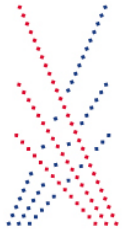

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BAM 2019 – Full Paper

Strategic Alliance Research in the New Era

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Strategic Alliance Research in the New Era

Summary

Rapid changes in the wider business environment suggest it is time to review the theoretical and practical insights of research into Strategic Alliances in the New Era. This is achieved by problematizing strategic alliance research, by offering alternative visions towards theoretical underpinnings and fresh applications of existing theoretical perspectives, leading to new observations and findings concerning strategic alliance management. This conceptual paper will stimulate multidisciplinary debate and discussion on emerging paradoxes and challenges facing contemporary firms during the formation, development, optimization and resolution of multiphase processes of strategic alliances.

Keywords: Strategic alliance, problematizing, future research

Track: Inter-organizational Collaboration

Word count: 5,921

1. Introduction

Inter-firm strategic alliances have attracted substantial attention from industry and academia over the past three decades (e.g., James, 1985; Devlin and Bleackley, 1988; Das and Teng, 2001; Das, 2006; Christoffersen, 2013; Gomes et al., 2016; Mesquita et al., 2017). Previous studies have attempted to examine the formation, maintenance, and utilization of strategic alliances. While offering incremental improvements in our understanding of the phenomenon, most of the previous work has tended to follow a gap-filling approach based on traditional theoretical assumptions including (but not limited to) Transaction Cost Economics (Williamson, 1981; Judge and Dooley, 2006), the Resource-based View of the Firm (Barney, 1991), Resource Dependence Theory (Pfeffer and Salancik, 1978), the Knowledge-based View of the Firm (Grant, 1996), Social Capital Theory (Koka and Prescott, 2002), and Dynamic Capabilities View (Teece et al., 1997; Eisenhardt and Martin, 2000). However, these theoretical underpinnings are largely based on assumptions from a different era. Fundamental and rapid changes in the wider environment suggest it is time to review the theoretical and practical insights of these earlier studies – to examine the challenges, issues and paradoxes of Strategic Alliances in the New Era.

Currently the strategic environment of businesses is changing faster than ever, due to rapid technological evolution, saturated marketplaces, globalization of businesses on the one hand and de-globalization of the market on the other (as marked by the recent vote for Brexit and the Trump administration's stance towards NAFTA and the TPP, and the recent trade conflict between US and other countries). The balance of the global economic structure is also changing; the new strength of emerging economies (such as the BRIC countries) and the consequent increase in the number and power of multinational firms from those markets, has challenged the strategic vision of many businesses with regard to their international cooperative strategies, especially when companies from the emerging economies may have very different conceptions compared with their western counterparts. Moreover, the financial crisis has altered the shape of inter-firm collaboration structures; and this is compounded by the increasing importance of strategic agility, flexibility and resilience, and the sustainability agenda adopted by firms around the world. As a consequence, contemporary companies need to review their traditional business models for inter-firm collaboration and relationship coordination to meet the rapidly changing expectations, requirements and characteristics of existing or potential strategic partners.

The concept of a strategic alliance is a multi-dimensional one, and it represents a broad array of strategic partnerships across inter-firm boundaries with many different alliance types or arrangements (Koka and Prescott, 2002) ranging from joint ventures (Kogut, 1988), franchising and licensing (Combs et al., 2011), business networks (Gulati et al., 2000; Min and Mitsuhashi, 2012), public-private partnerships (Hart, 2003), vertical supplier-buyer alliances (Wilson, 1995; Carmeli et al., 2017), consortia (Ring et al., 2005), and concentric partnerships (Bustinza et al., 2017), among other types. Complex inter-firm relationships have the potential to generate significant benefits for firms but they can also induce various relational risks (e.g., Nooteboom et al., 1997; Das and Teng, 2001; Gallear et al., 2015). As a result, changes in the environment bring new challenges to firms that are currently in, or seeking to form, strategic alliances. Companies are facing dilemmas, such as whether to form strategic alliances, which strategic partners to select, how to design strategic alliance structures, to manage alliance coevolution and to unravel alliances if things go wrong. As a

result, alternative alliance formations, structures and governance mechanisms have brought new issues and paradoxes for participants.

