interaction between the three dimensions of SC that eventually influence the dual processes of technology translation and transfer.

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#### **1 INTRODUCTION**

Despite University-Industry Partnership (UIP) has had a long history (O. Al-Tabbaa, Ankrah, & Zahoor, 2019; Perkmann et al., 2013; Welsh, Glenna, Lacy, & Biscotti, 2008), there has recently been substantial interest and increase in these kinds of organisational arrangements (Perkmann & Schildt, 2015; Bruce S. Tether & Abdelouahid Tajar, 2008). While firms perceive UIP as a channel to generate, internalize, and commercialize knowledge (Hemmert, Bstieler, & Okamuro, 2014), and a source for both radical and incremental innovation (Perkmann & Schildt, 2015), universities seek them to lessen the pressure of their tight research budget, and increase the relevance and usability of their abstract knowledge (Manyika & Roxburgh, 2011).

However, examining UIP-related literature shows limited research from a social capital perspective (Al-Tabbaa & Ankrah, 2018), defined as the actual and potential resources made available through reciprocal interactions and trusting relationships (Adler & Kwon, 2002; Arregle, Hitt, Sirmon, & Very, 2007), despite its reported impact in enhancing performance (Winter, 2003), boosting creativity and product innovation (Elfenbein & Zenger, 2014), and reducing transaction costs (Oni & Papazafeiropoulou, 2014). Few studies have merely mentioned social capital in UIP context (e.g., Santoro & Chakrabarti, 2002b; Doris Schartinger, Rammer, Fischer, & Fröhlich, 2002). Others have applied the social capital concept in a narrow perspective, that although contend that the concept of social capital is useful to understand how to build and maintain collaborative research partnerships, they barely addressed the relational dimension (as an essential component of social capital) (e.g., Carayannis, Alexander, & Ioannidis, 2000; Thune, 2007). For instance, Murray (2004) relied on the structural dimension (in terms of connections network between firms and academic scientists) to explore the value of social capital in the case of collaboration between scientists and firms. Similarly, Datta and Saad (2008) focused primarily on the structural dimension (another component of social capital), employing social networks to investigate the use of social capital as a resource firms can use when searching for potential exchange partners.

On the other hand, our review of the social capital-related literature unfolds that the mainstream research on the organizational social capital has been predominantly conducted from the perspective of homogenous organizations (see for example, Inkpen & Tsang, 2005; R. Lee, 2009; Payne, Moore, Griffis, & Autry, 2011). In principle, research in the area of organizational social capital can be categorized as intra or inter-organizational (Maria & Barclay, 2011). The former concerns the capital generated by means of interaction between actors from different social groups belong to one organization (Arregle et al., 2007), where the latter involves external resources become available to an organization through its relationship and interaction that span its boundaries to other organizations (Dess & Shaw, 2001). We extend this notion by arguing that inter-organizational social capital can emerge from the interaction between either homogenous or heterogeneous organizations. Homogenous inter-organizational social capital relates to actors' interaction from two or more different organizations, yet these organizations belong to the same setting and/or are generally similar in organizational characteristics (e.g., companies from the same industry, organization with similar commercial activities, buyer-supplier, etc.).

By combining the above two issues, a salient research gap can be realized: we know little about the idiosyncrasy of social capital development in UIP as an interestingly unique context for studying social capital that can evolve via interaction between heterogeneous organizations. Such investigation is necessary because the inherent discrepancies rooted in their mission, organizational characteristics, policies, and procedures, are likely to affect how social capital evolves as a result of the actors' interaction from these organizations.

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