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Impact of Organizational Learning Process on Alliance portfolio performance with mediating role of Alliance portfolio management capability

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Abstract

Dynamic capabilities (DC) have been extensively explored in achieving sustained competitive advantage. Their further fragmentation in the first-order and second-order dynamic capabilities opens up new avenues for business strategy researchers. This study uses this hierarchy lens in the domain of alliance portfolio management. Organizational Learning Process (OLP) as a second-order dynamic capability/ higher-order DC helps firms to achieve alliance portfolio success through first order DCs i.e. Portfolio Coordination (PC), Partnering proactiveness (PP), Interorganizational coordination (IC) and Relational Governance (RG) as Alliance portfolio management capabilities. 327 out of 500 survey questionnaires were received from firms having multiple alliances (alliance portfolio). PLS-SEM was used to find the results that show the significant and valid indirect effect of RG, IC & PC on the relationship of OLP and APP. This study not only contributed to the theoretical frame of DCs by adding empirical evidence of its process approach of hierarchy but also by helping practitioners comprehend this complex labyrinth to ultimately attain success in this dynamic environment.

Keywords: Alliance Portfolio performance, first order dynamic capabilities, Alliance portfolio management capability Second order Dynamic capabilities, Organization learning process

Introduction

In the frantic and intensely competitive commercial world of today, alliances are critical in helping organizations achieve their strategic objectives. Strategic alliances are now essential for all business plans as a means of cooperation like manufacturing (Liu & Ravichandran, 2015), automobile (Jiang, Tao, & Santoro, 2010), and energy (CE Noticias Financieras, 2021), mining (Marketscreener.Com, 2020) and Software (Lavie, 2007) to access new markets, share risks, and pool resources. But dyadic relationships are not enough to get the full picture of success so the focus on the alliance portfolio (entire the coalitions of a focal company (Hoffman, 2005) is essential (Castiglioni et al., 2020), or "Businesses must perceive strategic partnerships as a portfolio play" (Özbek et al., 2022).

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Chakravarty, Zhou, & Sharma, (2020, p. 74) stated that "more than half of the alliances for new products developments proven to be failed due to lack of R&D. Strategy practitioners and researchers are intrigued to identify the success factors that contribute to the success of joint research and development partnerships.

According to Kohtamäki, Rabetino, and Möller (2018), p. 188, "the ability to manage, integrate, and learn from strategic alliances in today's interconnected and globalized economy" is one crucial component". But just building partnerships isn't a guarantee of success. Effective alliance portfolio management calls for an organization to work dynamically. Using a dynamic capability approach with its hierarchical viewpoint, this study explores this complex mechanism or as mentioned by Schilke (2014)" two-step causal chain" by investigating the influence of the OLP (organizational learning process) on alliance portfolio performance determined the mediating function of alliance portfolio capability.

A notable surge in alliances in the recent past is witnessed (Serrat, O.et al., 2017). Since 1980, the number of alliances has increased, leading to a large body of literature that can be divided into three key stages: The first ten years of the 1980s witnessed a lot of research on phenomenological analysis (sectoral, typological, etc.) and theoretical frameworks (transaction costs theory, resource-based approach, etc.).

The second decade (1990–2000) focuses on problems with alliance management and control, including aspects like performance, organizational learning, trust, and so forth. Finally, the concept of alliance portfolios has been the basis of numerous researches since 2000, and their management has grown in importance. The idea of an alliance network is well-developed and introduced as "portfolio" and "networks" interchangeably when referring to alliances (Guillouzo,2017). Through alliance portfolios, businesses may concurrently use the resources of several partners for (Van Wijk & Nadolska, 2020; Asgari, Singh, & Mitchell, 2017; Lavie, 2007).

But the question is how firms handle these multiple partners coherently to treat them as Alliance portfolio to gain access to required resources and effectively achieve portfolio success. To explore the answer, the researcher has utilized the lens of dynamic capabilities and most importantly discussed this scenario in the process approach with the hierarchy aspect of dynamic capability.

It is established through literature that higher-order dynamic capabilities i.e. second-order- DC work on first-order DCs (Schilke, 2014; Collis, 1994; Ali et al., 2020; Zollo & Winter, 2002;). The routines that work on organizational resources are called first-order dynamic capabilities or Lower order DCs. Although this hierarchy is generally accepted in Strategy literature, still there is a dearth of knowledge in the Alliance portfolio context and how the relationship of these capabilities under various boundary conditions changes must be analysed quantitatively to explore this framework (Abdullah, 2023; Rajan, Dhir & Sushil,202; Ali et al., 2020; Schilke, 2014; Wassmer, 2010). This research work aims to fill the gap in two ways. First, it endorsed to the DC literature by discussing the path of different levels of capabilities and their interdependencies i.e., First and second–order dynamic capabilities. Second, it works on different alliance portfolio

capabilities that help organizations to positively handle their multiple alliances, increase synergy, and eliminate conflicts.

Literature Review

Alliance Portfolio Performance

Strategic alliances here are taken as Cooperation between firms in any form e.g., joint ventures (JV), licenses, contracts, agreements, partnerships, etc. According to Kale and Singh (2009), these alliances can be collected under the umbrella term of strategic alliances. Alliance portfolio being infancy stage, has inconsistent definition. The most accepted one was by Lavie (2007: 1188) "An alliance portfolio refers to a firm's collection of direct alliances with partners". By taking a holistic frame, the firm can get additional advantages that come from the supervision of these interdependencies. The APP (Alliance portfolio Performance) is described in the past.

It pertains to an organization's overall performance and results brought about by its network of relationships. APP is defined as "The collective performance outcomes and contributions of a set of alliances within an organization's portfolio, which may include financial, strategic, and operational measures"(Kale & Singh, 2009).

Previous studies (Hung et al. 2010; Koka and Prescott 2002; Chien and Tsai, 2012; Gulati 1998; Namada, 2017) lead to the possibly ambiguous hypothesis that a firm's individual relationships develop and produce capital irrespective of one another. The success of an alliance is not determined by the mere total of a firm's alliances at the individual level; rather, it depends on the capabilities, handling, and execution of strategies, as well as the effective utilization of resources across the entire partner portfolio. It is where the statement under consideration breaks down when combined at the firm level. (2009, Sarkar et al.). To comprehend how various levels of capacities are formed and to explore their whole route rather than just discrete facts, a comprehensive picture of the phenomena is necessary.

