The Influence of Artificial Intelligence on Strategic Alliance Formation: Evaluating the Integration and Impact on Traditional Frameworks and Processes

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Abstract

This thesis investigates the potential impact of AI on the formation of strategic alliances, particularly examining how AI might influence the traditional frameworks, processes and selection criteria within partnership formation. Thereby, the rapid implementation of AI and its involvement within the business landscape are recognized in the concept of alliance formation, creating a yet not existing intersection of the two fields. The research of this thesis is based on thirteen interviews with experts in the areas of AI and strategic alliance formation. The main findings of this thesis propose that nowadays AI is no main driver within alliance formation, playing only a minor role in current alliances. The possibility of AI to replace the needs for alliance formation has been declined with an emphasis of the incapability of AI to replace certain human competencies and components within alliances. Rather, AI is seen as a potential ally within the formation processes and the collaboration within alliances themselves, possibly supporting the accomplishment of alliance formation motives. Concerning the relevance of common selection criteria, an emphasis is laid on the unchanging importance of partner-related criteria. AI's potential role in the evaluation of alliance candidates has been more controversy, indicating many uncertainties concerning the involvement of AI within the processes. The thesis concludes with managerial implications based on the main findings and proposals concerning the further research within this novel area.

Keywords:

Artificial Intelligence, Strategic Alliance Formation, Alliance Motives, AI Use Cases, Qualitative Research

Title:

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Sumário

Nesta tese investiga-se o potencial impacto da Inteligência Artificial (IA) na formação de alianças estratégicas, examinando, em particular, o modo como a IA pode influenciar as estruturas, os processos e os critérios de seleção tradicionais na formação de parcerias. Deste modo, a rápida implementação da IA e seu envolvimento no panorama empresarial são reconhecidos no conceito de formação de alianças, criando uma interseção entre os dois campos até então inexistente. A pesquisa desta tese assenta em treze entrevistas com especialistas nas áreas de IA e formação de alianças estratégicas. As principais conclusões desta tese indicam que, atualmente, a IA não é o principal motor na formação de alianças, desempenhando apenas um papel secundário nas alianças atuais. A possibilidade de a IA substituir as necessidades de formação de alianças foi descartada, destacando-se a incapacidade da IA de substituir determinadas competências e componentes humanos nas alianças. Em vez disso, a IA é vista como um potencial aliado nos processos de formação e na colaboração no seio das próprias alianças, possivelmente contribuindo para o cumprimento dos motivos por detrás da formação de alianças. No que concerne à relevância dos critérios comuns de seleção, destaca-se a importância contínua dos critérios relacionados aos parceiros. O papel potencial da IA na avaliação dos candidatos a alianças gerou mais controvérsia, revelando muitas incertezas quanto ao envolvimento da IA nesses processos. A tese encerra com implicações ao nível da gestão baseadas nas principais descobertas e propostas relativas à investigação futura nesta área inovadora.

Palavras-chave:

Inteligência Artificial, Formação de Alianças Estratégicas, Motivos de Aliança, Casos de Uso de IA, Pesquisa Qualitativa

Título:

A Influência da Inteligência Artificial na Formação de Alianças Estratégicas: Avaliando a Integração e o Impacto nos Frameworks e Processos Tradicionais

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List of Abbreviations

AI	Artificial Intelligence
IoT	Internet of Things
IP	Intellectual Property
NLP	Natural Language Processing
R&D	Research and Development
RBV	Resource-Based View
TCT	Transaction Cost Theory
WIPO	World Intellectual Property Organization

1. Introduction

Throughout the last decades, strategic alliances have been formed as a crucial tool for organizations seeking to enhance their operations across distinctive functions. (Ferreira et al., 2020) Within the last years, the formation of strategic alliances has seen a significant rise (Leischnig et al., 2014), reflecting a growing culture of interdependence in the business world that enables organizations to create and capture value more effectively (Hannah et al., 2016, Ferreira et al., 2020). These alliances have become crucial for firms wanting to access essential tangible and intangible resources as well as maintain or gain a competitive advantage in the increasingly complex business environment as of today (Cummings & Holmberg, 2012). More recently, researchers have shed more light on the theoretical concepts, motives and processes behind alliance formation. Particularly the partner selection process, including the identification of potential candidates as well as the evaluation of specific selection criteria has been highlighted as a crucial factor, determining the future success of the alliance. Contrastingly, alliances that were formed by applying a non-sophisticated and fast paced approach were shown to have a higher probability to failure which can only be mitigated by superior alliance management towards a certain degree (Cummings & Holmberg, 2012).