Overall, it is important to realize that the underlying assumptions behind strategic alliances are changing rapidly. Although research is beginning to address this changing landscape and exploring the implications of the new pressures mentioned above (e.g., Pangarkar, 2007; Shi et al., 2011; Christoffersen, 2013; Inkpen and Tsang, 2016; Mindruta et al., 2016; Arranz et al., 2017; Balboni et al., 2017), there is still a lot to be done. A forum for debate, extending and challenging existing perspectives is needed urgently as there is a lack of synthesized work that takes into account the changing nature of strategic alliances in a rapidly evolving strategic environment.

We highlight the *problematization* perspective offered by Alvesson and Sandberg (2011) who suggest that questioning the assumptions underlying existing theory in some significant ways (rather than "gap-spotting" or "gap-filling") offers the major opportunity for the construction of innovative research questions and, thus, for the development of interesting and influential theories. We argue that it is time for scholars to offer alternative perspectives to guide and enhance decision-making on strategic alliances due to the fast changing strategic context. This conceptual paper will therefore venture deeper into the new phenomenon, and explore the opportunities, issues and paradoxes of strategic alliances, while triggering future debates and investigations of alternative theoretical perspectives and interpretations to address the issues of managing strategic alliances and maximizing the returns from them in the new environment.

This conceptual paper is structured as follows. The next section will review the extant literature on strategic alliances, with a particular focus on the theoretical underpinnings of past and current work. It will be followed by a discussion of the rapidly changing context for strategic alliances, which raises important questions about conventional theoretical underpinnings. We move on to highlight the alternative perspectives that should be considered in future research, in order to formulate new substantive theories or to apply existing theories to new empirical or practical ends.

2. The theoretical underpinnings of strategic alliance

Past SA research has been built upon an array of frequently cited theories, with key assumptions underpinning the investigation of the phenomenon. These theories include: Transaction cost Economics (TCE), Resource-based view of Firm (RBV), Knowledge-based view of Firm (KBV), Resource Dependence Theory (RDT), Dynamic Capabilities View (DCV), and Social Capital Theory.

For example, Transaction Cost Economics (TCE) (Williamson, 1981) serves as one of the most important perspectives in SA research. The basic assumption of TCE lies in the bounded rationality, opportunism and risk neutrality (e.g., Chiles and McMackin, 1996). According to TCE, SA serves a mid-way governance structure between complete integration and spot market transaction. Researchers have since extended TCE to explain different governance structures of SA, for example in contract-based relationship or equity joint ventures (e.g., Parkhe, 1993; Houston and Johnson, 2000).

Following on from TCE, some SA researchers choose to draw up contingency theory. This theory (e.g., Scott, 1981) is based on the assumption that there is no single 'best way' to

organise or lead a firm, or to make a strategic decision such as whether to enter into an alliance. Instead, contingency theory claims that the 'optimal' course of action is contingent (dependent) upon the internal and external situation. Hence it has been influential in shaping the thinking of SA researchers, for example in exploring the motivations driving firms to engage in SA in different circumstances, and the factors that might be impacting upon the outcomes (successful or otherwise) of an SA (e.g., Joshi, 1995; Murray and Kotabe, 2005; Hoffmann, 2007).

Moreover, the central proposition of Resource Dependence Theory (RDT) (e.g., Casciaro and Piskorski, 2005) is that organisational survival hinges on the ability to procure critical resources from the external environment. To reduce uncertainty in the flow of needed resources, organisations will try to restructure their dependencies with a variety of tactics. RDT thus offers important explanations on the alternative governance structures of SAs.

According to social capital theory, in the course of their business activities, organisations establish a variety of interfirm ties (e.g., Koka and Prescott, 2002). Such ties may include buyer-supplier relationships and joint memberships in industry associations, as well as strategic alliances. These ties enable firms to exchange a variety of information, knowledge, and other forms of capital. Thus firms have to go beyond traditional cost-benefit analysis of particular individual alliances. They need to evaluate particular alliances not only in the context of the other alliances that they already possess but also in the context of the entire network of relationships.