Dynamic Capability and its Hierarchy

The dynamic capability view (DCV) provides a powerful lens for understanding how organizations work in dynamic environments, continuously adapt, and excel in today's world where rapid changes in technology, production processes, customer preferences, and business paradigms are pushing organizations to face each adversity of change with constant revisions. It is hypothesized that firms gain a competitive edge via their capacity to recognize and grasp opportunities, reorganize resources, and create new routines in reaction to shifting circumstances (Teece, Pisano, & Shuen, 1997).

Previous studies contributed toward definition of DC i.e. according to Teece etal., (1997), "integration and reconfiguration abilities to cope with turbulent environments", then Eisenhardt and Martin (2000) conceptualized DC's as "strategic routines". (Zollo and Winter (2002) describe DC's as performance through learning, Zahra and George (2002) treated it as change agent concluded resources reconfiguration.

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Table 1: Hierarchy of Dynamic Capability

Collis (1994)	**Danneels (2002)**	**Winter (2003)**	**Zahra et al. (2006)**	**Ambrosini et al., (2009)**	**Marfo et al., (2017)**	**Ali et al., (2020)**
First category capabilities	First- order capabilities	Zero-level capabilities	Dynamic capabilities (DC's)	Renewing DC's	First- order capabilities	Dynamic capabilities
Second & Third category capabilities	Second-order capabilities	First-order capabilities		Incremental DC's	Second-order capabilities	
Meta capabilities		Higher order capabilities	Substantive capabilities	Regenerative DC's	Third-order Capabilities	Substantive capabilities
				Resource Base	Resource level	

Source: *Author's own compilation of all the Transitory work in Organizational capabilities*

This nomenclature has since been employed by many previous scholars. Earlier is 1990's Dynamic capabilities introduced by Collis (1994) in comprehensive hierarchical order, here operational DC are termed as Zero order DCs which after sometimes revamping to first order DCs are altered by Second order or higher order capabilities to make alliances more strengthen. Few studies by alliance researcher Winter (2003 & 2008) modify these lower order and higher order terms to first order and second order capabilities.

Organizational learning capability falls under the Higher-order dynamic capability category (Schilke & Goerzen, 2010; Anand et al., 2010; Helfat & Winter,2011) while APMC (Alliance portfolio management capability) is a first category/order DC that uses resources that are available for the organization (Das & Teng, 2000; Hung et al., 2010) to achieve competitive advantage. In this constant dynamism, learning is essential. The learning process involves acquiring, interpreting, sharing, and integrating knowledge, which eventually leads to the development of higher-order capacities (Kale & Singh,2007). In this case, the high-order capabilities influencing the first-order DCs are the second-order dynamic capabilities. The alliance portfolio capability can be characterized as the level of proficiency with which a company develops alliance portfolio strategies, establishes a well-functioning management system, synchronizes the entire portfolio, permits resource synergies, and removes actor redundancies (Hoffmann, 2005; Chien et al., 2012; Namada, 2017).

Second-Order Dynamic Capability- Organizational Learning Process

Primarily, Kale and Singh (2007) have conceptualized this concept of organizational learning process (OLP). Through OLP an organization learns from its alliances and helps an organization to develop capabilities like targeting alliance partners with complementary resources, learning

from partners and portfolio and if market changes occur can transform them to respond timely. This process also partially mediates the OLP and Alliance portfolio performance. Learning is the main component of dynamic capabilities (Winter and Zollo, 2002; Winter, 2003; Kuppila O.P, 2015). Historically MNEs befitted from the alliance learning process by entering into a global market and forming international strategic alliances (ISA) (Parmigiani and Rivera-Santos 2011; Peteraf et al., 2013; Schulze & Brusoni, 2022). ISA is proven to be very effective in achieving market competitiveness globally (Nielsen and Nielsen 2009; Schweitzer 2014; Gehrisch et al., 2023).

The Extant literature review also validated the concept of OLP through codification, articulation, knowledge sharing and Internalization (Nonaka, 1994; Grant, 1996; Kale and Singh, 2007; Sawy et al., 2011; Wilden, Devinney, & Dowling, 2016; M. Peteraf, Di Stefano, & Verona, 2014; Schilke, 2018). Here, the step-by-step explanation of OLP is covered.

Knowledge Articulation

"Articulation" is the process of acquiring an external knowledge and making the greatest effort to translate it into explicit understanding. In businesses, knowledge and information can be communicated in a variety of methods, including verbal or written communication, specific models, metaphors, and analogies (Kale et al., 2002; Li, J., Qian, L., & Qian, Z., 2018; Karna et al., 2016). Among other relational variables and conflict, learning and knowledge have recently been highlighted as one of the important categories (Gehrisch et al., 2023). Kale and Sing (2008), pointed out that articulation can be very beneficial for a manager's alliance management expertise. Initially, it helps a business to maintain its past alliance database, and to overcome loss of former alliance practices due to employee changes. Then, the OLP through the articulation mechanism assist managers in making sense of their ex-post actions and judgments as they talk about or consider their previous collaborations (Kale and Singh, 2008; Li, J., Qian, L., & Qian, Z., 2018). Therefore, articulation can help managers discover the best and worst ways to carry out particular tasks during alliance administration and building, as well as the procedures associated with them.

Codification of Alliance Knowledge

Generating and applying knowledge objects or issues is part of the codification process. For example, alliance guidelines, guides, or checklists to assist with activities in future alliance scenarios. The partnering firm's ability to articulate and codify information, its willingness to share knowledge, and its consistent and effective use of communication channels all influence the extent of knowledge acquisition (Laaksonen & Peltoniemi, 2016; Wilden, Devinney, & Dowling, 2016; Minbaeva et al., 2018; Gehrisch et al., 2023).

Taking it a step further, Zollo and Winter (2002) define it as a more proactive and intentional endeavor founded on critical scrutiny of practical work connected to explicit actions, which includes the construction and use of codified resources to drive action. In a similar vein, Kale and Singh (2007) define OLP in the context of codification as "producing and consuming

knowledge items or resources such as alliance rules, checklists, or instructions to assist action or decision-making in future alliance situations" when referring to the alliance learning process.