Compared to the established and well researched area of alliance formation within the business landscape, the field of artificial intelligence (AI) has been a concept limited to theoretical exploration for a much longer time before “the steady growth of its applications has radically penetrated human lives and business organisations.” (Sestino & De Mauro, 2022). Hence, daily operations within businesses are changing due to the fast integration of AI into various functions and value creation activities (Sestino & De Mauro, 2022), which has become a key driver of competitive advantage, as indicated by more than 85% of organizations uncovered in a recent study (Ransbotham et al., 2018).

Given this impact of AI on various business functions and within decision-making processes, it makes sense to investigate the potential impact of AI solutions on the formation of strategic alliances. This is particularly relevant given that as of now, both AI and strategic alliance formation have been only investigated separately. Correspondingly, there is a gap within current research concerning the intersection of these two fields. Thus, this thesis seeks to address the research question:

How is the evolving application of AI impacting strategic alliance formation?

This question is particularly relevant in the light of AI continuing to redefine traditional business operations and strategies, potentially altering the traditional concepts, motives and

processes associated with alliance formation. Therefore, this research aims to bridge the gap between the theoretical frameworks of alliance formation and the potential impact of distinctive AI use cases upon the concepts associated with it. Further, this dissertation makes a relevant contribution to literature by diving deeper into the intersection of strategic alliance formation and AI, which has not been addressed yet within the academic world. Moreover, presenting researchers with new insights and perspectives on this specific topic might give rise to more research conducted in the realm of AI and strategic alliance formation.

To be able to answer the research question without neglecting any relevant aspects and potential insights, this work sheds light on distinctive aspects in the process of alliance formation and how AI could possibly influence them. Therefore, within the literature review of this work, an overview of the basics of AI are given as well as the current AI use cases implemented within the business landscape are presented. Thereafter, this work dives into the traditional frameworks for alliance formation, such as the Resource-Based View (RBV) or Transaction Cost Theory (TCT) (Yasuda, 2005). Further, common motives for alliance formation based on past research are described, before more light is shed on both the partner selection criteria and the actual partner selection process for alliance formation. Hereby, the thorough literature review provides the theoretical foundations for assessing the potential impact of the involvement of AI within these concepts. The qualitative data laying the foundation for answering the research question is collected through a total number of thirteen expert interviews, following the research design outlined in chapter three of this work. The results of the data analysis, performed according to the Gioia methodology (Gioia et al., 2013) are then presented and discussed, being linked to the theoretical frameworks outlined within the literature review, addressing the research question by highlighting the relevant connections and insights uncovered. Within chapter five, the main findings in relation to the research objective of this work are summarized and managerial implications are drawn. Lastly, possible limitations of this work as well as potential future research areas are identified.
To put it in a nutshell, this thesis will explore strategic alliance formation in the context of AI integration, investigating how AI might impact the concepts, processes, and criteria associated with forming these partnerships.

2. Literature Review

The following chapter encompasses a review of existing literature specifically concerning the theoretical concepts underlying strategic alliance formation, after an initial overview of AI and its current integration within the business landscape is given.

2.1. Overview of AI

2.1.1. Definition and basic concepts

Traditionally, computer programs were to strictly follow a set of rules that were programmed within an algorithm, created by humans. Thereby, humans take over the task of designing the algorithm, which requires autonomous thinking, whereas the computer is just in the position of execution. Yet, when speaking about AI, the latter is no longer valid in this context as computers are given "human-like capabilities, meaning that computers are able to perform tasks that normally require human intelligence" (Enholm et al., 2022). This involves being able to analyze, understand, solve, explain and learn (Mikalef & Gupta, 2021) independently from predetermined rules that were set externally by humans (Demlehner & Laumer 2020). The capability of AI to perform certain intelligent tasks, that are originally only assigned to humans, can be explained by cognitive technologies that mirror the functioning of the human brain and mind (Enholm et al., 2022; Bytniewski et al., 2020; Ryan, 2020).

When speaking about the implementation of AI, companies usually imply making use of machine learning or deep learning, which are subsets of the former concept (Enholm et al., 2022). Compared to deep learning, which is way more complex, machine learning can be explained in a relatively simple manner: Being provided with data sets, the machine is in a position of learning, without explicit programming (Wang et al., 2019) to be able to make future predictions and decisions on unseen data (Jarrahi et al., 2023) without any human interference or dictation of rules (Afiouni 2019, Enholm et al., 2022).