Resource-based view of the firm (RBV) (Barney, 2001) identifies two preconditions for competitive advantage: resource heterogeneity and imperfect mobility. Based on the RBV, SA researchers highlight the potential mutual benefits gained from collaborative inter-firm relationships, which allows the sharing of complementary resources from alliance partners, while maintaining independent status.

Other extensions of RBV, such as natural-resource-based View (NRBV (Hart, 1995; Hart and Dowell, 2011) and knowledge-based view of the firm (KBV) (Grant, 1996) provided important explanations to alternative motivations for firms to enter into SA. For example, the need or desire to work with a partner with strong environmental credentials or a broad set of criteria for the 'success' of an alliance such as the environmental impact of a firm's activities (NRBV); and the access to competences and knowledge resources (KBV).

Overall, these theories have provided important lenses through which SA researchers have investigated the SA phenomenon. The choice of parameters, constructs and research methods and the interpretation of results are largely shaped within the boundaries of assumptions of these theoretical lenses. However, we posit that previous research into strategic alliances is largely based on assumptions which were established in previous decades, e.g. Transaction Cost Economic (TCE) (Williamson, 1981), Resource-based View of the Firm (RBV) (Barney, 1991), Knowledge-based View of the Firm (KBV) (Grant, 1996), and Dynamic Capabilities' View (DCV) (Teece et al., 1997). The establishment of those theories, which are well regarded as the main stream of SA research, more or less reflected the currency of the economic and political and technological environments at the time. We acknowledge that most of the following SA studies, whether conceptual or empirical, inspired by these theories have applied those theories to the most current context or practical end when those studies were conducted. These theories will continue to shed light on how we understand the phenomenon of SA. However, because the fundamental theoretical assumptions were

developed long before the current context, the level of generalization and enlightenment provided to the understanding of the current situation will be increasingly limited. Alternatively, we argue that theories which have attracted little attention in past SA research, or even new theories, may offer better explanations of the SA phenomenon in the new era.

In the following section, we offer some brief reflections on the emerging political, economic, social, and technological changes which may trigger differed applications of main stream business and management theories, and even the need for alternative theoretical explanations.

3. The emerging global trend that affects SA research

3.1 The changing political economic environment

Since the end of the Cold War, globalization was one of the main themes of the political and economic life of countries around the world. The establishment of the World Trade Organization (WTO) in 1994, which replaced the General Agreement on Tariffs and Trade (GATT), and the growing membership of the WTO marked a trend towards major economic players around the world moving to lower international trade barriers. Major multinational companies around the world were able to search for optimum destinations, with bigger markets, better profit opportunities, or with lower costs to operate their business functions. Strategic alliances became one of the main strategic choices of companies to take advantage of lower trade barriers. Strategic alliances in the form of international joint ventures allowed MNCs to quickly get access to the local market with adequate policy, taxation and regulatory support from the local government. For example, most of the world's major automakers make at least one-quarter — and in some cases more than half — of their profits in China. Volkswagen is reported to have gained 49 % of its global profits from China in 2016, and largely from its Shanghai VW and the Changchun VW joint ventures with Chinese state-owned equities (Clover, 2017). Similarly, almost all major MNCs have successfully entered the Chinese market through joint ventures, covering almost all industry sectors.

Meanwhile, emerging economies such as China and India have also become key beneficiaries of this trend. With sufficient cheap and skilled labour, and the marketization of the Chinese economy driven by the Reform and Open Policy, China became one of the major destinations of foreign direct investment (FDI) around the world and the world manufacturing centre. This allowed China to quickly update its manufacturing capability and also gain access to foreign technologies. The huge trade surplus gained by China year-on-year from exports has been directed into further development of the economy. Similarly, India is also a major beneficiary from this trend. With tens of thousands of call centres and outsourced software engineering companies established under the mechanisms of strategic alliance and outsourcing, India is able to obtain a fast growing local workforce with valuable expertise, and huge profit gains, from such businesses. Huge successful companies have emerged, such as Chinese Huawei and Indian Tata.