Sharing of Alliance Knowledge

The next stage in the alliance learning process is knowledge sharing, which is essential. Knowledge sharing is the exchange and distribution of autonomously and organizationally obtained alliance management information through social contact inside the company. This information may be tacit or codified. According to March, Sproull, and Tamuz, 1991; Seely Brown and Duguid, 1991; Zahra et al., 2006; Hung et al., 2010; Winter, 2003; Chien et al., 2012; Hernández-Linares et al., 2021; Gehrisch et al., 2023), "centers of personal communication" are a prominent part of the aforementioned information exchange. As personally held knowledge can be shared among managers through dialogue as opposed to knowledge objects, every individual is given a forum to share personally held information through personal interaction (Hansen et al., 1999; Peteraf et al., 2013; Namada, 2017; Sims et al., 2001; Schulze & Brusoni, 2022; Dyer, Kale, and Singh, 2001; Martin, 2000; Easterby-Smith and Prieto, 2007; Protogerou et al., 2011;). Face-to-face communication

Knowledge Internalization

"Learning how to do it" is emphasized in the internalization process, when the recipient concentrates on understanding the "recipe" for the "how to" rather than just why it works. Additionally, internalization increases a firm's capability to absorb information for the given activity (Cohen and Levinthal, 1990) in this instance, familiarity in alliance management. Previously case studies and researches (Alliance Analyst, 1996; Hansen et al., 1999; Peteraf et al., 2013; Draulans et al., 2003; Casseres et al., 2002; Protogerou et al., 2011; Karna et al., 2016; Pavlou and El Sawy, 2011) indicate that companies having a devoted alliance learning processes have a higher chance of success in their alliances.

Despite an epitome of research on the concepts of organizational learning process and Alliance portfolio performance little is known about how these ideas are applied in an alliance setting. Alliance researcher Dong et al., (2020) significantly contributes to the body of literature by focusing on organizational learning process. Experience is added as a crucial element of knowledge cited by contemporary alliance researchers (Waheed, A., Shafiq, S. and Mirza, B, 2023; Doz and Hamel, 1998; Marco Castiglioni, Mar Cobeña, José Luis Galán, 2021; Anna Nadolska, 2020; Fiol and Lyles,1985).

In Second order dynamic capabilities discussion, organizational learning is being discussed. These higher order capabilities are styled "learning-to-learn" by Collis (1994), Ambrosini et al., (2009) treated them as Meta DCs and Regenerative DCs. Duysters et al. (2012) discussed that firms have the potential to improve the performance of their varied alliance portfolios by engaging in deliberate learning tools that mirror their alliance capability. Overall, the whole process of organizational learning leads to better decision-making and later enhances performance at portfolio level of alliances. So, we can propose that

H1: Organizational learning process (OLP) has a positive influence on alliance portfolio performance (APP).

First Order Dynamic Capabilities- Alliance Portfolio Management capability (APMC)

Alliance portfolio competence is comprised of three cooperative rent-creating factors as presented by Sarkar et al. (2009) relational governance, portfolio coordination, and partnership proactiveness. Nonetheless, these scholars look at these dimensions on their own. Furthermore, this is viewed as a second-order construct by Kauppila (2013) and Schilke and Goerzen (2010) as a multidimensional capability. Furthermore, they don't pay attention to how its parts work together with the essential alliance learning processes.

Afterward, Kale and Singh (2007) and Heimeriks and Duysters (2007), investigated by what means some second-order DC practices and routines of the OLP grant the organization the authority to extend the scope of this capability, authorize the firm to do so, and stimulate the accomplishment of all the coalitions in its group. The researchers did admit, nevertheless, that they did not compute or theorize these "first-order" dynamic capability concepts directly.

Partnering proactiveness

The overall effectiveness of the innovation system can be raised with proper partner selection. However, inadequate partner selection may raise risks and cause innovation systems to fail (Li et al., 2019). Selecting and screening the ideal partner is a crucial decision and a challenge for the success of the strategic alliance; it also requires time and money (Li, J., Qian, L., & Qian, Z., 2018; Fu et al., 2019).

The efficacy of the partnership is increased when partner firms have higher degrees of learning orientation and success. According to Farrell et al. (2011) and Gehrisch et al. (2023), partner businesses that effectively advance their knowledge and complete their learning objectives will also succeed in improving their operational efficiency.

Businesses are therefore more likely to benefit from first-mover advantages in the defective key component market of partners if they are proactive in identifying and pursuing collaborative opportunities (Sarkar et al. 2001; Laaksonen & Peltoniemi, 2016; Wilden, Devinney, & Dowling, 2016; Gehrisch et al., 2023). Thus, this will most likely increase a company's collusion portfolio's worth-making potential.

Relational Governance

Relational governance, on the other hand, is defined as an organization's involvement in social schedules that support the advancement of self-authorizing barriers in alliance management portfolio (Wang et al., 2015; Sarkar et al., 2009). A special kind of intelligent contact between partners creates cooperative worth. The extent to which an alliance develops and uses systems for coordination, trust, and commitment to handle interdependencies and potential conflicts (Poppo & Zenger, 2002; Sarkar et al., 2009),

Interorganizational coordination

Alliance management competence significantly impacts on performance of the alliance portfolio (Schilke, 2010). There are three arguments in favor of interorganizational coordination schedules. The goals of strategic interorganizational partnerships or alliances include market exploration, resource acquisition, product development, and the improvement of R&D competencies.

Firms' alliances have expanded expressively in the last several years (Serrat, 2017; Ali et al., 2020; Schilke, 2018). The intra-organizational knowledge dissemination process possibly has varied learning consequences in alliance portfolios and their other segments, it has a substantial influence on corporate modernization (Verona et al., 2014; Hubel et al., 2022).

Alliance portfolio coordination

It governs an association's dedication to coordinating and harmonizing data and activities among its alliances (Bamford & Ernst, 2002; Goerzen, 2007). The strategic development and supervision of a group of partnerships inside a company's portfolio to fulfil strategic objectives, distribute resources as efficiently as possible, and reduce risks at the portfolio level (Koka & Prescott, 2002; He & Wong, 2004). The systematic governance of various alliances improves portfolio performance overall by coordinating partner choice, resource distribution, and alliance governance (Kale & Singh, 2007; Dyer & Nobeoka, 2000).

Strategic alliances can provide valuable resources, capabilities, and market access. However, realizing the full potential of these partnerships requires effective management. Kale and Singh's framework sheds light on how organizational learning fosters alliance portfolio management capability (APMC), a first-order capability crucial for alliance success.

Through efficient knowledge articulation, codification, sharing, and internalization, organizations can develop effective partner selection processes based on learning from past experiences, facilitate inter-alliance knowledge transfer and collaboration, leverage synergies across partnerships, optimize the composition and dynamics of the alliance portfolio, ensure alignment with strategic goals, and build robust relational governance mechanisms to manage conflict and foster trust with partners.

Ultimately, organizational learning acts as the catalyst, enabling the development and deployment of APMC, thus enhancing the performance and value derived from alliance portfolios.