Through its architecture, deep learning is designed to increasingly resemble the human cognition and brain functionality through the usage of neural networks that aim to mimic biological neurons (Jelonek et al., 2019; Schmidt et al., 2020; Enholm et al., 2022; van der Lee & Swen, 2023).

2.1.2. AI within the business landscape

After having established a common ground for understanding what is specifically meant by the different concepts within AI, some examples and use cases on how AI is currently applied in

the industry and business landscape will be provided in the following. However, at this point, it is crucial to mention some of the prerequisites and conditions that allowed to enable the implementation of the models described before (Lee & Shin, 2020). Within these, of utmost importance is the availability of large amounts of data that fulfill certain criteria such as high-quality, diversity and privacy (Aldoseri et al., 2023). Without access to the respective data, AI deployment is most likely to fail or exhibit poor performance (Aldoseri et al., 2023). Besides the availability of big data, progress in computation power as well as research on artificial intelligence, including machine learning algorithms and neural networks throughout the last decades, has shown to be indispensable for successful AI applications (Lee & Shin, 2020; Sestino & De Mauro, 2022). Finally, the implementation of AI to add value to business activities requires constant expert inputs within a firm (Galanos, 2019).

Within the business landscape, AI can facilitate and enhance a wide portfolio of value adding activities. Considering manufacturing processes, AI can offer capabilities to optimize the accuracy of production forecasts, reducing stockouts and overstock challenges as well as reducing the downtime of manufacturing by applying predictive maintenance models (Sestino & De Mauro, 2022). Therefore, modern Internet of Things (IoT) devices are employed within the production processes, such as sensors that collect real-time data which is processed by machine- or deep learning algorithms (Jeschke et al., 2017; Sestino & De Mauro, 2022). Further, AI can automate administrative, bureaucratic and financial work through Robotic Process Automation, which can assist executives in their decision-making (Sestino & De Mauro, 2022). AI-powered process mining additionally reveals patterns and chances to raise the efficacy of company processes (Zhang et al., 2020). Another particular interesting field for the application of AI within this thesis is discoverable in the knowledge management of organizations. Hereby, key components of knowledge management, such as knowledge generation, sharing, application, storage and retrieval, are supported by AI (Jarrahi,2023). Further, thanks to self-learning analytics and pattern recognition capabilities that allow big data to be used in previously unheard-of ways, artificial intelligence technologies link variables in new ways to generate new insights and declarative knowledge. (Faraj, Pachidi, & Sayegh, 2018; Jarrahi et al., 2023). Thereby, artificial neural networks are explicitly useful in knowledge management as their main advantage is the ability to process incomplete data (Birzniece, 2011).

Amongst the existing models that are applying deep learning, Generative AI has become particularly popular in recent years, demonstrated in the enormous demand and number of interactions for models like ChatGPT (Rane, 2023). Nowadays, through the advancements in Natural Language Processing (NLP) and deep learning, interacting with these models feels deceptively real like a conversation with a human-being (Enholm et al., 2022). Further, the models are progressing to create more creative, human-like responses in the form of different outputs such as text or images (Mohamadi et al., 2023). Therefore, in a business context, they are increasingly used for customer service and interaction in the form of chatbots but also for marketing purposes such as content generation or target group analysis (Rane, 2023).

2.2. Strategic alliance formation

2.2.1. Theoretical frameworks for alliance formation

Within strategic alliance literature, the most discussed and researched theoretical frameworks for explaining alliance formation are most certainly the resource-based theory and the transaction-cost theory.

The RBV is a strategic management concept that emphasizes the significance of a company's resources in gaining and preserving a competitive edge (Barney, 1991). According to Wernerfelt (1984), at the very core, a firm is not more than the bundle of tangible and intangible resources it possesses. Therefore, whenever firms need additional resources, which they are missing internally and cannot be acquired through transactions in the market, the RBV suggests that they enter an alliance to expand their resource portfolio (Yasuda, 2005). Following the work of Eisenhardt and Schoonhoven (1996), this is most likely to happen if the involved firms are in urgent need for resources, reflecting a position of strategic vulnerability. This finding aligns with the RBV's emphasis on resource availability and utilization as the main driver for alliance formation.