However, the credit crunch in 2007 and the subsequent prolonged global financial crisis and recession have shifted the expectations of all around the world, including developed countries such as US and UK, and emerging economies such as China and India. De-globalization is being mentioned more and more frequently (Foroohar, 2018), marked by major political economical phenomena such as the Brexit, the exit of US from the TPP under the Trump presidency (BBC, 2017), and the more recent trade conflict between US and China as well as other countries (see also Ghemawat, 2017). The driving forces behind this trend are far

beyond what this paper can address. However, what we want to argue here is that the traditional assumption that strategic alliances will lead to access to excessive resources will be increasingly challenged by top management or shareholders. For example, given the likelihood of raising barriers of trade and capital flow, protectionism, and increasing intervention of government into the formation of strategic alliances, SA is likely to be a more expensive strategic option for many firms than before.

Companies are more likely to face higher economic or political risks in forming and maintaining SAs, especially when international alliance partners are involved. Recent examples can be found in a number of business incidents (Poczter et al., 2018). For example, Poczter et al. (2018) highlighted that the U.S. is introducing more stringent procedures for Chinese Invest in the US for national security reasons. They gave the example that in March 2018, the U.S. government blocked Broadcom Inc.'s proposed merger with Qualcomm Inc., because of concerns that the merger of the two chipmakers would have resulted in China's Huawei Technologies gaining a dominant position in the market for 5G mobile network technologies. Similarly, in 2018 the U.S. government blocked ZTE Corp., a Chinese telecom equipment maker, from buying chips from American suppliers, which resulted in significant supply chain disruptions to ZTE and shut down of its operations. Both Huawei and ZTE have ambitious international expansion plans, presumably backed by the Chinese government. These examples also reflect the fact that traditional SA strategy is increasingly challenged by external political forces.

Indeed, it can be argued that protectionism is spreading quickly around world, not only marked by the Trump Presidency but also in emerging economies. For example, for decades FDI in China have benefited from favourable policy treatment (including taxation, land, foreign exchange etc.), but since 2010, foreign companies have seen such special treatment disappearing and they are now treated equally alongside domestic Chinese companies. After decades of favourable treatment, the ending of such a policy will mean that foreign companies now face more severe competition, and they become increasingly vulnerable to national protectionism.

As the political environment changes, the landscape of the economic environment is also changing, which has significant implications for the SA strategies of companies. For example, while China has been the most popular manufacturing destinations for low cost labour, it is now experiencing different demographics in its population, as skill and income levels are rising quickly. Many companies outsourcing their production for low cost reasons will find the country no longer the best destination. Of course other low cost destinations will emerge, such as India, Vietnam, Indonesia, and Turkey, but none is comparable with China in terms of capacity, logistics, infrastructure and level of skills, at least in the short term. Moreover, companies are realizing that they cannot replicate the same strategies for example in India that have led to success in China, because of the very different income segments in India compared to that of China (Mudambi et al., 2017). New collaboration models are needed to replace traditional outsourcing strategies with new vertical or horizontal partnership strategies.

3.2 Technological revolution and emerging business models

Over the last two to three decades, the world's technologies – especially in the area of ICT – have been advancing at an exponential rate. The capacity of data processing and storage has expanded dramatically, which has allowed more and more sophisticated digital applications to be possible, such as cloud-based applications, Internet of Things, 3-D printing, big data

analytics, machine learning, Blockchain, etc. Industry 4.0 is being pioneered by major market players around the world, which will reshape competition rules, the structure of industry and customers' demands (Dalenogare et al., 2018). Such technological advancement can improve efficiency and bring new business opportunities; it also leads to the emergence of new business models which define how companies create and deliver value.

For example, the increasing adoption of 3-D printing in manufacturing is likely to result in much lower entry costs, since firms can invest in a single machine instead of a production line or a multi-tier supply chain in order to commence production. Stocks of materials or components will be replaced by stocks of designs (Weetman, 2018). Thus the supply chain network of future firms is like to be much shorter and the supply chain partnership can be extremely short-term and dynamic.

