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Redefining relational rent

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ABSTRACT

Drawing on a sample of 402 inter-firm R&D alliances of National High-Technology Enterprises located in Jiangxi Province, as identified by the Ministry of Science and Technology of China, the paper constructs a Comprehensive Index Evaluation System for relational rent with the PLS Path Regression Model. This allows quantitative estimations to be made of the relational rent that is generated in R&D alliances between pairs of partners. The study proceeds to reexamine relational rent and to materialize it as a practical economic concept. This leads to discussion of relational rent from this new perspective and enables systematic analysis of a number of its key aspects. An important consequence of the quantitative analysis is that three types of relational rent are revealed, i.e. primary rent, intermediate rent and advanced rent. The classification is based on empirical evidence, so that it is not only a classificatory standard but also possess an instructive and predictive power. It challenges the existing two-category typology of relational rent based on qualitative analysis and conceptual frameworks. A new understanding of, and indeed a new definition for, relational rent is thus proposed in this paper. Relational rent is the relational benefits that are comprised of those economic gains, soft power and S&T output that are only jointly created in an inter-organizational relationship, through the joint idiosyncratic contributions of both partners. The paper further explores the generation of relational rent in an R&D alliance context. The results indicate that, among all the potential factors, it is the nature of an inter-organizational relationship that provides the dominant influence on the size of relational rent.

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1. Introduction

Despite the increase in the number of R&D alliances and partnerships witnessed in recent years, associated research has been mainly confined to a description of how and why they happened. There has not yet been a defined paradigm for successful alliance management, although studies have been carried out that seek answers to the question as to how firms can maximize the chance of making alliance partnerships that are productive and lasting (e.g. Kale et al., 2002). Whether a R&D alliance is successful is dependent upon the definition of success (e.g. profits or patents), but it is nevertheless clear that alliances can generate exceptional economic value in one way or another (Chan et al., 1997). The question is how to make sure that this, indeed, happens.

Is it true that '1 + 1 = 2'? We now know that this equation is not inevitably correct in many circumstances and in many scientific disciplines; especially in management science. When there are collaborations, resources are allocated across organizational boundaries in a time-efficient and cost-effective manner so that the intended yield seeks to be bigger than a simple sum of outcomes from the same

resources if applied separately. Therefore, '1 + 1 > 2' is the goal for such collaborations. The '>2' value thus created is known as relational rent, which is a form of inter-organizational rent that Dyer and Singh (1998) defined as "a Supernormal Profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through the joint idiosyncratic contributions of the specific partners". Dyer and Singh considered that the competitive advantages are created in a dyad or network of firms, in the perspective now known as Relational View (RV).

Extant research has concentrated more on the gains in economic benefit, in one form or another, by a focal firm (such as accumulated resources and organizational learning ability) under the Resource Based View, whilst from the Transaction Cost Theory's viewpoint, it is the lowering of such costs which represents an alternative form of gain (Tece, 1986; Larson, 1992; Dyer, 1996; Williamson, 1997). These are undeniable benefits from collaborations. However, with this line of thinking it is natural to presume that the party that invested more in the relationship would harvest more (e.g. Pfeffer and Salancik, 1978). This, we argue here, is not necessarily always the case. Outcomes of collaborations may appear in different forms, tangible or intangible (Hu et al., 2015), can constitute common benefit or private benefit (Dyer et al., 2008), and then contribute to both firm performance and alliance performance. There may, for example, be one firm that appropriates all

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the profits generated by a collaborative project, while its partner does not share the immediate profits but instead accumulates useful knowledge, techniques and resources from its participation. We have observed from a prior case study on a strategic technological partnership between Grunfos and Himin, a collaboration between a pump manufacturer and a solar heating company (Hu et al., 2015), that the latter benefited considerably from improved systematic management techniques learnt, in running the joint R&D project together, in addition to obvious financial income. This form of intangible gains may still count as relational benefits and perhaps be worth even more than the short-term gains in the long run. Therefore, it is necessary to further specify the term relational rent by taking account of the “intangible benefits” in a way that is based on empirical evidence.

To discern the mechanisms behind the generation of such supernormal profit, the present research is conducted in a collaborative innovation context, so as to be able to measure the value of the output of inter-organizational R&D collaborations. So far, researchers have only been able to observe the outcome of collaborative innovation as a jointly created economic or non-economic gain. It is different from more directly economic indicators, such as revenue or profit, where one could measure and calculate them in terms of other given inputs. Thus the question is, as a form of supernormal profit, how can relational rent be measured, predicted and, perhaps, even be manipulated for better reciprocal outcomes? We also lack a working scheme for the management of this special form of earning. Thus the purpose of the paper is to develop our application of the relational rent concept in the context of collaborative innovation.