In contrast to the described theory, the transaction-cost perspective is taking on a much more external view for the firm, searching for opportunities in their business environment that allow them to minimize their overall transaction costs and production costs (Yasuda, 2005). In an economic context, transaction costs refer to those expenses that occur within an economic exchange and which are not included in the price of a product or service (Williamson, 1985). In other words, transaction costs encompass the rather hidden costs of a transaction, such as searching for a suitable supplier or business partner, negotiating contracts or mediating conflicts (Rindfleisch, 2019).

For achieving this reduction in expenses, companies are looking for the most efficient governance structures to do so, including the formation of strategic alliances (Glaister & Buckley, 1996). Within this field, past research has shown different positive effects of alliances in the realm of transaction cost theory, including the improved management of uncertainties through sharing of resources and therefore reduced contractual efforts and monitoring expenses. (Hennart, 1988). Further, there are significant transaction costs involved when businesses invest in highly specialized assets. By forming strategic alliances, businesses can pool these specialized resources and reduce the danger of opportunistic behavior (Williamson, 1985). The latter can be also fulfilled through joint ownership within the alliance (Williamson, 1991).

Whereas those two concepts have been the most significant explanations throughout the last decades (Yasuda, 2005), other theories have emerged that are trying to encompass the complexity of this research field, suggesting further explanations for the formation of strategic alliances. Some of these concepts can be classified as sub-categories of the former two theories, while others are more opposing to the established research (Das & Teng, 2000).
Amongst these, the knowledge-based theory, which can be categorized as a sub element of the resource-based-view, might be of special interest for identifying the potential impact that AI has on the formation of strategic alliances. It addresses the intangible resources of a firm as described in the previous section and their acquisition through strategic alliances. The process of sharing knowledge has been, as research suggests, one of the main objectives for the creation of strategic alliances and hence is of utmost importance to consider when investigating changes in the formation of alliances (Grant & Baden-Fuller, 2004).

2.2.2. Common motives for alliance formation

For the purpose of this research, light will be not only shed on the most common theoretical frameworks for explaining the formation of alliances but also on more specific business-related objectives, which have driven firms to enter alliances in the past. Thereby, the reasons for forming strategic alliances become more tangible, complementing the generic nature of the theoretical frameworks, which are only particularly covering the strategic business objectives for which alliances are created (Yasuda, 2005). As research about the motives behind the formation of strategic alliances has been an extensive endeavor during the last decades, the most important and prevalent classification schemes (Todeva & Knoke, 2005) will be uncovered in the following.

Enter new markets

By forming alliances with the motive to enter a new market, companies try to expand their operations in foreign territory in order to acquire new customer bases and thereby increase profits (Tatoglu & Glaister, 2000; Lamba et al., 2022). However, instead of doing this on their own, firms often prefer to search for a local alliance partner who can help in circumventing different obstacles in the new market (Elmuti & Kathawala, 2001). Amongst these are 'restrictive policies of the local governments' (Lamba et al., 2022) including obstacles for foreign companies such as the prohibition of full ownership of the firm within the host market (Lamba, Dhir, & Ongsakul, 2022) or the access to subsidies. Further, the alliance with a local firm can facilitate intercultural communication (Ulas, 2005; Nielsen, 2010), acquisition of new customers, establishment of distribution and marketing channels and building relationships within the foreign market (Lamba et al., 2022). Hence, by making use of the strategic alliance partner's local network and capabilities, foreign firms can accelerate their entry into new markets (Larimo and Nguyen, 2015; Lamba et al., 2022).

New product development

Within companies, strategic alliances can greatly speed up product creation and improve the refinement of already-developed items (Lamba et al., 2022). Due to financial limitations or a lack of resources to create and promote new products, companies frequently enter strategic alliances in research & development (R&D) and production (Jambulingam & Saxton, 2002; Lamba et al., 2022). Thereby, the overall risk that is coming along with new product developments can be shared among the alliance partners as well as innovation time might be reduced, while the market shares can be increased (Gassel & Pascha, 2000; Hynes & Mollenkopf, 2008; Lamba et al., 2022; Elmuti & Kathawala, 2001). Further, pooling together research, product design, development and production capabilities within these alliances makes it easier to establish a common ground for future innovation (Lamba et al., 2022).

