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Digital exploration alliances

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I hereby declare that this dissertation is my original work, and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in this dissertation. This dissertation has also not been submitted for any degree in any university previously.

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Abstract

Digital disruption has impacted every industry and the spending on digital transformation technologies and services worldwide is estimated to reach USD 2.3 trillion by 2023 (Statista, 2021). Reflecting the increasing importance of digital transformation, many firms are entering into strategic alliances that feature traditional industry leaders and digital technology leaders. Little research, however, examines these digital exploration alliances in a systematic way. Accordingly, this dissertation synthesizes extant literature with a theories-in-use approach to conduct depth interviews with 26 managers, with a collective 797 years of experience, to offer a parsimonious definition of digital exploration alliances (DEA) and outlines the similarities and differences with related concepts. In addition, this dissertation articulates DEA performance criteria and develops seven propositions that bring to fore critical *ex-ante* factors that are likely to determine DEA performance. The dissertation concludes by discussing implications for both theory and practice, and developing directions for future research in this nascent domain.

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Dedications

This project is dedicated to Professor *Chhote Tayaji*, who always was and always will be my inspiration to always be learning. I wish you were still here.

1 Introduction

A large number of firms are increasingly entering into alliances. A recent PwC survey revealed 40% of US CEOs planned to do partnerships in 2019 (PwC, 2019). Another KPMG survey of 1,300 CEOs in 11 of the world's largest economies found 33 percent of respondents preferred strategic alliances versus 16 percent who preferred M&As (KPMG, 2019). Interestingly, the rapid and large-scale technological evolution is seeing the emergence of a new kind of alliance between traditional industry leaders and digital technology leaders. Consider the alliance between Goldman Sachs and Apple to jointly create a phone linked credit card with a luring feature set, such as a digital wallet, to open new markets. Goldman, that has typically played as an advisor to the elite, has seen a steady decline in its trading business (Hoffman & Rudegeair, 2018; Liz Hoffman, 2018). Apple, witnessing cooling iPhone sales, is hoping to enter the financial lives of its hundreds of millions of existing customers to open new revenue streams through fee-generating services. In the alliance with Apple, Goldman is hoping to enter the rank-and-file consumer market. As the Wall Street Journal notes,

> "Apple and Goldman are entering a crowded field with little experience. Both are looking for new revenue sources as their bread-and-butter businesses struggle. As iPhone sales cool, Apple is turning to fee-generating services." (WSJ, 2019)

Despite not having prior experience in such a product, Apple and Goldman, pressured by declines in existing businesses, are counting on the creation of new revenue streams at the intersection of their respective domain expertise, digital technologies and banking, respectively. Both firms are taking a shared-risk approach with the hope of entering a new market outside of their respective industry expertise to seek new cash flows.

Apple and Goldman are not alone. The traditional industry firms such as banks or telecommunication operators are experiencing massive disruption in their traditional business models owing to digitization of industries. Whilst these traditional industry firms are experts in their respective domains (referred as *industry partners (IP)* and *industry domains*, respectively in this document), they lack the digital experience, expertise, and reach of digital technology firms (*digital partners (DP)* that are experts in *digital domains*). To overcome the disruption, the IPs and DPs are forming strategic alliances (Gulati, 1998) to create new cash flows in an existing market or creating a new market altogether. However, unlike Marketing or R&D alliances, digital exploration alliances (DEA) are loosely contracted with an unknown future economic impact owing to their open-ended nature. For example, Google and Stanford Federal Credit Union recently announced a partnership introducing Google-powered smart-checking accounts (WSJ, 2019):

> "The accounts, which should be available sometime next year, will be co-branded and part of Google Pay Services, according to the credit union's announcement. Google will deliver the interface and Stanford Federal Credit Union, which has $2.9 billion in assets and about 72,000 members, will house the account… We serve a lot of Google employees, and as Google was developing their vision for this product, they reached out to us with interest in being a lead partner on the initiative. And we were excited to do so. We think it fits very well with our visions." (Times, 2019)

Stanford Federal is looking at boosting its memberships as a result of the partner, and Google is looking at proving scalability of its technology to back a financial product (American Banker, 2019). As is noticeable in the partnership, the product or the solution doesn't exist yet and the future economic conditions are unknown. Google and Stanford Federal are betting on their engineering teams to co-create a product that will generate future growth. Yet, it is not clear as to how they will do so.

> "Some details of the partnership still need to be finalized, and it's likely industry observers will closely watch how it plays out. The success of it could spur other credit unions to pursue similar partnerships… It's likely that the deal could bring a number of benefits to Stanford. For instance, those that join the institution through the Google account will be able to access its other products, though how that will work is still being finalized, Opp said. That means there could be opportunities for the institution to sell its other services to these members. (American Banker, 2019)"

Firms are increasingly betting on such alliances with the hope of opening new markets with a targeted mutual set of customers. The recent alliance between Microsoft and Bukalapak, a leading Indonesian e-commerce retailer, demonstrates similar characteristics:

> "This partnership signals a deep collaboration with Microsoft on an array of technology projects that will transform the technology-driven commerce solutions and operations solution and operations in Indonesia," said Rachmat Kaimuddin, CEO of Bukalapak. (Channel Asia, 2020)

Across these open-ended alliances, as is evident in the Microsoft Bukalapak alliance, the partnership is technology and collaboration driven, the product or the solution is expected to create new markets but does not exist yet and thereby the future economic impact is unknown. Yet, little is known about DEA in terms of what constitutes such alliances, and whether they are fundamentally different from traditional marketing and R&D alliances. Importantly, it is not clear what drives performance of such alliances. Given the relative newness of the concept and the sparse literature on DEAs, I adopt the theories-in-use approach (e.g., Zeithaml et al. 2020), to propose a definition of DEA, outline its similarities and differences from related constructs, and develop propositions that outline factors that are likely to have an impact on DEA performance.

2 Research Method

Theories-in-use (TIU) seeks to tap into the mental models that managers are using to make decisions on a unique and emerging phenomenon (Zeithaml et al. 2020; also see Tuli, Kohli, and Bharadwaj 2007 and Ulaga and Reinartz 2011). I conducted depth interviews with senior executives from the industry who are closely related to DEAs in their day-to-day work and build theories and mental models using their practical knowledge and the know-how of the subject matter. These senior executives represent some of the largest players in the industry, have experiences across functions and hierarchal levels in multiple industries, perform significant duties within their organizations at a regional or global level, are engaged in decision making with impact ranging from tens of millions of dollars to billions of dollars, and carry an average industry experience of 31 years. To recruit the participants, I used a convenience sampling approach that draws on my personal network and network of network (people in personal network who know other subject matter experts).

Specifically, I conducted interviews with 26 senior managers, with average work experience of 31 years who are involved in business development, sales, customer experience, finance and operations, procurement, and business and technology consulting functions. Some examples of titles carried by these senior managers include Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, Chief Technology Officer, and Board Member. The study participants had significant cross-functional work experience across large geographical locations (see Table 1 for details). The interviews lasted between 28 and 50 minutes each, for a total interview time of 14 hours, 48 minutes, and average interview time of 34 minutes. Since professionals often move across the industry, almost fifty percent (14) of the participants had experiences working across both IPs and DPs, and the rest had experiences across multiple IPs (4) and DPs (8), in their

respective industries. The participants were experienced with multiple alliances and dug deep to reflect upon both successful and unsuccessful experiences.

Table 1

Interview Participant Titles, Company and Industry representation, Role, Experience, Geographical coverage, and Interview Duration