Ambrosini et al., (2009), stressed the significance of comprehending the unique process that second-order DCs use towards other DCs. One can only be certain of reaching Higher-order DCs by proving that wary erudition practices impact outcomes concluded the expansion of first-order DCs. Theoretical explanations distinguishing the characteristics of higher-order DCs, by indirectly integrating lower-order DCs into the mechanism, rather than directly impacting performance.

This reasoning points to a mediation paradigm in which the effects of second-order dynamic capabilities on performance are mediated by first-order dynamic capabilities. After this

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discussion, we propose the mediation mechanism in our research where APMC mediates the association flanked by the OLP and APP.

H1a: Partnering Proactiveness mediates the relationship between the OLP and Alliance portfolio performance.

H2a: Relational Governance mediates the relationship between the OLP and Alliance portfolio performance.

H3a: Portfolio coordination mediates the relationship between the OLP and Alliance portfolio performance.

H4a: Interorganizational coordination mediates the relationship between the OLP and Alliance portfolio performance.

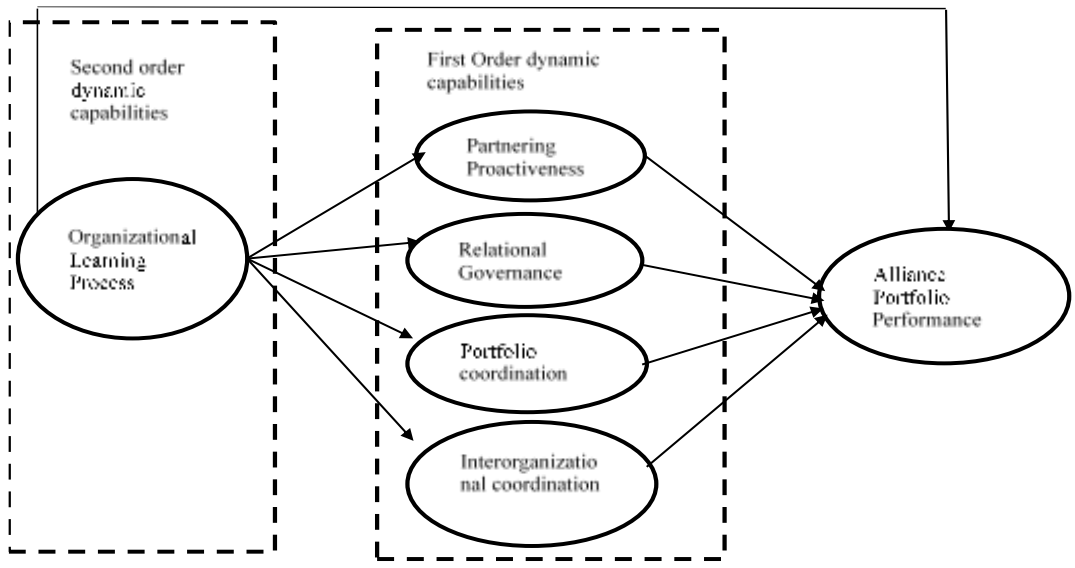

Figure 1: Proposed conceptual framework

Methodology

Data Collection

Data was collected through a cross-sectional survey method from the sample population and presented statistical clarification for the measurement model. Several researchers use the survey method as a quantitative research design in Alliance Portfolio (Castro et al., 2015; Wang & Bao, 2017; Han et al., 2018; Schilke et al., 2010; Kumar et al., 2022). This research is on the firms that are involved in multiple partnerships and have an alliance portfolio. Top management, the Strategic Unit Heads of different firms in different industries, and key administrative employees

were taken as sample population. Out of 500, we received 327 valid responses to further analyze it all. As the exact population is unknow, so non probability Snow Ball sampling is used.

Measurement Scale

The measuring scale used in this study consists of two sections. Section A: Profile of the company, No. of employees, No of Alliances, Industry in which the firm is operating. Section B consists of measuring latent variables with previously established instruments. Second Order Dynamic Capabilities consist of Organizational Learning further divided into four-step Process e.g. Knowledge Articulation theoretically proposed by Alliance researchers; Davenport and Prusak (1998); Nonaka (1994); Harbison and Pekar (1998) measured by well-known Alliance Analyst Kale & Singh (2007) through five items scale.

Knowledge codification theoretically defined by Winter (1987); Badaracco (1991); Zollo and Singh (2004) also tested by Kale & Singh (2007) with 04 items scale. Earlier Knowledge sharing was explored by several research studies (Seely Brown and Duguid, 1991; Huber, 1991; Milliken et al., 1994; Senge, 1997; Nonaka, 1994) and measured through 06 items scales by Kale & Singh (2007). Finally, Knowledge internalization is measured through 04 items scales of Kale & Singh (2007). More precisely we have used the 19-item comprehensive scale developed by Kale & Singh (2007) to measure the Organization's Learning Process, communally the Second-order capability is corroborated by using a 21-item scale.

The direct effect of Second-order capability over first-order capability is further figured through five dimensions with 21 item scales collectively i.e. 1- Partnering Proactiveness, RG and PC by Sarkar, Aulakh, & Madhok, (2009), 05 items each i.e.15 items scales and Interorganizational Coordination by Schilke and Goerzen(2010) tri-items scales items. Finally, Alliance Portfolio Performance (APP) is tested by Schilke and Goerzen (2010) using a 04-item scale developed based on previous research works of Saxton (1997), Zollo et al. (2002) and Judge and Dooley (2005).

Measurement model assessment dealt with the analytical interpretation of data collected through surveys. Given the nature of relationships, PLS-SEM is used to test the model. PLS-SEM has high statistical power that gives consistent results with intricate models and is capable of handling reflective and formative dimension in chorus is the major reasons to selecting PLS-SEM for the analysis of this study. PLS-SEM requires testing the model in two stages. Measurement models and structural models (Chin,1998; Edwards, 2001; Jarvis et al., 2003) are discussed next.

Measurement Model Assessment

Measurement model assessment dealt with the analytical interpretation of data collected through surveys. A Two-Step process of PLS Path Model Assessment has following domains. Measurement Model Assessment has following steps and Structural Model Assessment.

First is dealt with Investigation of Reliability for individual item, determining internal consistency of items, establishing convergent validity determining Discriminant validity. Second is analysis of

path coefficient, Evaluating the variance explanation (R^2), Shaping the (f^2) and finally (Q^2) i.e. predictive weight (Henseler et al., 2009)

The measurement model represents association between items and its dimensions or the indicator variables or items. Since the model of the study contains one higher order reflective-formative and then six reflective-reflective constructs, both reflective & formative constructs will be estimated separately using the guidelines of Hair et.al. (2014).