The much wider use of automation and robotics has lessened the need for physical labour around the world. One the one hand, this will revolutionize operational efficiency and will ease the pressure created by labour shortages as a result of de-globalization and raising labour cost. On the other hand, companies will increasingly move their focus towards the customer-end services, in order to gain competitive advantage through new models of mass customization and seamless services. The emergence of machine learning and artificial intelligence will reshape the operational processes of many, if not all, companies. Combined with the widespread use of big data analytics, the business models of companies will be increasingly data-driven.

Given such speedy advances in new technology, it is unlikely that any one company can master all new technologies at the same time; indeed it may not be economically viable for any single company to do so. This may further the level of industrial speciality and division of labour. It is likely that firms will rely more on SAs to gain competitive advantage, but the difference is that future SAs may focus more on the quick formation of dismissible alliances, in order to allow new configurations of technology solutions to be adopted rather than longer term stable partnerships. The life cycle of many strategic alliances may be much shorter than ever before. In this sense, not only effective formation, but also effective dismissal of strategic alliances will be a challenge facing many companies.

3.3 The changing societal expectations

Markets are also experiencing fast changing customer expectations, alongside bigger impacts from stakeholders and wider societal forces. Consumers are getting used to fast delivery, a wide variety of choices, and more personalized products at lower costs. Companies nowadays are increasingly regarding consumers and stakeholders as key factors in their decision-making. Historically, companies may have treated interactions with governments, media, and the public as an afterthought in setting strategy. Today, how to engage with society is an increasingly prominent issue on business leaders' agendas (Ghemawat, 2017).

The first implication of this trend is that more and more businesses will integrate stakeholder influences into their new business models and their collaborative strategies. For example, the concept of triple bottom line (Elkington, 1998) is widely recognized by companies, and is increasingly built into companies' strategies and decision-making. It is reported that over 70% of FTSE 100 companies set carbon reduction targets (CarbonClear, 2017). Within this trend, the environmental and social agendas are also increasingly built into companies' strategic alliance strategies. More and more firms are putting their carbon footprint and their

environmental management capabilities into partner selection processes (Kumar et al., 2014). For example, in 2017 the number of FTSE 100 companies assessing supply chain sustainability risk increased to 50; this figure has more than doubled since 2016 (CarbonClear, 2017).

Secondly, the impact of stakeholder influences will be extended to beyond focal firms' boundaries. Whether it is regulatory, environmental, or societal, any changing expectation will be more quickly impacting on all alliance partners and not just the focal firm. For example, US chemical production companies with global supply chains are increasingly seeing the need for further oversight of their supply chain partners, and taking tighter control of the components that comprise their products because of the tighter chemical restriction regulations imposed on them (Westervelt, 2012).

Thirdly, the performance measurement of any strategic alliance is becoming much more comprehensive. Rather than evaluating SA performance by just profitability, cost reduction, access to market and resources, future SA will be measured by a much wider matrix of performance indices, which reflects the wider stakeholder and societal expectations. In parallel, it is foreseeable that the fundamental incentives and how partners see the benefits of strategic alliances will be very different. As reported, 18% of FTSE 100 companies have co-innovation initiatives with suppliers in 2017, an increase from the 8% in 2016 (CarbonClear, 2017). More and more companies will highlight the potential partners' environmental capabilities to balance their own deficiencies in those areas.

3.4 Changing modes of collaboration

Along with the fast changing technology infrastructure, increasing societal expectations and the emergence of new business models, the way SAs are formed and operated between partners will also be very different. This will re-shape the way companies will collaborate with other partners either vertically or horizontally.

Firstly, the speed of technology innovation is increasing at a faster pace than many firms had previously imagined. The life cycle of a typical strategic alliance may span many years from formation to maturation. However, more and more firms will start realising that the traditional models of strategic alliance will be less suitable. More flexible, agile and even ad hoc virtual collaborations will emerge and will be enabled by advanced ICT solutions, such as cloud computing and smart contracts enabled by Blockchain technology (Tafti et al., 2013; Cong, 2018). Long term strategic alliances may not be the only or the best option for firms that wish to gain access to resources or competitive advantage. Instead, more dynamic, instant and even virtual collaboration models are to be exploited. The emerging modes of inter-firm collaboration will be driven by new business models under the move towards digitalisation and decentralization of information processing (Cong, 2018). Consequently, the traditional governance structure of strategic alliances will also be challenged.