S.No.	Title	Company, Industries	Role	Experience (yrs.)	Experience (IP, DP, IP+DP)	Geographical coverage	Interview Duration (mins)
1	Board Member. Global Vice President	Product distribution. Fortune 100 Tech.	Consulting, Business Department Head	31	IP+DP	Global	46
2	VP, Sales	Fortune 10 Tech.	Business Development, Sales leadership	29	IP+DP	Asia	44
3	Director, Sales	Global System Integrator. Cloud provider.	Alliances, Business Development, Sales Leadership	26	DP	Asia. Global	50
4	Board Member & Chief Executive	Global Cloud provider. Retail. Finance.	Chief Executive	34	IP+DP	China	39
5	Board Member & CEO	Online Media. Sports. Telco	Ex-Chief Executive	45	IP	Asia. United States	44
6	Corp VP, Engineering & Customer Experience	Global Tech. Product engineering.	Product Engineering, Customer Experience	32	DP	Global	31
7	VP, Customer Experience	Global Consulting.	Customer Experience, Support, Operations	34	IP+DP	Global	38
8	Digital Advisor	Advisory Services.	Digital Advisory, Strategic Planning	30	IP+DP	Asia	28
9	Global VP, Consulting	Business Efficiency. Consulting Services.	Alliance Delivery	32	IP+DP	Global	32
10	Chief Technology Officer	Digital Technology	Alliance Engineering management	26	DP	Asia	48
11	Corp VP, Global Alliances	Global Cloud provider. ICT.	Business Desk, Deal construction	31	IP	Global	44
12	Corp VP, Sales	Strategic Alliance management.	Business Unit Head, P&L owner	39	DP	Global	30
13	President, Asia	Global Tech.	Business Unit Head, P&L Owner	32	IP	Asia	31
14	Global VP, Consulting Services	Global Consulting.	Business Unit Head, P&L Owner	38	IP+DP	Global	28
15	General Manager, Finance, Asia	Global Tech.	Chief Financial Controller	28	IP+DP	Asia	30
16	Global VP, Customer Pursuits	Global Consulting.	Alliance formation and negotiation	29	DP	Global	31
17	Global VP, Business Development	Global Cloud Provider.	Global Alliances	32	IP+DP	Global	35
18	Asia Consulting Sales VP	Global Tech.	Alliance Consulting, Sales, Delivery	30	DP	Asia	29
19	Asia Strategic Sales GM	Global Tech.	Business Development, Sales leadership	28	DP	Asia	36
20	Chief Operating Officer, Services	Customer Operations.	Global Operations	31	IP	Global	32
21	VP, Asia Pacific Sales & Marketing	Global Cloud Provider.	Chief Executive, Business Unit Head	27	IP+DP	Asia Pacific	30
22	GM, Sales & Marketing	Telecom.	Chief Executive, Business Unit Head	30	IP+DP	Australia, New Zealand	33
23	WW Strategic Pursuits Vice President	System Integrator. Cloud Provider.	Global Alliance Business Development	29	DP	Global	29
24	General Manager, Sales & Alliances	IT Unicorn.	Asia Business Development	28	IP+DP	Asia	40
25	Country Manager, Cloud business	Global Cloud Provider	Alliances, Engineering	22	IP+DP	Asia Pacific	32
26	GM Alliance Engineering	Native Cloud Company.	Product Engineering, Innovation Head	24	IP+DP	Global	30

IP – Industry Partner. DP – Digital Partner.

3 Data Collection and Analysis

I used a structured set of questions for the interviews (see Table 2). These questions were used as a general guide during the interviews, not necessarily in that specific order. The questions were consciously worded to be non-suggestive and open-ended (McCracken, 1988; Tuli et al., 2007). Further clarifying questions, examples, and details were elicited based on the responses to the questions. 24 interviews were transcribed with the permission of the interviewees. In 2 cases, where the interviewee expressed reservations about transcription, detailed notes were taken.

Table 2: Interview Questions

1.	What are these exploration alliances?
2.	Why do Companies enter these alliances?
3.	How are these alliances different from traditional alliances?
4.	Why do some work and others struggle?
5.	What should change to increase the success rate?
6.	What is the best way to anticipate and plan exits?

As the interviews progressed, I thoroughly reviewed the notes and identified specific themes. This helped to define emerging ideas and tease out related nuances and implications of such. When the analysis revealed insightful ideas into the phenomena of DEAs, I carefully compared the notes with traditional well-established theories to identify unique propositions. I did not include an idea that was only bound to a specific example. For example, a manager shared how the alliance fell apart since the entire senior executive team for one of the firms, that led and formed the alliance, suddenly quit the organization. Although this situation relates to human asset specificity (Lunnan

& Haugland, 2008) and is explored in this research in a different scenario, this specific situation was unique to an example and therefore, I did not include the idea. I also only included those ideas that were mentioned by multiple participants (see for example, Tuli, Kohli, and Bharadwaj 2007, and Ulaga and Reinartz 2011). For example, multiple participants mentioned the importance of not just incorporating risk- and reward-sharing mechanisms but also defining the upper and lower thresholds beyond which the two firms must revisit the arrangement. This ensures the ideas are critical to success of alliances based on experiences of multiple managers. I also refrained from including the ideas that are in the vicinity of "obvious". For example, almost every participant highlighted the importance of *trust* between alliance firms to ensure operational success. However, the role of *trust* in alliance success has been thoroughly studied in literature (Kale et al., 2002; Krishnan et al., 2006). Therefore, I refrained from including such well-studied and "obvious" themes that occur in alliances. Finally, *Active Listening* was exercised through-out the research process which was critical to connect the dots and frame complex propositions (Zeithaml et al., 2020). For example, a participant with sales responsibilities blamed poor execution as the cause for failure of the alliance while another participant with execution responsibilities cited poorly set expectations during sales as the cause for failure. Deeper analysis revealed specific areas that must be addressed during early stages of the alliance and revisited each time certain pre-defined thresholds are reached to avoid fatal challenges during execution. Table 3 lists primary themes that emerged during the interviews.

Table 3
Primary themes that emerged during interviews

Category	Emergent Themes	Exemplar Quotes
The Concept - DEA		
	Early-stage strategic alliance	"Usually, there is an MOU (memorandum of understanding) in the early stages of the strategic alliance and some financial terms and contractual stuff based on whatever is known that parties can sign-off on. It's like a 'paper-venture' early-on and we enter with good-faith on the unknowns in a hope we iterate on the contract as the engagement evolves...it can become something material or nothing at all..."
	IP and DP co-exploration	"…two companies come together with an ambition to create a new market. The key differentiation is we are co-exploring and co-developing new markets. Like a new kind of car, a new kind of bank, a new kind of farmland."
	Seek new cash flows	"…two firms come together to create a new market, new cash flows, like let us build a phone with most advanced features of the best phone in the world for the bottom of the pyramid in an emerging market like India at fraction of a price…"
	Open-ended	"They do not have a clear set of business terms. That is why they are open-ended. The shared benefits and shared risks are not clear. But they start with a belief that they will find something worthwhile together."
DEA Performance		
	IP and DP generate new cash flows	"New value needs to be created grounded in mutual value exchange, which in turn, creates the desired new cash flows. That's what everyone is after, growth from new cash flows…"
DEA Performance Predictors		
	Early-stage technical involvement	"Like one wouldn't build a house without a site-survey, one shouldn't enter a partnership without understanding the underlying environment… get the tech guys to do right levels of tech discovery and assessment to inform the strategic intent otherwise it's just a house of cards…"
	Longevity of deal team involvement	"…to be successful, you need a continuity-based model. That comes with people who thought it out, crafted it up, and signed the dotted line to stay engaged until the end…this leads to complexity in operating model that's why most companies struggle on doing it..."
	Deal team incentives	"We are still in a sell-to model, but these (alliances) are not sell-to motions…incentives need to be adjusted as selling in these alliances never stops…you stay engaged and continue to sell until the (alliance) objectives are achieved."
	Risk-reward capping	"We started with an understanding of per unit fees and per transaction fees. When it took off, it soon fell apart as our alliance partner thought we were profiting more than our fair-share…there was no cap to our gains and that concerned them immensely…"
	Financial renegotiation mapping	"Model needs to allow for open and transparent discussions top-down and for financial renegotiations along the way at various milestones or as certain patterns evolve…without that, conflict and undesired consequences are certain..."
	Structure renegotiation mapping	"…it's not so much of maintaining the balance in power…its more about maintaining symmetry of interdependence...being clear who is making which call at what stage and in which area of the partnership… things evolve fast and very dynamically…you need mechanisms to evolve and maintain clarity on roles and accountabilities..."
	Alliance exclusivity	"…in these alliances, there is no such thing as exclusivity… exclusivity is a 'scary word'…There will always be a primary and secondary partner(s)...your aspiration and target needs to become the primary partner…"

IP – Industry Partner. DP – Digital Partner.

4 Definition

Drawing on the depth interviews, I define a digital exploration alliance (DEA) as:

> *An open-ended early-stage strategic alliance among two or more industry firms and digital technology firms that seek new cash flows in existing markets or by opening new markets using digital technologies in traditional industries.*

The concept of a DEA encompasses four key conceptual pillars:

First, DEAs are early-stage strategic alliances. Strategic alliances are voluntary arrangements between firms involving exchange, sharing, or co-development of products, technologies, or services (Gulati, 1998). In the case of DEAs, the firms enter the alliance with an intent to co-explore potential opportunities that could be created at the intersection of their respective domain expertise *i.e.*, the industry domain and the digital domain. However, the opportunity and the objectives are unclear at the early stages. This early-stage exploration can lead to more formal and structured partnerships such as Joint Ventures or even an acquisition. Alternatively, the alliance may simply fade away if the firms fail to identify a material joint opportunity. As a Global Alliance Executive & ex-CEO of a Fortune 500 firm notes,

> "CEOs shake hands and alliance gets going with an MOU (Memorandum of Understanding) of sorts. Then the exploration starts of what can the companies do together beyond the tech company's sell-to relationship. It may lead to something substantial, or it may just disappear over time."

Another alliance manager of a global organization highlights that this exploration in the early stages of the strategic alliance with an open mind to the fate of the alliance is a key distinction between DEAs and traditional strategic alliances:

> "I have been involved with several alliances in the past… but in these alliances, you haven't really tied into something very specific early on. It deserves some exploration first…so you start with kind of a cooperation and then see what happens later. Maybe it will lead to a joint

> venture or maybe it will turn itself off… these [alliances] are a different kind of an animal compared to traditional strategic alliances."