Economies of scale and sharing of costs

In the case that firms want to reduce their per unit costs by leveling up certain activities, for instance production (Linden, 2018), strategic alliances offer a possibility of taking advantage from shared resources and risks to do so (Lamba et al., 2022). In opposite to vertical integration inhouse, alliances can be used to outsource specific production processes or even whole functions such as the procurement or marketing to their alliance partners (Elmuti & Kathawala, 2001). Thereby, through specialization instead of generalization, a higher efficiency can be

achieved, which has been proven in extensive research throughout the last decades (Matsui & Postlewaite, 2000).

Access and transfer of resources

When companies enter alliances for the purpose of gaining access to certain resources and assets, the primary motive is usually not the mere acquisition of these resources but much rather how they can be used within the alliance to reach more specific objectives. For instance, making use of skilled labor from alliance partners located in developing countries, which leads to great savings in manufacturing costs (Lamba et al., 2022). The partnering firms on the other side profit from the access to technology and knowledge transferred by the partner from a developed country, such as patents or R&D capabilities (Bai & O'Brien, 2008; Lamba et al., 2022).

2.2.3. *Partner Selection Criteria*

Even though the described theoretical views from the previous section have been well established over decades, firms rarely discuss those theories namely when deciding to enter a strategic alliance. Much rather, firms do have certain objectives such as the major five motives discussed before, that they want to accomplish. However, the theoretical concepts are reflected in those more specific objectives and hence play a role in deciding, which criteria are the most relevant in a potential partner firm (Nielsen, 2003).

Selecting the most suitable partner has proven to be crucial for the performance of the future partnership as it influences distinctive aspects such as the interorganizational communication (Nielsen, 2003) "operating policies and procedures" (Geringer, 1991), or strategic objectives within the alliance (Nielsen, 2003). Finding the 'right' firm for building a strategic alliance thus depends on the degree to which a potential partner fulfills the selection criteria for the given objective of the planned alliance and hence which characteristics and capabilities they bring along (Nielsen, 2003). If the latter are not aligned with the distinctive specifications for the designated alliance, potential conflicts and 'the traditional hazards involving alliance partners, such as management and coordination disagreements, instability and incongruent objectives' (Li & Ferreira, 2008) can occur and decrease the alliance's viability (Nielsen, 2003).

Throughout the decades researchers have often differentiated between task-related and partner-related selection criteria for identifying the most relevant characteristics in a potential partner firm (Nielsen, 2003). In particular, task-related selection criteria are shaped greatly by the

firm's ambition to accomplish the initial objectives and motives of the planned alliance (Dong & Glaister, 2006). Therefore, they reflect the resources, capabilities and characteristics in a partner firm which are needed for achieving the set targets of the partnership (Dong & Glaister, 2006). Accordingly, many researchers link the task-related criteria to the resource-based and knowledge-based theories whereas the partner-related criteria are rather connected to transaction cost considerations as they focus on the relationship between partnering firms, emphasizing the importance of trust and compatibility in firm values and culture (Dong & Glaister, 2006). As Hoffmann and Schlosser (2001) pointed out, trust and the cultural fit between companies are found to be the most important criteria for the success of a potential alliance.

The following table exemplifies some of the most relevant criteria for partner selection, depicted by past research.

Partner-related selection criteria	Task-related selection criteria
Reputation of potential partner firm	Technological capabilities & resoures
Trust between executives across firms	Specific knowledge & assets
Past experience with potential partner	Access to marketing & distribution channels
Size of partner firm	Capital access
Financial status of firm	Local network size and quality of relationships
Compatibility of corporate culture & values	Experience in the field of co-operation

Table 1 Common partner- & task-related selection criteria.
Adopted from Nielsen (2003) and Dong & Glaister (2006).

As observable, of the criteria listed, some are more generic whereas others are already displaying a higher specificity. Hence, when it comes to selecting the right partner, these criteria need to be broken down further into case specific requirements. As already mentioned, the relevance of the distinctive criteria a potential partner should fulfill as well as the composition of the bundle of important characteristics varies in every strategic alliance, due to different alliance motives and objectives (Holmberg & Cummings, 2009; Nielsen, 2003). Hence, even though the overall target and motive might be the same among two strategic alliances, the criteria and weights assigned to them can differ greatly as each partnership is highly individual (Holmberg & Cummings, 2009), which will become relevant in the partner selection process.Therefore, establishing a sophisticated screening procedure including adjusted and well-considered criteria can be a costly and time-consuming endeavor (Hagedoorn, Lokshin &

Zobel, 2018). Consequently, many firms decide to partner with companies with which they have prior alliance experience from the past (Li & Ferreira, 2008).

