Innovative Firms and the Management of Technological Partnerships: Evidence from Australia

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Abstract

Australian technology policy has traditionally relied on the use of R&D incentives to stimulate innovative activity. However, a recent Industry Commission report found that Australian industry receives $16.6 billion in Government R&D incentives each year, but concluded that most selective assistance has little or no positive effect on the welfare of Australians (Dwyer 1998).

The cause of the problem lies in the limitations of innovative firms. It is unusual for a firm to have all the necessary resources and skills to manage invention and commercialisation, so getting access to skills through the use of partnerships has become an increasingly important part of the innovation process. However, the use of a partner brings the problem of co-ordination, as well as the danger of opportunistic behaviour by the partner, either in the form of not fulfilling its responsibilities or seeking to seize a larger share of the rewards from the innovation (Williamson 1991). Returns to the innovative firm are eroded while customers, collaborators and other industry participants benefit. At the firm level, benefits accrue to the partner, many of whom are based overseas, thereby reducing national economic performance (Teece 1986).

In examining the national problem, our analysis is conducted at the level of the firm, as this can provide insights which are missed through looking at economy wide performance. We investigate the management of collaborative partnerships using data collected from 130 Australian firms and distinguish between firms on the basis of their innovativeness. The analysis of collaborative relationships examines the use of formal arrangements based around rules and policies, and the use of normative arrangements based around norms of co-operation, shared values and shared rewards. Both forms of contracting are expected to be evident to some degree in each partnership examined, but the mix between the two will vary, as innovative firms face different risk/reward profiles and are on the outskirts of the prevailing sociometric network (McCammon 1963). The differences in managing the partnership will also have implications for the performance of the relationship.

The analysis shows that innovative firms have different contracting preferences to less innovative firms. The relationship structure of highly innovative firms is transactional, despite the presence of frequency of contact and long relationship duration, which have been associated with more integrated relationships in prior research (Heide and John 1992). The highly innovative firms are also significantly more likely to be dissatisfied with relationship performance.

However, where highly innovative firms are able to put normative arrangements in place, relationship performance improves greatly. Accordingly, government must recognise that innovators are outsiders and proscribe technological policy that assists collaborative arrangements for commercialising technology, and not just encourage further investment in invention.

References

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