Second, DEAs are co-exploration between IP and DP. Digital disruption has shaken up most, if not all, traditional industries such as Banks, Manufacturing companies, Construction houses, Automotive companies, and so forth. These industry leaders are experiencing unprecedented disruption in their businesses, with many business models such as voice and text for telecommunication operators being rendered redundant. Industry leaders are looking at large digital technology providers for answers to survive this disruption. As noted by a digital transformation leader for a technology company, industry leaders are counting on these alliances with DPs to disrupt the market or create new markets to find new cash flows,

> "Industry leaders are struggling to compete. They must place option bets... CEOs are seeking for answers under the uncertainties. They are looking at digital tech companies for those answers… they use this to disrupt the market or to find a new niche."

A global Vice President of a MNC underscores that the IPs are forming these alliances to gain access to vast pool of resources, global reach, and digital expertise of the DPs:

> "The non-tech traditional company likes to partner with tech company as they can benefit from the expertise, the scale, and the reach the tech companies have. They not just want to buy technology. They want to put some more emphasis behind the relationship to leverage tech companies' wider pool of resources and reach to survive their disruption…"

The DPs benefit by gaining the market share of their platform and services. Should the co-exploration with industry leaders in creating a new market be successful, the DP benefits with a multiplier effect as the penetration of their platform and services continue to grow. A senior executive of a Fortune 50 firm notes,

> "These alliances are tech-dominated. There is a tech leader and there is an industry leader. Industry leader is counting on acquiring technical intensity to win. Tech leader is after the

> landgrab… tech leader makes money when they sell their platform, and the upside is arguably unlimited if we find a joint breakthrough…"

Third, the firms enter a DEA seeking new cash flows at the intersection of the industry domain and the digital domain. As a senior manager in Asia with a global technical services firm reflects on her experience,

> "These exploratory alliances drive co-creation and co-development of new markets which don't even exist right now. And I am not saying something totally nebulous, but something like a digitally enabled new car or a new agricultural farm or a new bank, and we're seeing a proliferation of these type of alliances in the market."

Another sales executive shared that firms drive this exploration seeking new cash flows with an intent to mutually benefit through risk- and revenue-sharing mechanisms. He also points out that the compelling factor is the longer-term potential and upside:

> "Two companies come together to generate new value to address a new market and gain new cash steams. They intend to get into a revenue and risk sharing partnership, build joint GTMs (go-to-markets), and beat the competition. But usually, the market is untested or new… immediate business impact on our P&L was minimal but longer-term impact looked astronomical…"

Fourth, DEAs are open-ended in nature especially in terms of how the partners will achieve the objective of generating new cash flows. Indeed, a global executive of a Fortune 50 tech firm notes that:

> "The thing that is unique about these strategic alliances is they don't actually have a good set of business terms. If you knew what your goal was you can construct business terms for an alliance that help you understand how you achieve that goal…example a Cloud company and an industry leader coming together and exploring 'x', what you find is a very lose contract. There is MOUs and letters of understanding but the contractual terms on the outcome, the shared obligations, and the shared benefits is really not there. There is just a belief that these companies will explore and find something worthwhile together…"

This open-ended nature of DEAs and the reliance on risk- and reward-sharing models drive open-ended governance structures that inject high levels of uncertainty and unpredictability.

5 Digital Exploration Alliances (DEA) and Extant Literature

5.1 DEA: A Specific Form of Strategic Alliance

Firms form strategic alliances (SA) to take advantage of market opportunities, such as new market entry and timing, existing market protection, structure and position within markets, by offering closer contacts with intermediaries such as suppliers and distributors while facilitating extension and leverage of core capabilities of one company through the alliance relationship with another (O'Dwyer, 2011). Some examples of SAs include joint product development arrangements, manufacturer-distributor partnerships, and joint promotion agreements (Li et al., 2010). Strategic alliances between buyers and suppliers aren't new. The governing mechanisms of such interorganizational relationships have been studied in four theoretical areas: (a) Transaction cost economics (TCE) (Williamson, 1979), (b) Resource dependence (Salancik & Pfeffer, 1978), (c) Commitment-trust (Morgan & Hunt, 1994), and (d) Relational norms (Palmatier et al., 2006).

A digital exploration alliance (DEA) is a form of an SA. Like SAs, DEAs are voluntary arrangements between firms that involve co-development of products, technologies, or services and can occur as a result of a wide range of motives and goals (Gulati, 1998). Similar to SAs, DEAs look for a fast and flexible way to access complementary resources and skills that reside in other companies to achieve sustainable competitive advantage (Dyer et al., 2001). SAs encourage governance mechanisms to keep one's own resources intact while gaining access to partner firms' valuable resources, and continuously encourage managers to consider renegotiation as a key element to successful adaptation by the alliance (Ariño & Reuer, 2004). Similarly, interview participants for this research repeatedly highlighted that DEAs are realized as the IPs and DPs complementary resources come together. The participants also highlighted the importance of

renegotiation mechanisms as a key element of success for DEAs. In SAs, like DEAs, partner firms tend to maximize their incentives by exploiting resource complementarity, that drives value creation, while minimizing opportunistic behavior (Eisenhardt, 1989; Harrison et al., 2000). Lastly, the factors leading to termination of SAs and DEAs are also similar. For example, alliance stability is significantly dependent on the degree of resource and power dissimilarities, and competition within the portfolio (Cui, 2013), and managers are encouraged to establish contingency based exit provisions (Gulati et al., 2008). Taken together, DEAs are a specific form of SAs. I now elaborate on the differences between DEAs and Marketing and R&D alliances.

5.2 Overlaps and Differences with Marketing and R&D Alliances

A marketing alliance is a formalized arrangement among two or more organizations that focuses on one or more downstream value chain activities (Swaminathan & Moorman, 2009). DEA is similar to marketing alliances in the sense that both the IP and DP are entering an alliance to seek new revenue streams by co-developing products or services. Yet, a DEA differs from a marketing alliance due to its explicit focus on digital transformation of the existing business of an IP to generate new cash flows. A marketing alliance, however, can span multiple activities such as distribution agreements, brand licensing, new market entry, and/or co-branding. Importantly, a marketing alliance does not necessarily involve digital transformation of existing business of a partner firm.

An R&D alliance is a formal arrangement for firms to gain access to complementary capabilities, reap economies of scale in R&D, and shorten development time while spreading the risk and cost of such new developments. (Sampson, 2005). While in an R&D alliance, the focus is on creation of a new technology, a DEA builds upon the resource complementarity of the partnering

firms to seek new-to-world products or solutions for new cash-flows without an exclusive focus on developing new technologies. As an Engineering head of global MNC notes,

> "Success happens when the firms come together to build something definitive vs. a CTO's skunkworks. It has to be like a billion-dollar deal to create a new animation movie or a new car. It cannot be an executive's science project. It cannot be incremental from engineering point of view but has to create something that is new to the world."

The recent example of an alliance between AT&T and Microsoft puts a spotlight on how firms are exploring new-to-world products and solutions through digital exploration alliances. The alliance is counting on the proliferation of 5G and the opportunities that emerge as a result across the spectrum of mutual customers between AT&T and Microsoft (AT&T, 2019).

6 DEA Performance

Organizations enter SA to pursue a set of common and private interests (Ariño, 2003). Most interpretations of a successful alliance are measured using three groups: (a) financial; (b) operational; and (c) effectiveness (Ariño, 2003; Lunnan & Haugland, 2008). In DEAs, with disrupted traditional businesses and fading cash flows, IPs actively seek new cash flows by introducing digital technologies in their industries. As the Engineering leader of a Bank notes,

> "Our intent is to (digitally) monetize the treasury and enter high growth markets where we have no presence today. Work with (unnamed global digital partner) will help us build the digital solution leveraging their expertise…when we are successful, we make more money, and they will make more money."

A common place for the IPs to start with this journey is by introducing new digital technologies within their existing environments or portfolios. This entails moving their legacy IT infrastructure, applications, and business processes to Cloud technologies, often termed as *modernization* in the digital world. These steps require initial investments in

people, process, and technology. Given the complexity of the technical debt, internal processes, and people change management, the underlying projects carry significant costs and a risk of failure. IPs often look for a shared-risk model as they embark on their complex digital transformation journeys. As the leader of the Customer Success department of a digital partner highlighted,

> "IT projects historically have a high failure rate… It's no different when Companies start moving to the Cloud. They underestimate the complexity of their technical environments which have been built and patched over decades. We call this technical debt. Even more than that, they underestimate the complexity or how archaic their processes or people's mindset is. A large majority of the Cloud or digital transformation projects are having troubles as a result and we often have to heavily lean-in and bail our customers out."