Reliability and validity

The Construct reliability established after evaluating composite reliability and Cronbach's alpha is used to ascertain reliability and validity of the measurement scale. F actor loadings and AVE were also used for convergent validity. Finally, the cross-loadings represent discriminant validity of the results by deploying Fornell-Larcker criteria.

As mentioned, Cronbach's alpha should be > 0.7 and factor loadings should be greater than 0.5 (Hair Jr et al., 2017; Yasin, 2021). Composite reliability > 0.6 and the AVE ought to be > 0.4 (Fawehinmi et al., 2020; Fornell et al., 1981).

Table 2: Validity results: Construct and Convergent validity

Item Description	Cronbach's Alpha	Composite Reliability	(AVE)
Alliance Portfolio Performance	0.935	0.954	0.837
Interorganizational Coordination	0.933	0.957	0.882
Organizational Learning Process			
Partner Proactiveness	0.925	0.943	0.768
Portfolio Coordination	0.925	0.947	0.816
Relational governance	0.925	0.947	0.816

Since Cronbach alpha is more than 0.7 it reflects an internal item consistency among items. A careful examination of Table 2 reveals that the Cronbach alpha values were satisfactory in meeting the requirements for measurement (all values were between 0.925 and 0.935).

Regarding convergent validity, finally, all the AVE values exceeded the minimum threshold (values were between 0.768 and 0.882). Based on the results, construct reliability & convergent validity of the model is satisfactory.

Discriminant Validity

The cross-loadings represent discriminant validity of the results by deploying Fornell-Larcker criteria (Henseler et al., 2015). Discriminant validity is crucial to assessing the dissimilarity across measuring instruments of various components, where the AVE square > other constructs' correlations (Fornell et al., 1981).

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Table 2 : Discriminant Validity assessment

Fornell-Lacker Criterion	Alliance Portfolio Performance	Interorganizational Coordination	Organizational Learning Process	Partner Proactiveness	Portfolio Coordination	Relational governance
Alliance Portfolio Performance	0.915					
Interorganizational Coordination	0.805	0.939				
Organizational Learning Process	0.745	0.762				
Partner Proactiveness	0.771	0.810	0.849	0.876		
Portfolio Coordination	0.765	0.787	0.837	0.817	0.903	
Relational governance	0.787	0.813	0.795	0.788	0.726	0.903

Multicollinearity analysis

PLS-SEM was adopted to determine the collinearity statistics for the following set of (predictor) constructs: Knowledge Articulation, Knowledge Codification, Knowledge Internalization, Knowledge Sharing, Interorganizational Coordination, Partner Proactiveness, Portfolio Coordination, as predictors of APP. Using the values of Variance Inflation Factor (VIF), multicollinearity was computed. VIF values for all the study constructs were clearly < the cut off value of 10 (Hair et al., 2016).

Further, correlations among study variables did not signify the issue of multicollinearity. Therefore, collinearity among predictor constructs was not reported in structural model. All the readings were found satisfactory and no collinearity found among items.

Evaluation of Formative Constructs in the Higher Order Construct (HOC) Assessment

Organizational Learning is theorized as a 2nd order formative concept entailing KA, KC, KS and KI. To evaluate the formative constructs, three conditions need to be examined: Convergent validity, Indicator's Collinearity, and outer weights' relevance and significance. Convergent validity was examined using outer weights to ensure that both the formative construct and its indicators adequately capture the entire scope of the construct's domain. The outer weights assorted from 0 to +1.

A weight adjacent to 0 specifies a weak association, whereas proximity to +1 suggests a strong relationship (Hair et al., 2019). In this case outer weight of knowledge confidence is insignificant. If an item's outer weight is not statistically significant, it is essential to examine its outer loading, which represents the indicator's absolute contribution to construct (Hair et al., 2017). If the outer loading is greater than 0.5, it is advisable to retain the item, even if it is deemed statistically insignificant. As outer loading is 0.838 hence knowledge confidence was retained and not deleted.

The issue of collinearity has the potential to diminish the predictive efficacy of the variables involved in the prediction. It is checked by using VIF. VIF values below 5 serve as an indication of the absence of multicollinearity. Over all the results in the table reflects sufficient validity of OLP and its four dimensions. The results of these assessments are summarized in Table no. 6 below.

Table 3: Assessment of Formative Construct

2nd Order construct	Scale Type	Items	Weights	VIF	Loadings	t-value	p-value	Items Deleted
OLP	Formative	KA	0.455	2.795	0.932	7.850	0.000	None
		KC	0.081	3.121	0.838	1.123	0.262	None
		KI	0.228	2.363	0.842	3.328	0.001	None
		KS	0.343	3.861	0.922	5.120	0.000	None

Significance of Structural Models

Significance of structural model is determined by variance size (R^2), effect size (f^2) and the relevance (Q^2) of the model. R-squared values depict the variance in endogenous constructs resulting from exogenous constructs. In simpler terms, it signifies the extent to which changes in the dependent variable are attributed to one or more independent variables.

Hair et al. (2013,2014) suggested values 0.75 (high) ,0.50 (medium) and 0.25 (low). APP shows R^2 value of 0.73 which means that 73% change in APP is due to combine effect of first order dynamics. f^2 indicates the revised value of R-squared after exclusion of exogenous variable. f2 value >0.02 is insignificant, >0.15 moderate and >0.35 is High (Cohen ,1988). The value of 0.07 reflects small effect size. The predictive relevancy is measured by Q^2. Its value should be greater than 0. The value of 0.7 reflects strong predictive relevancy of the model.

Table 4 : Structural Model Assessment

Endogenous Constructs	R^2	f^2	Q^2
APP	0.730	0.079	0.70

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Table 5: Significance of the Relationships-Direct Effect

Relationships-Direct Effect	β Values	T Values	P Values	Status
Organizational Learning Process -> Alliance Portfolio Performance	0.751	22.658	0.000	Accepted
Interorganizational Coordination -> Alliance Portfolio Performance	0.298	4.287	0.000	Accepted
Organizational Learning Process -> Interorganizational Coordination	0.762	25.782	0.000	Accepted
Organizational Learning Process -> Partnering Proactiveness	0.849	42.505	0.000	Accepted
Organizational Learning Process -> Portfolio Coordination	0.837	41.867	0.000	Accepted
Organizational Learning Process -> Relational governance	0.795	28.634	0.000	Accepted
Partnering Proactiveness -> Alliance Portfolio Performance	0.120	1.571	0.116	Rejected
Portfolio Coordination -> Alliance Portfolio Performance	0.222	2.576	0.010	Accepted
Relational governance -> Alliance Portfolio Performance	0.288	5.319	0.000	Accepted

OLP taken as a formative construct is run on PLS to find its direct relationship with APP. The relationship is found significant with p-value < 0.000 having β:0.751, t value: 22.658. All the relationships are accepted except Partnering Proactiveness ->APP. The P-value falls above the threshold.