There has been little study undertaken that treats pairs of affiliated firms as units of analysis and analyses the relational rent generated between focal pairs. Existing literatures often analyze the so-called focal firms, or leading firms, in partnerships instead of the partnership itself. The current research aims to fill this gap by treating the inter-organizational relationship of paired collaborators as an important factor determining the value of relational rent. By applying the relational view and network perspective, the study analyses questionnaire survey results of 402 pairs of R&D collaborators in order to better understand the generation of relational rents and how to maximize them for all participants. In order to do so, we firstly construct a PLS Path Regression Model and obtain a Comprehensive Index for relational rent. Secondly, we analyze the role of the nature of inter-organizational relationships in the generation of relational rent, among the many other factors that influence it. To further exploit the results, factor analysis is applied and an indicative relational rent typology introduced for the first time so as to provide useful implications to the management of R&D alliances.

2. Theoretical background

2.1. Collaborative innovation and relational rent

Extending from the collaborative entrepreneurship concept (Miles, 2005), collaborative innovation is elaborated as ‘the creation of innovations across firm (and perhaps industry) boundaries through the sharing of ideas, knowledge, expertise, and opportunities’ (Ketchen et al., 2007). Duin et al. (2008) proposed a Unified Collaborative Innovation Framework (UCIF) as a simplified framework where “ingredients” (knowledge objects) are added together to form an innovating collaboration in an open innovation environment. Here the Collaborative Innovation Network (COIN) concept becomes relevant. This was first introduced by Gloor (2006) and defined as “a cyber-team of self-motivated people with a collective vision, enabled by technology to collaborate in achieving a common goal in innovation by sharing ideas, information, and work”. Although it mainly concerns a team of individual personnel, COIN lays a good background for later research to help better define collaborative innovation networks of business groups or alliances of firms. Sharing of ideas and knowledge is highlighted in all such collaboration concepts.

A related term, ‘strategic alliances’, is also valuable here. These were defined in different ways by various researchers during the 1990s (e.g. Porter, 1990; Dussauge and Garrette, 1995; Gulati, 1998) but can be summarized as an inter-organizational relationship bounded by agreements, contracts and trusts so as to coordinate and collaborate in product development, research and services. Alliances can take many forms including marketing alliance, strategic alliance, alliance in the manufacturing stream, in R&D, etc. Hence the outputs of alliances are diversified. In the present research, since the fruition of collaborative innovation is the main focus, we direct most attention to R&D alliances.

The benefits gained from collaborations or alliances are defined as collaborative advantage (Donada, 2002) or relational rent (Dyer and Singh, 1998), which precisely indicates the joint nature of the activities. Lorenzoni and Lipparini (1999) found that inter-organizational R&D activity is one of the major sources of relational rents. Mursitama (2006) examines whether affiliated firms in a business group generate more relational rent and improve their performance more than do independent firms; the result of which is affirmative. Thus, to pursue supernormal profit, more firms opt for partnerships. In a similar vein, strategy scholars (Dyer and Singh, 1998) argue that analyzing alliance procedures is key to the understanding of how relational rent is generated. Extant research has studied relational rent from its origination to its distribution, covering the rationale of strategic alliances (e.g. Kogut, 1988; Eisenhardt and Schoonhoven, 1996), the sources of relational competitive advantages (e.g. Masrurul, 2012), how to succeed in alliances (e.g. Harrigan, 1985a, 1985b; Koh and Venkatraman, 1991) and the distribution of relational rents to participating partner firms (e.g. Dyer et al., 2008). The dominant conclusion is that sustainable competitive advantages can be obtained from committed long-term relationships (Day, 2000).

2.2. The generation of relational rent and relational rent typology

Since the discovery of relational benefit, research has investigated the conditions required for its generation. Four sources of relational rent are identified: investment in relation specific assets, knowledge exchange, the combination of complementary resources, and the lowering of transaction costs (Dyer and Singh, 1998; Teece, 1989; Rodríguez-Díaz and Espino-Rodríguez, 1989). Kobayashi (2014) summarizes four prerequisites of such competitive advantages as a) the geographical closeness of firms; b) investments in special assets; c) knowledge exchange via human interactions and d) product features. Other recommendations have been made regarding factors that determine the success of alliances. Child and Yan (1999), Anand and Khanna (2000), Zollo et al. (2002) and Sampson (2005) all recognize previous alliance experience as one of the most important determinants of alliance success. Simonin (1997), however, suggests that alliance experience is only related to the effectiveness of partner selection and conflict management.

A number of other factors are suggested by the literature to have influence on the alliance outcome, such as: appropriate governance structure (Hennart, 1988), complementary resources (Harrigan, 1985a, 1985b), trust (Arino and de la Torre, 1998). Gulati et al. (2000), working from a network perspective, suggest that similarities among partner firms play an important role in defining relational space, which then affects the size of benefits. Further, the value of such resource combination is argued by Lee et al. (2001) to be dependent on the complementarity of the resources and the capabilities of the affiliated firms. Relational view scholars argue that competitiveness arises from inter-firm sources of advantage (Dyer and Singh, 1998; Lavie, 2006) where relational rent is realized through the synergy of assets, knowledge, capabilities and governance, indicating that firms who are able to combine resources may gain a competitive edge over firms that are unable or unwilling to do so (Dyer and Singh, 1998). The relational view and the network perspective agree that the basis of the generation of relational rents is that the affiliated firms should possess strong capabilities for

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