Given these projects are expensive to execute, the IPs look for options to share the risk of failure with the DPs. The DPs understand the challenge. Since they are driven by the motivation to capture market-share and operate under strong competitive threats, they often extend benefits in the form of additional discounts as platform usage grows, headcounts that operate as part of IPs' digital transformation teams, trainings to IPs' workforce, assistance in building new go-to-market motions, and so on. This eases the initial cost of digital transformation and short-term impact on IP's free cash flows, and in a way, shares the underlying risk for the IP. As the global Procurement Manager for a Fortune 500 firm highlights,

> "Industry leaders need the capability, and this gives them a shared-risk model to obtain that. If it goes bad, they do not bear the entire risk…if it goes well, the benefits discount their cost of transformation."

DPs, however, seek new cash flows to continue to grow market-share and monetize their technologies. As the Engineering leader of a global digital partner notes,

> "We engineered together (with a mining company) and created a new product for the mining industry. Interestingly, now our (industry) partner wants to exit their decades old mining business and use the solution to become a digital solution provider to other mining

> companies. As they start scaling and the solution increases penetration, we would have just opened up a net new revenue stream altogether."

Similarly, the alliance leader of a Fortune 50 company highlights the intent to expand into new industries by entering DEAs,

> "…the next billions of dollars of growth will come from delivering higher-order, industry relevant solutions such as clean energy, digitally enabled exploration of natural resources, virtual reality and sports, digital supply-chains, and so on. These alliances certainly provide the short-term monetization through usage of the platform, but it's the learning of the industries, the IP we create at the back of it, which leads to these industry solutions as the big future cashflows that motivate us…"

DEAs typically start with the IP using DP's platform or solution, driving organic growth in DP's cash flows. If the DEA is successful in building a new-to-the-world product or solution, the DP gains a potentially unlimited upside, including, the upside potential by enveloping adjacent provider's platforms or solutions (Eisenmann et al., 2011). When asked about his decision-making criteria for approving an alliance with an IP in an emerging market in Asia, the global Vice President in charge of approving alliances for a large digital firm noted:

> "Given we already had investments in the market through this company (local datacenter), the economics of this alliance looked even better. If they did well, which we believe they will, given their market brand and expertise in their industry, we will grow with them. If they don't do well, that will be unfortunate, but we would have recouped our investments aligned with our core sell-to model because they are and will be using our platform for the duration…so the downside is covered… (this) also gives us the chance to land and expand…our multi-cloud environment is far better and cost effective than the incumbent…"

Taken together, the common denominator that both the IP and DP seek from a DEA is generation of new cash flows. Therefore, I define DEA performance as:

> *The degree to which a DEA generates new cash flows for both the industry and digital partner by opening new markets with the introduction of digital technologies to industry partner.*

7 What drives DEA Performance?

Alliances, in general, have a high historical record of failure. A recent industry survey estimated 40% of alliances to fail to comprehensively address the commercial, strategic, operational, cultural, and technical leading practices required to contribute to success (Deloitte, 2019). Field interviews identify two key challenges that need to be addressed to drive DEA performance. First, since the product or the solution doesn't exist at the time of forming a DEA, it is highly challenging to have governing mechanisms, such as comprehensive legal contracts, to provide a thorough coverage of risk factors and related mitigation (Crocker & Reynolds, 1993; Reuer & Ari˜no, 2007). Second, due to the open-ended nature of DEAs, it is critical to identify structured execution frameworks, including decision-making, conflict resolution, milestone success, and exit criteria, during the planning phases of the alliance creation. As the global VP of strategic alliances for a global cloud provider notes,

> "If there is one thing that must change then it is taking more time to discover each other more…we rush into these alliances because they are cool, competition is moving fast, sales always wants the deal to be closed etc. But signing is not success, delivering mutual success is success…plan as much as you can in advance, including the pre-nup agreement because one day, alliance will end, and you will wish you had the age-old exit chapter in the contract."

Similarly, the President of Asia business for a Fortune 50 Company reminds,

> "Problem is everyone is trying to be cute… nobody wants to ask the hard questions when trying to lock the partnership and therefore, there is no plan for execution or plan to cover for contingencies …the better you plan, the more successful the partnership will turn-out to be…don't rush into it."

The depth interviews identified seven specific *ex-ante* decision points that are likely to allow managers to address these challenges and therefore drive DEA performance.

Early-stage Technical Involvement: Early-stage technical involvement refers to the engagement of technical team experts during the DEA conception stages to carefully evaluate the possibilities, limitations, and resources that would be required to realize the possibilities and overcome the limitations. Since DEAs are technology focused, it is exceedingly difficult for business development or sales teams to decipher deep technical nuances or undo commitments based on wrong assumptions *ex-post*. For example, understanding the differences in engineering methodologies of the actors (such as product development approaches, commitment to or maturity of underlying technologies, and intellectual property management) during the alliance conception stages will allow for better deal qualification and early planning of mitigation tactics and required resources to avoid *ex-post* surprises. Consider the experience of a sales director:

> "Executives typically don't understand their technical environments super well and rush for closure. We were given to understand they had the landing zones for Cloud, they were already doing agile based projects, had governance in place, and so on. Only for us to discover later that all of that was at best in a sandboxed environment. Now the question became who pays to get the fundamentals in place. None of this was visible or discussed during the alliance formation. If we took the time to assess and address these upfront, it would have taken longer to sign but we may still have a deal."

Early-stage involvement of technology experts helps the actors determine a better alliance-fit (Zajac et al., 2000) from an engineering and technology standpoint by exploring, evaluating, and shaping the 'fit'. This allows the conceptualization of the alliance to be closer to the realm of possibility as opposed to just being about ideas of the top management. Therefore, the greater the involvement of technical experts at the conceptualization of the alliance, the higher the probability that both the industry partners and the technology leader have a better assessment of and preparation to meet the alliance objectives. This also builds higher levels of confidence in the

actors in the technical strategy of the alliance (Bucklin & Sengupta, 1993). Due to additional cycles required by the technical personnel to do the due diligence, such early involvement of the technical teams may elongate the time it takes to close the deal. However, it reduces the time the technical personnel take post deal-closure to understand the environments, reduces the risk of wrong assumptions made *ex-ante* and the time and the resources required to mitigate these *ex-post*. Reducing the possibilities of such *ex-post* adjustments, in turn, is likely to enhance speed and quality of the final product, and therefore have a positive impact on cash flows for both IP and DP. Accordingly, I expect:

> ***P1:*** *The greater the early-stage involvement of technical teams, the higher the performance of the DEA for both the digital and industry partners.*

Deal teams' alliance lifecycle involvement: The deal team consists of the senior executive who leads the deal conceptualization and formation at the most senior levels, supported by others such as sales, financial, procurement, and legal professionals. Typically, the deal team's objective is to close the deals, and they are organized separate from the delivery teams. They operate in linear motions, wherein, at deal-closure, the engagement is handed-off by the deal team to the delivery team and the deal team moves on to the next pursuit. In other words, the goal of the deal team diverges (i.e., pursue a new deal) from that of the delivery team taking over the alliance for execution (i.e., alliance execution), creating an exposure for alliance's operational success (Knight et al., 2001). This exposure emanates from the fact that DEAs start with a broad range of promises at senior executive levels and once the deal teams are incentivized on deal-closure, they disengage to pursue the next opportunity and the promises made by the deal teams may not even be properly understood (or considered feasible) by the delivery teams. As the Vice President of a deal approval desk notes,

> "For the sake of the success rate of these partnerships, I think they are entered into too loosely… they are like the press release out. You typically have Corporate or business development organizations doing the deal. Then they go away making whatever promises and its someone else's job to make it successful. However, to ensure the success of the deal, I would say, hey, if you did the deal, you need to stick around and run the deal to make sure it's successful after the fact."

Longer involvement of the deal teams during the lifecycle of the alliance helps in preserving the purity of the original commitments and the relationship. As the DEA evolves and encounters challenges, the deal team assists in overcoming the challenges leveraging the insights and assets that typically delivery teams either don't have the knowledge of or have access to. For example, deal teams are privy to deep first-hand insights into the original commitments made by both sides, have relationships at senior levels where the deal was initially conceptualized, and have visibility to future potential multiplexity growth in the partnership between the firms (and, consequently, the related available investments). In contrast, delivery teams that are focused on the execution of the alliance are usually challenged with (a) a limited understanding of the promises made at the deal formation stages, (b) limited executive-level relationships, and (c) limited foresights into partnership multiplexity potential (and commensurate investment pools). As a result, deal teams can yield better negotiation power and assist with better resolutions and faster unlocking of trapped value during execution in contrast to delivery teams that can possibly view the challenges as constraints. As a senior engineering executive of a Fortune 100 company noted:

> "Our CEO made this deal possible. He just didn't shake hands with the other CEO…he, and his core team, stayed engaged through-out and removed many roadblocks during execution to see it through. We (delivery team) wouldn't have either the foresight, knowhow, or investments to come up with solutions that the business development team used to counter those challenges, especially during renegotiations. They also used each renegotiation to include additional business systems…the pie kept growing."