Secondly, the changing customer expectations of firms in terms of sustainability and social responsibility, while providing products and services at lower cost, quicker and with better customization, mean that firms need to collaborate more widely to secure better profit margins. For example, in contrast to the traditional 3rd party logistics model, competing companies are developing tactics to share their distribution capacities through consolidated delivery to improve both economic and environmental performance (Mirzabeiki et al., 2017). Developments in new technologies, from cloud computing to Blockchain, are making such

co-opetive collaborations possible. In the future, it is likely that more and more horizontal collaborations, such as warehouse sharing, fleet sharing, and even human resource sharing, will be a common practice among competitors.

Thirdly, the dynamic business environment, driven by technology changes, means that there will be greater interplay between strategies of cooperation and competition in the future. Companies will be more likely to find that alliance partners may turn out to be competitors under different platforms or transactions. For example, the Twitter-Datasift partnership ended because Twitter made a strategic decision to get into the business of big data (the area where Datasift, a third-party reseller of unfiltered Twitter data, operates); this turned the two companies into competitors (Maycotte, 2015). One the one hand, alliance partners will seek higher levels of information integration and technology collaboration. On the other hand, they may compete for speedy entry into new markets and the capture of new opportunities from the advanced technology solutions. Future SA management will be less driven by establishing a stable working relationship for the longer term, and more by identifying suitable partners quickly and switching to those partners as soon as it is beneficial to do so.

Fourthly, rapidly advancing technologies, such as big data analytics and Blockchain, will make dynamic and ad hoc collaboration possible. However, firms will also need to be more cautious about issues such as privacy and data sharing when the alliance partners become far more dynamic and numerous than ever before (Cong, 2018). On the one hand, sharing of information, knowledge, and other tangible or intangible resources with supply chain partners, alliance partners and even with competitors will be the source of future competitive advantage. However, the need for cyber security and protection of key resources, in this case, data, information, and intellectual property (IP) will be ever more important for maintaining the competitive advantage of firms. Such requirements will be reflected increasingly in the collaboration mechanisms and also the governance of SAs, especially when IP protection is not consistently implemented across the world.

4. Future strategic alliance research

The implications of the emerging trends, discussed above, are significant for researchers in the field of SA management. We argue that a more fundamental review of traditional perspectives of strategic alliances is needed. Given that the motivations, incentives, and mechanisms of SA collaboration will be very different from two to three decades ago, future SA researchers need to consider alternative or enhanced use of existing perspectives, or the introduction of alternative theories to explain phenomena which may not be fully addressed by those existing theories. We discuss these future directions under three headings: boundaries of SA, how to manage SA, and the management of SA benefits.

4.1 Boundaries of strategic alliances

Existing theories, such as TCE, can offer excellent explanations relating to the location of the boundaries of firms and the formation of strategic alliances. However, future SA are likely to be more dynamic, and the boundaries of SA are likely to be more blurred than ever before. Therefore, researchers need to bring in alternative explanations to explain and explore the emerging dynamic and flexible SA relationships. These new perspectives need to consider the new driving forces behind the dynamic relationships, and the cost-benefit balance between switching to new alliances driven by new opportunities and the maintenance of stable relationships.

Traditionally, the RBV (Barney, 1991) has offered important explanations for the source of competitive advantage of firms and the key driving force behind SA formation, that is resource accession. Lavie (2006) suggest that while proponents of the RBV may have been correct when arguing that valuable resources are non-tradable and imperfectly mobile, they have failed to acknowledge the direct sharing of resources and the indirect transferability of benefits associated with these resources. Given that the transfer of information and knowledge will be highly dynamic and will be enabled by new business models and technology solutions such as the sharing economy (Hamari et al., 2016; Ertz et al., 2018), the *imperfect mobility* as the key assumption of RBV may be further challenged.