Table 6: Mediation Analysis

Total Effect OLP>APP		**Direct Effect OLP>APP**		**Indirect Effect of OLP on APP**						
B	**p-value**	**β**	**p-value**		**β**	**SD**	**T Value**	**P Value**	**BI 2.5%-97.5%**	**Status**
0.747	000	0.008	0.919	OLP>IC>APP	0.228	0.05	4.159	0.000	0.121-0.336	Accepted
				OLP>PP>APP	0.100	0.063	1.577	0.115	-0.023-0.230	Accepted
				OLP>PC>APP	0.183	0.078	2.339	0.019	0.040-0.346	Accepted
				OLP>RG>APP	0.228	0.047	4.898	0.000	0.140-0.324	Accepted

Different first order DCs like PP, IC, RG and PC mediate the relationship between OLP and APP. According to the analysis results, In the presence of IC, PP, PC, RG, the direct effect of OLP and APP becomes insignificant with p value (0.919), showing complete mediation in this case. This implies that Second order DC has a relationship with APP via first order DC.

Discussion

Our exploration of the intricate interplay between alliance portfolio management capability (APMC), organizational learning, and alliance portfolio performance, through the lens of the dynamic capability view (DCV), has revealed a compelling narrative. This study was conducted to discover the Dynamic capabilities that facilitate the operation of successful Alliance Portfolio Performance (APPs), the uprising progression engrosses the multi-order Dynamic Capabilities (DCs) and forms a holistic operational framework which consequently helps to measure the performance of Alliance Portfolio. These DCs are termed as the First order Dynamic Capabilities covering five domains i.e., Alliance (partner) Proactiveness, Relational Governance, Interorganizational Coordination, and Portfolio coordination. Finally, the Second Order Dynamic Capabilities consist of the Organizational Learning Process. All the above-mentioned constructs are measured through previously available tested scales. The outcomes would help explain the mechanism through which different firms get an edge over competitors by establishing successful management of Alliance portfolio through Alliance Portfolio management capability.

For businesses that participate in a lot of strategic alliances, considerate the association among alliance learning procedures and alliance portfolio performance is crucial. The effective application of alliance learning methodologies can have a significant impact on the alliance portfolio's performance. Organizations may acquire information through the alliance learning

process, which also makes it easier to share and use that knowledge effectively. When organizations are successful in learning from the experiences gained from their previous coalitions and sharing this knowledge throughout the portfolio, the performance of the alliance is enhanced.

Our data supported our first hypothesis and showed that the organizational learning process comprised of knowledge articulation, codification, sharing, and internalization (Kale & Singh, 1999) has a direct positive relation with portfolio performance. After discussing the benefits aspects, the study also evaluated the role of different mediators that work in this relationship of OLP and PP. Our results are consistent with current empirical data, which supports the suggested framework even more. We found that the formation of strong APMC is fostered by organizational learning mechanisms such as inter-alliance knowledge transfer and internalization (Schilke et al, 2014). The contributions of various first-order skills are then amplified by this finely tuned capacity, thereby converting hypothetical synergies into concrete portfolio outcomes like increased innovation, market share growth, and profitability.

Same as first postulate, the rest of the them directly deals with the mediation effect of PP, RG, IC, PC with OLP and APP. All except partnering proactiveness couldn't proven to be alliance portfolio management capability. While elational governance abilities form trust-based collaborations with other businesses (Hagedoorn, et al., 2018). Relationships that are trust-based and mutually beneficial allow parties to share more information informally outside of formal agreements and increase the likelihood of developing assets unique to the relationship (Sarkar et al., 2009).

Although organizational learning enables businesses to evaluate previous experiences, see warning signs, and modify communication techniques in response to cultural variations, all of which aid in selecting appropriate partners and establishing trustworthy connections but this doesn't happen to be the case in the Pakistani scenario. As insignificant results appear and the relationship gets falsified pushes the future researcher to identify those boundary conditions and the contexts in which it is more appreciated. Partnership proactiveness may play a different function as a mediator depending on the situation. Proactiveness may have less of an influence on industries with well-established partner networks since suitable partners are easily accessible. On the other hand, proactiveness may be necessary to get access to vital information and resources in highly fragmented and dynamic businesses, making it even more complex, specifically in a country like Pakistan, where trust among partners lacks is a reason for this response.

Implication and future recommendations

Theoretically, this study enhances the DCV framework by highlighting the hierarchical structure of capabilities and demonstrating how the second-order learning process propels the creation and coordination of first-order capabilities such as APMC. It provides a clear framework for converting learning into observable results, bridging the gap between theoretical learning processes and real-world alliance management. Practically this study has highlighted the

importance of the learning mechanism and suggesting to invest in developing Learning skills through continuous training and development. Also empirically proving to build strong APMC by creating dedicated alliance teams, having effective inter-alliance as well as at portfolio level strong communication channels to achieve maximum benefits of alliance portfolio.

Further research could delve deeper into these potential explanations and explore moderating factors that might influence the relationship between the interplay of these different levels of capabilities. Moreover, it is highly recommended to explore more first-level DCs to cater to the continuous renewal requirements of the alliance portfolio like Alliance transformation as well as Second order DCs in the context of the Alliance portfolio like the impact of structural support or integrative capability to fully explore this understudied phenomenon. The mediation and moderation relationship can be projected through other first-order capabilities i.e. Structural Alliance Units. Still, the Role of zero-order and Third-order DCs need to be explored through future research from local and global perspectives. To fill the vast gap in the current literature, more and more empirical pieces of evidence are required from this field.

References

Abdullah, S. (2023). Organizational Learning and Private College Performance: The Role of Capabilities' Hierarchy. *Economics, Business, Accounting & Society Review*, *2*(1), 10-19.

Ali, S., Peters, L. D., Khan, I. U., Ali, W., & Saif, N. (2020). Organizational learning and hotel performance: the role of capabilities' hierarchy. *International Journal of Hospitality Management*, *85*, 102349.

Ambrosini, V., Bowman, C., & Collier, N. (2009). Dynamic capabilities: An exploration of how firms renew their resource base. *British journal of management*, *20*, S9-S24.

Anand, J., Oriani, R., & Vassolo, R. S. (2010). Alliance activity as a dynamic capability in the face of a discontinuous technological change. Organization Science, 21(6), 1213–1232.