Given the open-ended nature, the DEA continuously evolves and surfaces additional opportunities. Deal team's ongoing engagement also assists with faster identification and realization of such opportunities. As such, deal team's longer involvement assists with ongoing alliance structure reconfigurations, renegotiations, and new opportunity identification and realization, thereby having a positive impact on cash flows of both DP and IP. Formally:

> ***P2:*** *The longer the duration of deal teams' involvement in the alliance lifecycle, the higher the performance of the DEA for both the digital and industry partners.*

Deal team at- and post-announcement incentives: The deal teams working on DEA are typically incentivized at deal-closure with the size of the incentive tied to the size of the deal at the time of the deal announcement. The larger the DEA deal-size, the greater the signaling impact of the deal announcement, and the higher the incentives. As the head of business development of a large technology leader shares,

> "My team's role is to close the deal at the highest levels of financial commitment we can get from the other party. Competition is intense and, in our field, it's not about just winning the customer. It's about winning the largest wallet-share of the customer that we can. I also do a special recognition for those who are good at continuing to improve deal velocity and drive faster closures, and those who are good at amplifying the deal at announcement so we can use that as a reference or testimonial for other deals."

Since incentives increase goal commitment (Locke & Latham, 1990), the more the deal team's incentives are tilted towards the size of the deal, the greater is their focus on announcing the deal, and lower on the execution details of the DEA. Lack of attention to details related to execution of the DEA, in turn, is likely to have an adverse impact on the performance of the DEA and hence, on the cash flows for both the DP and IP. Consider the experience of the delivery executive of a global consulting firm,

> "They (deal team) signed this $xxx million contract and threw it over the fence to us. Expectation is to realize the consumption (of the deal) in 3 years. It's a joke since none of the fundamentals are in place and by the time we get that done, half the period will be gone already. I can clearly see how we are walking on thin ice here and expect this to blow-up in a few months when both teams realize how oversized this whole engagement is... if they (deal team) still had a skin in the game vs. collecting their checks at announcement and moving on, the deal structure and size would be so different…"

Therefore, adjusting the deal teams' incentives to tilt towards post-announcement alliance performance will motivate the deal teams to consider tactical implementation factors appropriately (Knight et al., 2001) and accordingly structure and size the deal during deal formation stages. This, in turn, will result in achieving alliance success not just at-announcement but also in post-announcement performance as its more likely that the promises can be delivered to, bringing deal team's success criteria closer to alliance success criteria, i.e., cash flow generation for DP and IP. Accordingly, I expect:

> ***P3:*** *The higher the degree of deal teams' incentives for post-announcement performance, the higher the performance of the DEA for both the digital and industry partners.*

Risk-reward capping: Risk-reward capping refers to the degree to which the partners in a DEA conceptualize and agree on a financial framework that not only balances the downside and upside financial pay-offs for both parties, but also clearly outlines the limits of the same for each party. For instance, the Senior VP of a global consulting organization with extensive experience in such alliances noted:

> "These contracts start very lose and are normally setup as MOUs. And even as they get more diagrammed, everyone is assuming just success…and will be happy to share the pie in a certain ratio. However, this is where I think they must be clearer from the get-go – in (the event of) failure, it's about what's in the exit cost and criteria, and wild successes are equally troubling because then you get the sharing problem… so pre-define, as the pie grows, up to what size of the pie are they happy to share and what happens beyond…."

The firms can develop the perception of imbalance in losses during the execution, especially as the losses become material and trust starts eroding (Chiles & McMackin, 1996). Similarly, as the alliance starts delivering success, firms can develop a perception of imbalance in fair-share beyond the initially expected upsides. This contention may not seem obvious amidst the excitement of the DEA formation. However, a closer look at what each party truly brings to the table within the DEA makes the reason for the contention quite clear. In the words of the head of alliances of a Fortune 500 firm:

> "So, having the understanding that there are stage-gates where you kill things on the downside and don't have an unlimited upside would be beneficial…in all fairness to a telco – for something the telco is selling to their customers, we (digital company) might have helped with the tech, but we didn't do the marketing, we didn't take the risk with their customers etc. They have a reasonable concern that you should not get unfettered upside. And so maybe there is a more balanced way to do these things that say – there is a capped downside and upside."

Similarly, consider the experience of a senior executive of a DP who was closely involved in an alliance with a bank:

> "The agreement was based on sharing the transaction fees. For several months, originally envisaged product wasn't coming together. We had many disagreements on the level of investments beyond what we broadly agreed in financial terms early-on since they thought they were going over-and-above to make it successful and we weren't. Then, when it finally started to work, they're like, "wait, we don't want to share this transaction fee with you beyond the initial (undisclosed number) of users. This could be millions of dollars and you only put in x million into the whole thing". Agreement was designed as a 30-70 rev share, but now it looked like it's going to work. They didn't want to do a 30-70 rev share beyond a certain number anymore. Next was, both companies wanted out."

Therefore, whilst a progressively successful alliance may have clearly defined proportion of gains that each party enjoys, it's also critical to have a defined capped-gain for each party beyond which either the alliance terminates, evolves into other forms of alliances (such as a JV), or leads to a renegotiation. Correspondingly, in conjunction to a clearly defined proportion of losses that each

party would bear in a failing alliance, it's also critical to have a defined stop-loss limit for each party beyond which either the alliance terminates, or actors are led to a renegotiation. Thereby, a well-defined risk-reward capping during the alliance formation allows for increased predictability of deviation from original expectations and potential conflict to both the DP and IP, thereby providing a mechanism to protect their expected cash flow objectives. Therefore, I expect:

> ***P4:*** *The higher the risk-reward capping ex-ante, the higher the operational performance of the DEA for both the digital and industry partners.*

Financial renegotiation mapping: Financial renegotiation mapping is the degree to which the DEA partners envision, outline, and agree on the set of future contingencies that will trigger renegotiation of the financial terms and conditions of the DEA. Given that the DEAs are open-ended in nature and carry diffused objectives, adaptability by both parties and the ability to renegotiate is critical during alliance evolution (Ariño & Reuer, 2004). As the global Senior VP for a large consulting firm suggests, digital exploration alliances need to stay open to reconfigurations and renegotiations as they evolve:

> "These are loose alliances. Execs need to stay open minded during the course to reconfigure or renegotiate everything they negotiated at the beginning. They must start with this understanding. Adaptability in the model is truly key for success as there is lots of unknowns and it keeps changing."

For instance, if the new-to-world product ends up delivering significantly lower returns for one of the actors, financial renegotiation mapping will trigger a renegotiation arrangement enabling the firms to revisit prior assumptions and make amends to address financial asymmetries. Several other scenarios such as this one may emerge with-respect-to investments and other factors impacting financial interests of the firms during the alliance evolution. For example, the alliance director of an emerging market IP emphasized,

> "Had we had the foresight during deal negotiation to agree on specific criteria which drives amicable renegotiations when imbalance in investments vs. returns occurs, the alliance may still be alive. We felt like we were being taken advantage of…they were maximizing their returns based on a very loosely defined playbook. One must have the hard discussions upfront before embarking on the alliance."

Similarly, another senior manager notes the adverse impact on costs and cash flow generation,

> "We (DP and IP) knew we had poorly estimated the investments needed from both sides to deliver to commitments. But it took us so much longer than it should have to come back and renegotiate the terms. Renegotiation also took a long time as it was like redoing the whole thing but in a very painful way, because now we both thought the other party was trying to take an advantage of the situation. And we both lost money while doing this, in addition to the opportunity cost as the launch was delayed. Lesson learnt was, think very deeply during the planning itself on the possible set of factors that must trigger and force the teams back into the board room… be sure to add those in the agreement as that has a massive impact on either achieving or not achieving your financial goals."

Therefore, financial renegotiation mapping provides a mechanism for the DP and IP to plan for the contingencies during alliance formation, to enter expected renegotiations during execution as triggers are reached, and thereby avoid the undesired costs and increase cash flow generation.