Given that future SA are likely to place more emphasis on the importance of technology sharing and access to knowledge resources, the KBV (Grant, 1996) will be playing an even bigger role in explaining the boundary of firms and the incentives for SA formation. Nevertheless, what future researchers need to explore more is that given that the flow of knowledge and technology will be much faster and more convenient as enabled by the advanced ICT technology and more dynamic alliance models, the nature of knowledge possession which traditionally enables firms' competitive advantage is likely to change. Such knowledge will no longer be only the static explicit or tacit knowledge possessed by firms, but could also be in the form of dynamic capabilities to combine heterogeneous sources of knowledge and to mobilize such knowledge to commercial ends. In this sense, the DCV will be an important explanation for such capabilities, as reviewed further below.

4.2 How to manage strategic alliances

Along with the increasingly dynamic and fast changing business environment, new perspectives or alternative uses of existing perspectives are needed to offer more comprehensive guidance on how to manage SAs in the future.

As mentioned earlier, the DCV (Teece et al., 1997) will have important implications for the interaction between firms and the dynamic business environment. It will help firms to understand how to survive and gain competitive advantage in a fast changing business environment. More importantly, DCV can be further utilised to enhance our understanding of how a firm can configure or re-configure its portfolio of alliance partners, in an environment where the life cycle of SA will be much shorter.

Given that SAs are increasingly influenced by external political forces and external stakeholders, Stakeholder Theory (Freeman, 1984) and Institutional Theory (e.g., DiMaggio and Powell, 1983) will be able to offer a good basis to explore the optimum strategies of SA management. In addition to business interests being the main factors driving the SA formation, other external forces (such as political, legal and societal considerations) are going to add new constraints, or increasingly likely, new incentives for firms' SA formation and management.

Similarly, the increasing social awareness of sustainable performance and more stringent environmental regulations means that firms in the future will be increasingly competing to achieve *sustainable competitive advantage*. The selection of alliance partners and the management of SA alliances will increasingly focus on the sustainable performance of the partners and the SA. NRBV (Hart, 1995), which has received relatively less attention from SA researchers in the past, will offer important explanations regarding the alternative driving forces behind SA formation and management.

Traditionally, Resource Dependence Theory (e.g., Casciaro and Piskorski, 2005) explains the balancing and leverage of resources between alliance partners, in order to achieve an appropriate governance structure for an SA. However, with the emergence of more flexible and potentially ad hoc alliance and virtual alliances, an extension of RDT is needed to reflect the fact that future alliances are less bounded and will be more dynamic and contract-less. Resource dependence will be evened out by the vast availability of alternative resources enabled by faster and more capable ICT technologies. New perspectives are needed to explain the alternative governance structure of future SAs.

In the same vein, Contingency Theory (Pennings, 1975; Scott, 1981) may offer a micro view on SA decision-making and the optimum SA structure under this dynamic environment. The choice of alliance structure and the optimum portfolios of alliances for a focal firm will be a balance of different internal and external factors and a balance of the trade-off between resource sharing enabled by more flexible and dynamic partnerships and the risk of obsolescence due to potentially ad hoc and even virtual relationships.

The emergency of ad hoc and virtual SAs enabled by ICT solutions will also mean that the traditional use of Social Capital Theory (Koka and Prescott, 2002) must be reviewed and extended. The establishment or maintenance of future SA may take place principally online. Therefore, computer and automated process will be equally important, and in some instances more important, to the human agent during the alliance lifecycle. With the wider application of AI technologies, it is likely that more interfirm relationship ties will be managed with reduced levels of human interaction.

4.3 Managing performance of strategic alliances

In the future, SA performance will be monitored by a more comprehensive set of factors than has traditionally been adopted, such as the stability of the alliance and immediate business performance. The measurement of strategic alliance performance has typically been based on a relatively linear function; this may be replaced by more of a dynamic, non-linear matrix of measurements. This is because companies will experience more dynamic relationships with alliance partners, they will face a range of more demanding expectations and they will operate in a more dynamic and fast changing environment. In this sense, the future performance of SAs will rely more on the implementation of more flexible, ad hoc and even virtual partnerships. The goals of an SA manager in the future will be the speedy identification of suitable partners given various expectations and constraints, and the management of more flexible and easily dismissible SA.