Asgari, N., Singh, K., & Mitchell, W. (2017). Alliance portfolio reconfiguration following a technological discontinuity. *Strategic Management Journal*, *38*(5), 1062-1081.

Akoglu, H. E., & Özbek, O. (2022). The effect of brand experiences on brand loyalty through perceived quality and brand trust: a study on sports consumers. *Asia Pacific Journal of Marketing and Logistics*, *34*(10), 2130-2148.

Badaracco Jr, J. L. (1991). Alliances speed knowledge transfer. *Planning Review*, *19*(2), 10-16.

Bamford, J. D., Gomes-Casseres, B., & Robinson, M. S. (2002). *Mastering alliance strategy: A comprehensive guide to design, management, and organization*. John Wiley & Sons.

Bratianu, C. (2010, March). A critical analysis of Nonaka's model of knowledge dynamics. In *Proceedings of the 2nd European Conference on Intellectual Capital, ISCTE Lisbon University Institute, Lisbon, Portugal* (Vol. 29, No. 30, pp. 115-120).

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization science*, *2*(1), 40-57.

Castiglioni, M., & Galán González, J. L. (2020). Alliance portfolio classification. Which portfolio do you have?. *Baltic Journal of Management*, *15*(5), 757-774.

Castiglioni, M., Cobeña, M., & Galan, J. L. (2021). The role of cooperation in productivity: Alliance portfolio and network resources. *Research in Transportation Business & Management*, *41*, 100646.

Chakravarty, A., Zhou, C., & Sharma, A. (2020). Effect of alliance network asymmetry on firm performance and risk. *Journal of Marketing*, *84*(6), 74-94.

Chien, S. Y., & Tsai, C. H. (2012). Dynamic capability, knowledge, learning, and firm performance. *Journal of Organizational Change Management*, *25*(3), 434-444.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, *295*(2), 295-336.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 128-152.

Collis, D. J. (1994). Research note: how valuable are organizational capabilities?. *Strategic management journal*, *15*(S1), 143-152.

Collis, D. J. (1996). Organizational capability as a source of profit. *Organizational learning and competitive advantage*, *139163*.

Danneels, E. (2008). Organizational antecedents of second-order competences. *Strategic management journal*, *29*(5), 519-543.

Das, T. K., & Teng, B. S. (2000). A resource-based theory of strategic alliances. *Journal of management*, *26*(1), 31-61.

Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business Press.

De Oliveira, R. L. S., Schweitzer, C. M., Shinoda, A. A., & Prete, L. R. (2014, June). Using mininet for emulation and prototyping software-defined networks. In *2014 IEEE Colombian conference on communications and computing (COLCOM)* (pp. 1-6). Ieee.

Doz, Y. L., & Hamel, G. (1998). *Alliance advantage: The art of creating value through partnering*. Harvard Business Press.

Draulans, J., DeMAN, A. P., & Volberda, H. W. (2003). Building alliance capability: Management techniques for superior alliance performance. *Long range planning*, *36*(2), 151-166.

Dyer, J. H., Kale, P., & Singh, H. (2001). How to make strategic alliances work. *MIT Sloan management review*, *42*(4), 37-37.

Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: the Toyota case. *Strategic management journal*, *21*(3), 345-367.

Easterby-Smith, M., Lyles, M. A., & Peteraf, M. A. (2009). Dynamic capabilities: Current debates and future directions. *British Journal of Management*, *20*, S1-S8.

Edwards, J. R. (2001). Multidimensional constructs in organizational behavior research: An integrative analytical framework. *Organizational research methods*, *4*(2), 144-192.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they?. *Strategic management journal*, *21*(10-11), 1105-1121.

Financieras, C. N. (2021). The pandemic accelerated digital transformation.

Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *Academy of management review*, *10*(4), 803-813.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

Gehrisch, M. G., & Süß, S. (2023). Organizational behavior in international strategic alliances and the relation to performance–a literature review and avenues for future research. *Management Review Quarterly*, *73*(3), 1045-1107.

Geurts, D., & Van der Zee, H. (2001). Does alliance management differ from network management. *The alliance enterprise: Global strategies for corporate collaboration*, 41-49.

Gomes, E., Barnes, B. R., & Mahmood, T. (2016). A 22-year review of strategic alliance research in the leading management journals. *International business review*, *25*(1), 15-27.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, *17*(S2), 109-122.

Gulati, R. (1998). Alliances and networks. *Strategic management journal*, *19*(4), 293-317.

Guillouzo, R. (2017). Alliance Portfolio Management: A Model Based on Dynamic Capabilities. *Management and Governance of Networks: Franchising, Cooperatives, and Strategic Alliances*, 253-266.

Glynn, M. A. (1996). Innovative genius: A framework for relating individual and organizational intelligences to innovation. *Academy of management review*, *21*(4), 1081-1111.

Hagedoorn, J., Lokshin, B., & Zobel, A. K. (2018). Partner type diversity in alliance portfolios: Multiple dimensions, boundary conditions and firm innovation performance. *Journal of Management Studies*, *55*(5), 809-836.

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, *1*(2), 107-123.

Harbison, J. R., & Pekar, P. P. (1998). Smart alliances: A practical guide to repeatable success. *(No Title)*.

Hansen, M. T. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative science quarterly*, *44*(1), 82-111.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2012). Using partial least squares path modeling in advertising research: basic concepts and recent issues. In *Handbook of research on international advertising*. Edward Elgar Publishing.

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, *15*(4), 481-494.

Helfat, C. E., & Winter, S. G. (2011). Untangling dynamic and operational capabilities: Strategy for the (N) ever-changing world. *Strategic management journal*, *32*(11), 1243-1250.

Heimeriks, K. H., & Duysters, G. (2007). Alliance capability as a mediator between experience and alliance performance: An empirical investigation into the alliance capability development process. *Journal of management studies*, *44*(1), 25-49.

Hoffmann, W. H. (2005). How to manage a portfolio of alliances. *Long range planning*, *38*(2), 121-143.

Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2021). Dynamic capabilities and SME performance: The moderating effect of market orientation. *Journal of Small Business Management*, *59*(1), 162-195.

Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education*, *55*(3), 1080-1090.

Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of consumer research*, *30*(2), 199-218.

Jiang, R. J., Tao, Q. T., & Santoro, M. D. (2010). Alliance portfolio diversity and firm performance. *Strategic management journal*, *31*(10), 1136-1144.

Judge, W. Q., & Dooley, R. (2006). Strategic alliance outcomes: a transaction-cost economics perspective. *British journal of Management*, *17*(1), 23-37.