Accordingly, I expect:

> ***P5:*** *The higher the degree of financial renegotiation mapping a priori, the higher the performance of the DEA for both the digital and industry partners.*

Structure renegotiation mapping: Structure renegotiation mapping is the degree to which the DEA partners envision, outline, and agree on the set of future contingencies that will trigger renegotiation of not only the roles and responsibilities, but also the hierarchies and reporting relationships of the personnel involved in exploration alliance. For example, in advanced stages of a DEA between a brick-and-mortar retail firm in an emerging market and a global DP to create an online retail business, the DP will not have enough power-parity to avoid the retail firm from integrating their supply-chain with other (competing) digital firms, thereby impacting the final

product. Similarly, a DP may want the product's positioning and look and feel to be consistent with their global branding while the IP may want more local flavor that resonates with the local culture, drives faster acceptance, and thereby cash flow generation. Similar imbalances in hierarchies of relationship or roles and responsibilities such as who makes the decision on underlying technology, the look-and-feel and the cultural appeal of the interface, ecosystem integration aspects, and so forth can emerge throughout the evolution of the alliance disrupting the embeddedness and triggering managers to take undesired actions (Uzzi, 1997). As the President of Asia of a Fortune 50 company notes,

> "…they have a culture of 25 minutes long meetings. We do 30 minutes. Whose word prevails? This is the smallest example but consider you are making very different and impactful decisions depending on the stage of the alliance evolution. Its critical to be clear who leads in which situation, and equally critical to know when you need to collectively go back to the drawing board to redefine the R&R and the authority structure…if not, you can lose a lot of time and money, not mentioning the obvious opportunity cost…"

Structure renegotiation mapping provides a mechanism to address such asymmetries in a systematic and expeditious fashion preserving relationship embeddedness (Jeffries & Reed, 2000), and avoids adverse impact to cash flow generation objective. Therefore, I expect:

> ***P6:*** *The higher the degree of structure renegotiation mapping a priori, the higher the performance of the DEA for both the industry and digital partners.*

Alliance exclusivity: Alliance exclusivity is the degree to which the alliance arrangement limits each party's ability to pursue a similar or overlapping arrangement with another firm. Exclusivity has been noted as a pledge of commitment (Anderson & Weitz, 1992) and associated with perceived effectiveness (Ruekert & Walker, 1987). Exclusivity in alliances can be conceptualized in terms of a continuum – from unilateral constraints on one party to reciprocal constraints on both parties over the duration of the alliance (Sengupta, 1995). The $750M

exclusive agreement between Google and ADT (FT, 2020) demonstrates such a continuum. As part of the agreement, Google picked up a 7% stake in ADT. In return, ADT that previously sold various types of smart-home hardware, will exclusively sell Google's Nest products to consumers and small businesses. Depending on meeting certain conditions, the two companies are expected to invest another USD 150 million over the coming years towards marketing, training, and product development, and ADT will have access to specific Google's technologies.

Although, the extent of investments, the intent to co-create, the multi-year nature, and the hype involved for signaling benefits with DEAs may suggest that the actors desire high degrees of alliance exclusivity as a safeguard against expropriation of specific investments and other forms of opportunism (Salancik & Pfeffer, 1978; Sengupta, 1995), restrictive contractual arrangements or alliance exclusivity is uncommon. In majority of the cases, these alliances seek to build their exclusivity by means of co-creating something unique while seeking new cash flows and not through restrictive contractual agreements that block them from partnering with other firms. As the business leader of a digital consulting firm notes,

> "Contrary to popular belief or even the desire, you won't find a ton of exclusivity in agreements in this world. You will find some exclusivity when equity is involved but even then, it's not truly exclusive in most cases. The only exclusivity that makes sense in these kind of alliances is when you create something unique together that others can't replicate."

Consider the case of the multibillion-dollar Microsoft and AT&T non-exclusive alliance where AT&T will use Microsoft's cloud services and the two firms will work together on developing tools for artificial intelligence and high-speed 5G wireless for its mutual customers (CNBC, 2019a). In the same week, AT&T and IBM announced another multibillion-dollar alliance where AT&T will use IBM cloud for its business applications and the two firms will team-up on developing edge computing platforms that harness 5G networks and internet-connected devices

(CNBC, 2019b). With non-exclusivity in agreements, AT&T is able to: (a) attract both Microsoft and IBM to enter agreements that drives risk-sharing for AT&T, (b) achieve technology diversification (across Microsoft and IBM clouds), (c) gain higher signaling impact by expanding the target ecosystem than it would by entering into an exclusive agreement with just one DP, and (d) create a healthy competitive environment that will motivate the DPs to bring their best to AT&T, including benefits such as emerging technologies, through the duration of the alliance. Collectively, these benefits have a positive impact on AT&Ts cash flow generation objectives.

Similarly, consider the following example where Deutsche Telekom (including its subsidiary T-Systems) announced three strategic alliances within six months:

> "Deutsche Telekom and Microsoft redefine partnership to deliver high-performance cloud computing experiences… Seven-year strategic agreement to help enterprise and midmarket customers accelerate digitalization… Enhance productivity and digitize business operations with Microsoft 365 and Microsoft Azure as T-Systems' preferred cloud platform in select solution areas…Support digital education efforts in Germany." (Deutsche Telekom and Microsoft Redefine Partnership to Deliver High-Performance Cloud Computing Experiences - Stories, 2020)

> "Google Cloud and T-Systems today announced a partnership to deliver solutions and managed services to help enterprise customers digitally transform with the cloud. Under the new partnership, T-Systems will provide consulting services, migration support and managed services to enterprise customers leveraging Google Cloud capabilities." (Google Cloud and T-Systems Announce Strategic Partnership for Cloud Innovation | Deutsche Telekom, 2020)

> "Customers love the idea of AWS and T-Systems together. We have embedded our security DNA as well as our IT systems into the AWS platform, and our T-Systems experts are working closely with our clients to help them with their journey to AWS. Rodrigue Vitini, Director of Solution Architecture & Engineering" (T-Systems Case Study, 2020)

As noticed in these examples, an IP can increase its attractiveness and deal negotiation power by adapting a diversified technology strategy and desiring a lack of or a lower degree of alliance exclusivity during the alliance formation stages. In such cases, DPs tend to dip deeper into their

pockets and use a range of their assets from across their ecosystems (e.g., trainings, reach, assisting with initial cloud transition, joint-media activities, and so on) in the form of investments to win the IP. DPs consider these investments necessary for them to win the logo in the short-term and to open the doors for the long-term potential, even when the deal sometimes may not seem profitable in the short-term. Competitive embeddedness amplifies this effect (Gimeno, 2004), especially for digital firms that have high levels of niche overlaps with their competitors (example: Google Cloud and Amazon Web Services). The sales leader of a Fortune 500 digital company attributes this to staying ahead of the competition and investing in the future:

> "Typically, when we learn that there is a strong intent by the other party to diversify across technology platforms or they already are in that state and may continue to expand those investments, is when we are prompted to bring in the heavy artillery. We leverage a range of options like investing dedicated headcounts, upfront dollar investments, future credit commitments, discounts, providing access to our ecosystem, and even equity investments. Of course, these investments must be justified with short-term and long-term goals but 10x of zero is still zero, so you got to get-in first and this is kind of investment in the future by winning the logo and keeping the doors open, even if in immediate terms it may not be profitable. Do note that investments do have to be realized near-adjacent to the core business, so we don't deviate from the objective."

Interestingly, this is not a one-time event in the relationship. IPs use the lack of exclusivity and their multi-technology strategy as an ongoing lever for negotiations with DPs, especially as the alliance success and/or multiplexity grows. The IPs also try to avoid committing too much at the same time, keeping the pressure on the DPs, and enhancing their chances of ongoing negotiation through the duration of the alliance. As the sales director for an MNC emphasizes,

> "…the Bank (alliance partner) understands the leverage they have by not going exclusive and by not doing a big-bang agreement, committing too much at the same time. If the partnership is going well, they renegotiate every year. And we oblige that because if we don't, competitors will. Despite a clear multiyear agreement, their multi-cloud strategy keeps the pressure on us to continue to find new ways of investing in the partnership in an ongoing fashion… and by the way, they actively negotiate with us each time their business grows beyond original expectations, and this also constantly keeps us on our toes to make the whole thing work."

While the DP consequently experiences a lower signaling benefit than it would have had the alliance been exclusive, DPs that approach IPs with lower or no expectations of exclusivity increase their attractiveness compared to those that expect high degrees of exclusivity. Once the alliance is formed, DP strives to gain share and increase cash flow generation in the account and the partnership using various strategies, including platform enveloping (Eisenmann et al., 2011). As the Vice President at a digital consulting firm notes,

> "Nobody wants to lock into a single technology platform in the world of cloud, so there is effectively no exclusivity. Switching costs of technology are high but not as high as in the old world. And they (IPs) want to have options - a healthy mix of emerging technologies, access to broad ecosystems of digital partners, competitive pressure points, and the ability to fault-tolerate. In fact, we are appreciated and score more success when we approach with… "hey, we understand that you will be operating other clouds at the same time and as we co-create, we will be open to integration and rationalization opportunities...". Of course, everyone wants a larger share and so do we. But this emphasizes our focus on their success and the success of the alliance vs. pure short-term, self-profit motives. Once we are in, we look for possibilities to grow, drive share, and build value for them, and for mutual customers."

Therefore, I expect:

> ***P7:*** *The lower the alliance exclusivity, the higher the performance of the DEA for both the industry and digital partners.*

8 Discussion

8.1 Theoretical implications:

This research contributes to the understanding of strategic alliances (Gulati, 1998) by identifying a new form of early-stage strategic alliance, digital exploration alliances (DEA). Unlike the traditional alliances (e.g., Bucklin & Sengupta, 1993; Houston & Johnson, 2000; Rindfleisch & Moorman, 2001; Sampson, 2004), DEA feature open-ended agreements, are technology driven,

and seek new markets through co-exploration between traditional industry partners and digital partners. Given the relative newness of DEA, building upon extant theories (e.g., Conner & Prahalad, 1996; Cullen et al., 2000a; Eisenhardt, 1989; Gulati, 1998), this paper contributes to research in four areas:

First, I draw out the key features of DEA with a carefully crafted definition and identify the success factors for the actors. In addition, I identify the similarities and outline the differences between DEA and marketing and R&D alliances.

