Chapter 14
Resource Alignment of ICT in Taiwanese Small Dialysis Centers

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ABSTRACT
The literature on cooperative alliances has been criticized for its relatively narrow concentration on large firms and for ignoring small and medium-sized enterprises (SME) alliances where large firms do not operate in similar ways. Due to their size SMEs are more likely to seek external expertise. For small dialysis centers, they often form alliances to obtain these scarce resources. Unlike large firms which own a lot of slack resources to be able to form alliances with many partners, these small dialysis centers tend to form alliances with only a small number of partners and therefore, their dependence on these partners is higher than large firms. Hence, we conducted case study to investigate the use of complementary and supplementary information communication technology (ICT) resources among several small healthcare centers in Taiwan and evaluated how different types of resource alignment affect the performances of alliances. One contribution of the chapter is that the contribution of dissimilar ICT resources by both the focal and partner firms has a significant positive impact on alliance sustainable commitment. The results also reveal that there is a positive relationship between the contribution of dissimilar ICT resources by the partner firms and alliance performance. However, the contribution of dissimilar ICT resources alone by the focal dialysis centers has no significant impact on alliance performance.

INTRODUCTION
Many smaller dialysis centers are turning to cooperative alliances as a strategy to confront a competitive environment that is characterized by blurring industry boundaries, fast-changing technologies, and global integration. According to Lambe et al. (2002), alliance is broadly defined as the “collaborative efforts between two or more firms in which the firms pool their resources in an effort to achieve mutually compatible goals that they could not achieve easily alone” (p. 141). Cooperative alliance is often

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adopted by small and medium-sized enterprises (SMEs) as a competitive strategy and is also an important strategic choice because it allows SMEs to obtain necessary complementary resources in ICT. This is often carried out to overcome the problems of resource scarcity by entering into an alliance with other firms in order to create excess value relative to their value before the pooling by combining all their resources together (Dymsza, 1988; Nohria and Garcia-Pont, 1991). However, according to Beamish (1987) and Das and Teng (2000b), around 60% of alliances between firms resulted in failure. Needless to say, this is a particularly worrying trend for SMEs which are widely recognized as having important roles to play in emerging economies and are generally characterized by resource constraints (Lee et al., 1999; Weinrauch et al., 1991; Zineldin, 1998).

Hence, the choice of partners and resource fit of alliance partners are of great importance for SMEs (Grant et al., 1999). For those SMEs without much ICT resources, the formation process of alliance can be partly viewed as a process to increase both of their tangible and intangible ICT resources. Value generated from alliances is enhanced when partners have different ICT resource profiles and contribute these ICT resources into the alliance. These partner characteristics are important since they help in the evaluation of optimum allocations of ICT resources for potential alliances to achieve suitable alliance resource alignments.

Thus, the objective of this chapter is to examine how the alignment of different types of ICT resources affects the performance of alliances. The research to date has only examined complementarity in terms of dissimilar resources whereas in this study, we aim to measure resource alignment (Das and Teng, 2000a; 2003) by examining the alliance partners’ contribution in terms of both supplementary (similar) and complementary (dissimilar) resources. The focus of this study is the small dialysis centers in Taiwan. These small dialysis centers have formed alliances to confront the fierce competition as well as to absorb the regulatory pressure from the regulatory authority. The literature on inter-organizational collaborations has been criticized for its relatively narrow concentration on large firms and for ignoring SMEs’ alliances where large firms do not operate in similar ways (Prater and Ghosh, 2005). These cost pressures together with the general dynamic nature of the healthcare industry require a significant change in approaches to utilize ICT resources by these small dialysis centers. Therefore, these small dialysis centers must form alliances to obtain scarce ICT resources. Unlike large firms which own a lot of ICT resources to be able to form alliances with many partners, these small dialysis centers tend to form alliances with only a small number of partners and therefore, their dependence on these partners is higher than large firms. In this regard, these small Taiwanese dialysis centers offer an appropriate context for research.

**BACKGROUND**

**Resource Supplementarity and Resource Complementarity**

According to Parkhe (1991) and Sarkar et al. (2001), there are two types of interorganizational diversity. Type I diversity refers to the differences in complementary resources and capability profiles of the alliance partners in a search for synergy (Parkhe, 1991). As noted by Harrigan (1985), resource complementarity refers to both the uniqueness and symmetry of resources and is related to each partner’s resource contribution to the alliance. Uniqueness is the most often mentioned characteristic of complementarity and relates to each partner’s unique contribution to the alliance. If the resource contribution from each partner is too similar (overlapping), it will not be able to complement the other’s weakness (Hamel, Doz, and Prahalad, 1989). Beyond the role of resource complementarity in successful cooperative alliances, each partner has to provide symmetric
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