Again, DCV can offer more important interpretations of SAs than ever before. Companies will differentiate their SA performance by their capabilities in dynamically identifying suitable partners and establishing a highly productive SA. Likewise, Contingency Theory can also help researchers of SA to identify differentiated SA performance by considering a wider array of heterogeneous external and internal factors.

< Insert Table 1 about here >

Overall, SAs in the new era have new characteristics which need alternative explanations and interpretations. Table 1 compares the previous and future focus of SA, and possible

theoretical perspectives and potential future research questions which could offer new effective explanations to the emerging phenomenon.

5. Conclusion

Previous research into SA tends to follow a common array of management theories when investigating the SA phenomenon. Given a more dynamic business environment, a more heterogeneous view of strategic alliances is needed. We argue that it is time for the research community to review the existing assumptions behind theories underpinning strategic alliance research. Alternative uses of existing theories, or the introduction of new theories, are needed to better reflect emerging business models in a fast changing business environment.

Future research is needed to explore emerging SA management issues, such as the political dimensions and dynamics across inter-firm boundaries in strategic alliances, the motivation for alternative strategic alliance business models and effective governance structures of different alliance types in the new era, as well as the linear versus non-linear processes of strategic alliance lifecycle and co-evolution.

Our discussion offers a new perspective on research into strategic alliances. This conceptual paper therefore seeks to stimulate multidisciplinary debate and discussion on emerging paradoxes and challenges facing contemporary firms during the formation, development, optimization and resolution of multiphase (pre- and post-agreement) processes of strategic alliances. Our discussion indicates potential avenues for interdisciplinary research surrounding SA, such as international business, financial markets, international trade and human resource management. We focus on strategic alliances in this paper, because we find it is a key area affected by emerging trends and market conditions. Research in other business and management areas, such as international business, marketing and human resource management, may deserve the same review in order to provide more precise underpinnings for research into ongoing real world issues.

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Table 1. Summary of strategic alliance studies and possible future research directions

Focus of SA research	Previous focus of SA	Future focus of SA	Possible future theoretical perspective	Potential research questions
Environment under which SA operate	More static Laissez-faire Embedded technological environment	More dynamic Much higher institutional and stakeholder influence Open technological environment, shared economy	Dynamic capabilities view Natural resource-based view of firm Institutional theory Stakeholder theory	How should alliance strategy change with the faster changing business, technological and institutional environment? Will the contemporary SA work in the same way under the new competitive environment in the future? How do SA managers approach the challenges brought forward by the greater influence of stakeholders?
Motivations and benefits from the partnership	Access to resources and knowledge on a stable basis Linear function of cost and benefits	Access to wider array of resources and knowledge and in more instant ad hoc manner Heterogeneous, non-linear function of various internal and external factors	Knowledge based view of firm Dynamic capabilities view Natural resource-based view of the firm Stakeholder theory	What will be the alternative SA business models in the new era? What determines the best SA business models to fit into the new competitive environment? How do partners maximize returns from SAs, given that such returns will be more heterogeneous in the new era?
Nature of partnership	Static and stable longer term relationship is the key Linear evolution of SA lifecycle	Shorter SA lifecycle Non-linear evolution of SA lifecycle Flexible and ad hoc relationships and even virtual relationship	Dynamic capabilities view	What will be the optimum relational characteristics of SA in the new era? What will be necessary capabilities of firms to manage SA in the new era and how will those capabilities facilitate SA management? What will be the implications of shorter SA life cycles for business operations, innovation management and IP protection? How to balance flexible and ad hoc relationships with alliance maintenance?
Focus of alliance management	Optimizing formation and maintaining of the alliance performance	Quick identification, and configurations of partnerships, effective partnership and easy dismissal of partnership	Dynamic capabilities view Contingency theory	How to effectively manage shorter SA life cycles? How do firms internalise opportunities brought by the more dynamic and ad hoc relationships with the SA partners? What will be the micro foundations of firms to maximise returns from SA in the new error?