Second, I posit two specific areas that require higher degrees of human asset specificity (Riordan & Williamson, 1985) to increase the chances of operational success: Early-stage involvement of technical teams, and longer engagement of deal teams during the lifecycle of the alliance. Rate of abrupt terminations in newer alliances has been noted as higher than older alliances (Lunnan & Haugland, 2008), and the former reduces the chances of such undesired outcomes. The latter also necessitates that the incentive structures of deal teams must be revisited to tilt towards post-announcement performance so that the agent behavior on maximization of their payouts is aligned and rewarded closely with the principal's desired objectives of cash flow generation that requires certain amounts of strategic risk taking by the agent (Eisenhardt, 1989).

Third, I identify and define three concepts that can be used by firms to avoid abrupt termination (Lunnan & Haugland, 2008) of DEAs and perform planful renegotiations or exits during alliance evolution for better operational success (Inkpen & Beamish, 1997; Kogut, 1988): (a) Risk-reward capping, that proposes setting capped-gain and stop-loss limits for the upsides and downsides for each party, (b) Financial renegotiation mapping, that proposes envisioning, outlining, and agreeing on a set of future contingencies that trigger renegotiations of financial terms and conditions, and (c) Structure renegotiation mapping, that proposes envisioning,

outlining, and agreeing on a set of future contingencies to trigger renegotiation of roles and responsibilities. These concepts allow for trust to be preserved during DEA evolution (Ariño & Reuer, 2004; Das & Teng, 2001; Oxley & Sampson, 2004) and present an opportunity to preserve, and even grow, the relationship beyond exits (Gulati, 1998). These concepts may also extend to other forms of alliances and future research on such maybe worthwhile.

Fourth, the research looks closely at the topic of alliance exclusivity which is broadly understood as a pledge of commitment (Anderson & Weitz, 1992) between the alliance partners. Contrary to the "obvious", in DEA, firms enjoy better chances of operational success with lower degrees of exclusivity. Given exclusivity in alliances attempts to maximize opportunism within the bounds of rationality (Williamson, 1979), maximize effects of resource complementarity (Conner & Prahalad, 1996), and strives to preserve maximal trust (Cullen et al., 2000b) during execution, the exclusivity nuances identified with DEA have further implications and are proposed to be topics of future research for better understanding of such emerging alliances.

8.2 Managerial implications:

The findings of this research propose four key managerial implications for the IPs and the DPs:

Deal-making: One of the operational benefits for IP is to gain a position of shared-risk by having DP(s) invest in IPs' digital transformation efforts. Managers of IPs that plan and lead with multi-technology strategies stand to benefit by attracting better benefits, at deal-closure and during ongoing negotiations during alliance evolution, as compared to those who do not actively lead with multi-technology strategies or desire high degrees of exclusivity. Commensurately, DPs that lead with high alliance exclusivity expectations risk losing attractiveness to IPs.

Deal-scoping: Managers that involve technical teams during early stages of alliance formation have a higher probability of assessing feasibility and necessary mitigation tactics than those who don't. Additional cycles involved in performing technical assessments may be discouraging for the managers. However, the higher probability of success created by such pre-evaluation post deal-closure should serve as the motivator for the managers to actively invite and invest in such early-stage inclusion of technical teams.

Deal's operational success: Managers can take several steps to increase the chances of operational success: (a) define limits to both upsides and downsides for the actors i.e., risk-reward capping, (b) define a set of contingencies that trigger financial renegotiations, and (c) define a set of contingencies that trigger structure renegotiations.

Deal-team incentives: Managers should revisit deal team incentives. Incentivizing at realization of certain milestones and/or outcomes post-announcement, as an example, will drive deal teams to structure and size the deals more realistically thereby increasing alliance performance versus incentivizing the deal teams for size of the deal at deal closure.

I also identified several characteristics and peculiarities that managers must consider at different deal stages of DEAs for success. My study found a lack of consistent understanding and implementation of these nuances, including some managers treating these alliances as traditional technology or product sales cycles. Given the newness of DEAs, I attribute this to the *learning curve* of the managers i.e., managers are still evolving their mental models for best-suited approach during deal stages, from deal qualification to deal execution. Therefore, I offer a simple yet comprehensive framework that integrates the proposed concepts in this research with deal stages, deal milestones, verifiable outcomes and artefacts to be created at these milestones, and significance of such for a successful alliance formation and operational success (see Table 4).

Table 4

DEA deal stages, critical concepts, deal milestones, verifiable outcomes, supporting artefacts, and significance

Deal stage	Critical Concept	Deal milestone	Verifiable outcomes and artefacts	Significance	Notes
Deal Qualification					
	Alliance exclusivity early expectations	Executive level alignment	Joint strategic intent definition (usually confidential).	Expression of interest at most senior levels of industry and digital partner, high level of definition of alliance objectives.	Early alliance exclusivity expectations are set here.
		Defined business transformation roadmap	Multi-year business transformation plan that provides a directional roadmap to achieving alliance objectives.	Envisioning the future and possible roadmap to achieving alliance goals i.e., identification and realization of new cash flows. Industry partner executives use this to secure initial buy-in of the direction at senior management or board levels. Digital partner uses this to secure initial resources required to progress the deal.	DP and IP deal team holds joint envisioning and brainstorming engagements.
	Early technical team involvement	Defined technology transformation roadmap	Directional technology roadmap that underpins the multi-year business transformation plan.	Technology teams pre-evaluate technical environments to determine feasibility of alliance objectives as defined in business transformation roadmap, identify potential roadblocks, and mitigation measures. In addition to determining initial feasibility, this helps determine appropriate resources, mitigation tactics, risk-reward mechanisms, and informs deal structure.	Pre-evaluation of technology environment assessments must be captured to inform opportunity sizing, alliance exclusivity expectations, risk-reward parameters, and mechanisms during deal creation.
	Alliance exclusivity finalized	Opportunity sizing	Initial estimates on potential opportunity size and initial investments required by the firms.	Assists with aligning commercial objectives at a high level paving the way for official understanding memorandums to be signed.	Alliance exclusivity expectations are clarified and finalized at this stage. Deal teams appropriately size the deals setting the alliance up for operational success.
	Risk-reward capping, Financial renegotiation mapping	Business Value Case (BVC)	BVC for the alliance outlines expected financial returns on investments required and validates alignment with strategic intent. This includes estimates on future cash-flow expectations.	BVC outlines the business opportunity potential, estimated timelines, estimated investments needed, total cost of ownership (TCO) estimates, and expected returns on investments (ROI). BVC is used to secure buy-in from IP senior management, including finance department to approve investments. DP uses this plan to secure investments for the alliance and initial investments needed for the IP.	Initial risk-reward capping parameters and financial renegotiation mapping contingencies are identified at this stage.

Table 4 (continued)

DEA deal stages, critical concepts, deal milestones, verifiable outcomes, supporting artefacts, and significance

Deal stage	Critical Concept	Deal milestone	Verifiable outcomes and artefacts	Significance	Notes
Deal Formation					
	Structure renegotiation mapping	Value Realization Plan (VRP)	VRP breaks digital transformation plan into a series of milestones and prioritized projects and initiatives that are expected to drive BVC outcomes.	VRP assists deal teams to garner internal alignment and support from various business units required. For example, alignment of Head of treasury is important for digitization and monetization of treasury derivate products.	Initial structure renegotiation contingencies identified at this stage.
		Executive sign-offs	Executives of both actors sign-off on strategic intent, supporting plans, and required investments.	Green signal for deal teams to move to deal negotiation and closure.	Alliance execution team identification and internal alignment with internal stakeholders and business units.
		Signing of an Understanding	Memorandum of Understanding (MOU) or similar vehicles signed to lock initial agreement between the firms to proceed.	Formalizes the agreement between firms, unlocking further investments required to proceed to next stages of deal formation. Firms also use this event to publicly announce the intent and generate signaling impact. DPs sometimes use this for information peacocking.	First opportunity for market signaling.
Deal Finalization					
	Risk-reward capping, financial, and structure renegotiation mapping signed-off.	Contract creation and signing	Contract, including partnerships and work order sign-offs, where applicable.	Deal finalization.	Risk-reward capping, financial renegotiation mapping, and structure renegotiation mapping contingencies signed-off as part of the agreement.
	Altered deal team incentives	Press releases and market-signaling	External and internal communications, analyst interviews, and other forms of PR activities.	Amplify market signaling for purposes such as attracting other customers by digital partner, VC positioning by industry partner, and positioning to dissuade competition by industry partner or digital partner.	Opportunity for altered deal team incentives, such as non-monetary recognitions, can happen at this stage with other rewards being granted in line with alliance outcomes at later stages.