Laaksonen, O., & Peltoniemi, M. (2018). The essence of dynamic capabilities and their measurement. *International Journal of Management Reviews*, *20*(2), 184-205.

Lavie, D. (2007). Alliance portfolios and firm performance: A study of value creation and appropriation in the US software industry. *Strategic management journal*, *28*(12), 1187-1212.

Li, W. J., Wang, S., & Kang, W. C. (2015). Feature learning based deep supervised hashing with pairwise labels. *arXiv preprint arXiv:1511.03855*.

Liu, Y., & Ravichandran, T. (2015). Alliance experience, IT-enabled knowledge integration, and ex ante value gains. *Organization Science*, *26*(2), 511-530.

Kale, P., Dyer, J. H., & Singh, H. (2002). Alliance capability, stock market response, and long-term alliance success: the role of the alliance function. *Strategic management journal*, *23*(8), 747-767.

Kale, P., & Singh, H. (2007). Building firm capabilities through learning: The role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal, 28*(10), 981– 1000.

Kale, P., & Singh, H. (2009). Managing strategic alliances: What do we know now, and where do we go from here? *Academy of Management Perspectives, 23*(3), 45–62.

Kale, P., Singh, H., & Bell, J. (2009). Relating well: Building capabilities for sustaining alliance networks. *The network challenge: Strategy, profit, and risk in an interlinked world*, 343-356.

Karna, A., Richter, A., & Riesenkampff, E. (2016). Revisiting the role of the environment in the capabilities–financial performance relationship: A meta-analysis. *Strategic Management Journal*, *37*(6), 1154-1173.

Kohtamäki, M., Rabetino, R., & Möller, K. (2018). Alliance capabilities: A systematic review and future research directions. *Industrial marketing management*, *68*, 188-201.

Koka, B. R., & Prescott, J. E. (2002). Strategic alliances as social capital: A multidimensional view. *Strategic management journal*, *23*(9), 795-816.

March, J. G., Sproull, L. S., & Tamuz, M. (1991). Learning from samples of one or fewer. *Organization science*, *2*(1), 1-13.

Martin, D. J., Garske, J. P., & Davis, M. K. (2000). Relation of the therapeutic alliance with outcome and other variables: a meta-analytic review. *Journal of consulting and clinical psychology*, *68*(3), 438.

Minbaeva, D., Park, C., Vertinsky, I., & Cho, Y. S. (2018). Disseminative capacity and knowledge acquisition from foreign partners in international joint ventures. *Journal of World Business*, *53*(5), 712-724.

Namada, J. M., Bagire, V., Aosa, E., & Awino, Z. B. (2017). Strategic planning systems and firm performance in the export processing zones. *American Journal of Industrial and Business Management*, *7*(4), 487-500.

Pavlou, P. A., & El Sawy, O. A. (2011). Understanding the elusive black box of dynamic capabilities. *Decision sciences*, *42*(1), 239-273.

Peteraf, M., Di Stefano, G., & Verona, G. (2013). The elephant in the room of dynamic capabilities: Bringing two diverging conversations together. *Strategic management journal*, *34*(12), 1389-1410.

Parmigiani, A., & Rivera-Santos, M. (2011). Clearing a path through the forest: A meta-review of interorganizational relationships. *Journal of Management*, *37*(4), 1108-1136.

Pavlou, P. A., & El Sawy, O. A. (2011). Understanding the elusive black box of dynamic capabilities. *Decision sciences*, *42*(1), 239-273.

Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements?. *Strategic management journal*, *23*(8), 707-725.

Rajan, R., & Dhir, S. (2020). Alliance termination research: a bibliometric review and research agenda. *Journal of Strategy and Management*, *13*(3), 351-375.

Saltzman, A., Birol, E., Oparinde, A., Andersson, M. S., Asare-Marfo, D., Diressie, M. T., ... & Zeller, M. (2017). Availability, production, and consumption of crops biofortified by plant breeding: current evidence and future potential. *Annals of the New York Academy of Sciences*, *1390*(1), 104-114.

Sarkar, M. B., Aulakh, P. S., & Madhok, A. (2009). Process capabilities and value generation in alliance portfolios. *Organization Science*, *20*(3), 583-600.

Saxton, T. (1997). The effects of partner and relationship characteristics on alliance outcomes. *Academy of management journal*, *40*(2), 443-461.

Schilke, O. (2014). Second-order dynamic capabilities: How do they matter?. *Academy of Management Perspectives*, *28*(4), 368-380.Gomes-Casseres, B. (1994). Group versus group: How alliance networks compete. *Harvard business review*, *72*(4), 62-66.

Schulze, A., & Brusoni, S. (2022). How dynamic capabilities change ordinary capabilities: Reconnecting attention control and problem-solving. *Strategic Management Journal*, *43*(12), 2447-2477.

Senge, P. M. (1997). The fifth discipline. *Measuring business excellence*, *1*(3), 46-51.

Serrat, O., & Serrat, O. (2017). Learning in strategic alliances. *Knowledge solutions: Tools, methods, and approaches to drive organizational performance*, 639-647.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533.

Thompson, A., Janes, A., Peteraf, M., Sutton, C., Gamble, J., & Strickland, A. (2013). *EBOOK: Crafting and executing strategy: The quest for competitive advantage: Concepts and cases*. McGraw hill.

Van Wijk, R., & Nadolska, A. (2020). Making more of alliance portfolios: The role of alliance portfolio coordination. *European Management Journal*, *38*(3), 388-399.

Waheed, A., Shafiq, S., & Mirza, B. (2023). Alliance learning process and alliance success: the moderating role of openness. *Journal of Asia Business Studies*, *17*(4), 873-894.

Wilden, R., Devinney, T. M., & Dowling, G. R. (2016). The architecture of dynamic capability research identifying the building blocks of a configurational approach. *Academy of management annals*, *10*(1), 997-1076.

Winter SG. 1987. Knowledge and competence as strategic assets. In *The Competitive Challenge: Strategies for Industrial Innovation and Renewal*, Teece DJ (ed). HarperCollins: New York; 159–184.

Wassmer, U. (2010). Alliance portfolios: A review and research agenda. *Journal of management*, *36*(1), 141-171.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, *5*(2), 171-180.

Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of management review*, *27*(2), 185-203.

Zollo, M., & Singh, H. (2004). Deliberate learning in corporate acquisitions: Post-acquisition strategies and integration capability in U.S. bank mergers. *Strategic Management Journal, 25*(13), 1233–1256.

Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science, 13*(3), 339–351.

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