Table 4 (continued)

DEA deal stages, critical concepts, deal milestones, verifiable outcomes, supporting artefacts, and significance

Deal stage	Critical Concept	Deal milestone	Verifiable outcomes and artefacts	Significance	Notes
Deal Execution					
	Longer deal team involvement	Alliance execution plan (AEP) signed-off	AEP breaks-down VRP to an execution plan and is signed-off by alliance execution teams, and deal teams.	This plan outlines details of timelines towards key milestones or key result areas, required resources, key risks and mitigations, and sequencing of required activities or sprints. Given the evolving nature of DEAs, these plans typically follow a small sprints-based approach (agile and similar methodologies) to learn and fail fast, iterate, make progress or change course.	Deal team involvement continues and influences shaping AEP in support of commitments made at earlier deal stages. Technical pre-evaluation findings inform and accelerate development of AEP.
		Alliance execution plan kick-off	A joint kick-off between the execution teams, desirably supported by deal teams.	This notes the official kick-off of alliance execution, sometimes termed as sales-to-delivery hand-off or alliance kick-off. This drives alignment in what was committed during deal formation and negotiation with execution teams to ensure early success in delivering to alliance objectives.	Deal team plays a joint leadership role with alliance execution teams setting the stage for execution plans.
	Deal team's involvement in renegotiations and identification of new opportunities	Alliance execution cadence established	Alliance execution cadence is the establishment of a set of ongoing meetings and communications between key working teams and stakeholders between alliance partners, and internally within each of the alliance partners.	Sometimes termed as 'rhythm of business', this cadence is a recurring meeting and communication schedule to collectively review progress, remove blockers, identify issues that need to be escalated to senior levels or teams outside of the core working groups, or noted for future reference.	Deal team participates in key cadence such as executive steering committee meetings, decision review boards, and renegotiations during alliance evolution, and continuously look for new opportunities.

9 Research Directions

Partners in strategic alliances usually carry both shared and private goals, which each party has for the alliance but does not share with its partners (Ariño, 2003). As pointed by Doz (1996), these goals, both shared and private, change over time and new goals may emerge as the alliance evolves, which sets the foundation for potential conflict. In DEAs, since the alliance typically starts open-ended with the primary goal of identifying and realizing new cash flows, the potential for such conflict is even higher. Therefore, this study explicitly focused on factors that have a direct impact on the primary goal of the alliance and proposes seven propositions that can increase the performance of DEAs. Much work remains to be done towards other goals that partners may carry leading to ancillary benefits. Next, I share three such benefits:

Market signaling: These alliances are often viewed as an endorsement of DP's confidence in the IP which forms a market signaling benefit for the IP (Connelly et al., 2011). For example, associating with a large global digital partner can enhance valuations and attractiveness of the IP in the local market. As the General Manager of finance for an Asian Telecommunication Operator notes,

> "In local market, (the global tech partner) is a household name… one of the largest companies in the world. Partnership with (the global tech partner) will radically enhance industry partner's local valuations and perception. That brings tremendous amount of benefit to them in the form of access to more funding, local partnership possibilities, employee stickiness, and just the overall buzz in the market…"

Similarly, the Vice President of an Asian MNC acknowledged:

> "These alliances are being used as a tool by Companies to attract VC investments. I am not saying that's the solo objective, but in many cases that's a key part of the initial objective."

As such, in DEAs, DP's endorsement can benefit the IP in the form of market signals to attract funding, new customers, or to create disruption for the competition. On the other hand, as the DPs seek to grow in new markets or new industries, they enter DEAs to partner with the so-called market-movers. Market movers are companies that have local presence, expertise, or brand, and help drive rapid penetration for the new entrant. DPs enter into DEAs with market-movers to signal the market of their intent to invest and grow in the market or industry (Eliashberg & Robertson, 1988), and create early success that the rest of the industry can follow. A Financial Controller of a global MNC reflected on a recent alliance, noting:

> "We want to do deals which become reference cases for us. That moves the rest of the industry partners in the market to follow. If we have the number one or number two bank in China working with us, that sets an example for the rest on not only how to do it, but who to do it with."

Similarly, the business development head of a tech giant shared how these alliances are used as beachheads into the markets,

> "We partnered with the top two local conglomerates with the intent to move the market. These large entities are well known and respected in the country, they literally are the market-movers, and for us, the alliance becomes a beachhead. It does signal the competition we are serious, and we will dip into our deep pockets as we see early success."

Therefore, a DP can use a DEA for market signaling (in an industry or geography) to emphasize future intent to invest and grow in the market or to dissuade the competition. This leads to few interesting questions for future research: how market signaling impacts DP's operational performance; how market signaling impacts IP's operational performance; and how IP's market signaling impacts DP's operational performance.

Digital partner's reach and access: IPs benefit by gaining access to DP's vast pool of resources. Seven out of the ten largest companies by market capitalization in the world are DPs amounting to $9 Trillion (Statista, 2020). In addition to deep technology expertise and deep pockets, these companies have vast engineering and regulatory knowledge, presence across most countries in the world, and well-developed functions such as supply-chains or marketing. The IPs are looking to gain access to such resources and reach that DPs possess in rich abundance. These resources are crucial for various struggling firms and industries to survive and / or disrupt. As the global Vice President of alliance strategy of a Fortune 500 firm notes,

> "…what they do get is some level of upfront investments from us but more importantly, they get the expertise and our experience across hundreds of such customers which helps them accelerate digital transformation, come up with new ideas to survive and compete in their industry, and sometimes grow or expand faster... They are under intense competitive threat and we open our ecosystems to them...."

Future research can begin to understand how DPs scale and monetize their investments by providing access to their resources and reach to multiple IPs, and its impact on operational performance. In addition, deeper insights into how IPs effectively integrate and leverage such resources for operational performance when they engage with multiple DPs can guide the managers to make informed decisions.

Industry learning: DPs seek to build new capabilities by learning new industries through DEAs (Kale & Singh, 2007). As the Sales Director of a Cloud company notes:

> "So, for the digital technology business to create value for various businesses, they need to accelerate industries to an unlimited compute, unlimited storage, unlimited connected environments to turn-on new experiences. Now, unlike in the past where we could create a packaged software like an operating system or an application and entice customers to license that going forward, we must build industry solutions. These solutions have to be relevant to the industry or to the geography, and that's what's required to drive non-linear growth."

Learning and knowledge acquisition of new industries and industry-based technology solutions that can solve higher-order business problems, such as clean energy, and drive non-linear growth, is an iterative process for DPs and takes time. As the Engineering Head of a global MNC notes,

> "Technology has to solve real industry problems such as clean-energy. Plain vanilla technology implementation only drives linear growth and value-prop is limited. Moreover, as every company becomes a digital company, we need to think which Industries we need to learn today for us to make a play in those in the future… (unnamed global Cloud partners) built their business working with so many start-ups on their platform and eventually ventured into those industries such as media streaming themselves. So even if the alliance fails, you gain the experience. As we gain multiple of these experiences over time, we iterate on that learning..."

Whilst DPs gain industry knowledge that can provide future expansion opportunities, they also benefit by being able to test and improve their technology with diversified industry use-cases. As highlighted by a Chief Technology Officer (CTO) of a tech firm, the benefit of industry partnerships also provides the opportunity to continuously improve the platform from product engineering perspective:

> "We always want to improve our platform and add new functionalities that cater to a wide variety of use cases. How a frontline worker uses our technology on a manufacturing line is different to how a Digibank employee does. Wide range of partnerships across industries help us learn and continuously introduce engineer improvements in our platform."

As such, the DP benefits by gaining new experiences in a traditional industry and uses this learning for platform or solution improvement or to create future possibilities of entering those industries. This raises an interesting topic for future study: do firms, and if yes, how, decide to form an alliance with industry learning as the primary goal even when the alliance is not expected to be financially profitable for the firm.

10 Conclusion

An IBM estimate notes that over the last decade, organizations have generated USD 3 trillion by making digital investments in growth and innovation in platform-based business models, and in realizing operational efficiencies *IBM (2019) Targeting the Full Value of Digital Disruption*. Digital transformation, continuing to disrupt industries and businesses at breakneck speeds, is leading the firms to form DEAs to seek new cash flows. This study draws on depth-interviews with senior managers and offers a parsimonious definition of DEA, outlines similarities and differences with related concepts, articulates DEA performance criteria, and develops seven propositions that bring to fore *ex-ante* factors that are likely to determine DEA performance. The study identifies novel concepts such as risk-reward capping that can extend to other forms of alliances. It also elaborates on managerial issues such as deal team's duration of engagement and related incentives and emphasizes several research issues that still need scholarly investigation. I hope that this study provides insights that managers can use to improve DEA performance and researchers can use for further inquiry on this important topic.

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