Moreover, entering an alliance with a trusted, former partner can reduce the expenses for setting up complex governance structures and constant monitoring as the alliancing firms are already familiar with the way of collaborating and thus have established a certain sense of trust (Li & Ferreira, 2008; Gulati & Singh, 1998). Still, (Li & Ferreira, 2008) have shown that equity-based structures can also act as a replacement for established trust relationships and hence lower the urge to form an alliance with a prior partner (Li & Ferreira, 2008; Li, Eden, Hitt & Ireland, 2008).

This is especially relevant for knowledge-intensive industries, whose companies are becoming increasingly concerned with the protection of their intellectual property (IP) (Chen, & Chen, 2003) especially when partnering with firms in developing economies, where the legal environment might be a rather uncertain terrain (Li & Ferreira, 2008). In this very competitive environment, past collaboration is no longer a promise for future integrity and thus finding partners that agree into a more binding governance structure is becoming relevant (Chen, & Chen, 2003). Therefore, the willingness of the potential partner firms to agree to a certain governance structure of the future alliance might gain more importance for firms as a selection criterion.

2.2.4. Partner Selection Process

As the partner selection has been described to be one of the most important milestones in forming strategic alliances, (Elmuti & Kathawala, 2001) a lot of attention has been drawn to this research field over the past years (Holmberg & Cummings, 2012). Yet, choosing the most suitable ally partner can decide upon success or failure of the alliance and thus has become crucial for the overall performance of companies (Drewniak, 2013). Therefore, firms strive for continuous improvements in the partner selection process, displaying the potential for a great leverage for alliance success. In the following, more light will be shed on the actual identification of potential partners and the methods used for selecting the most fitting one amongst the former.

Companies need to recognize a set of possible candidates for a strategic alliance first, before being able to apply the respective processes and methods established for the following step of actual partner selection. Therefore, companies tend to make use of different approaches, the

most popular being market and industry analysis (Inkpen, 2009) as well as network and relationship analysis (Hartmann, 2019).

The latter has been quite popular among executives as it is time and cost saving in the sense that only known firms are considered (Holmberg, & Cummings, 2009) and therefore quick decisions are enabled (Holmberg, & Cummings, 2009). Yet, this is 'discouraging careful thinking' (Lei, & Slocum, 1992) reflected in the demarcation of the potential partners to the micro cosmos of the firm (Holmberg, & Cummings, 2009). Therefore, potential partners that extend the network and relationship level might be neglected in the selection process.

Hence, Holmberg & Cummings (2009) suggest 'creating a potential partner map' for a broad market and industry analysis of potential collaborators before entering the next process step of evaluating the fulfillment of different criteria within the bundle of ally candidates. Derived from Brandenburger and Nalebuff (1996), the introduced map covers distinctive present and potential future participants of the environment of a company, such as competitors, customers, suppliers and complementors, which are or might become involved in the value creation processes of a firm (Holmberg, & Cummings, 2009).

Still, even though this approach can help in extending the bundle of potential candidates for forming alliances, it is yet a very extensive endeavor, often still brainstormed on pen and paper and less likely to be covered by data or saved in a data warehouse for future purposes.

Further, companies that are less experienced within strategic alliances, are frequently confronted with a gap towards those firms, which have been involved in international alliances for a long time and thus were found to be in the possession of more information on potentially attractive collaboration partners (Gopalakrishnan et al., 2008). Therefore, the key asset that needs to be improved is the search capability of a firm, which translates into the ability to efficiently find candidates for alliance formation (Robson et al., 2019). By doing so, firms reduce the expenses of their research on potential partners.

After having identified a pool of potential candidates for the future ally, the concluding step following is the evaluation of the selection criteria identified earlier for each of the possible alliance partners (Holmberg, & Cummings, 2009). As covered in different works (Holmberg, & Cummings, 2009; Chen, Lee & Wu, 2008; Cummings, & Holmberg, 2012; Drewniak, 2013) this step encompasses creating different kinds of decision matrices (Cummings, & Holmberg, 2012). Those matrices include the predefined selection criteria at hand for the certain alliance objectives, which will be evaluated for each potential partner individually. Thereby, weights are assigned to the different criteria to reflect their relative importance for the motive of the

alliance (Holmberg, & Cummings, 2009; Chen, Lee & Wu, 2008; Cummings, & Holmberg, 2012; Drewniak, 2013), which are later offset with the score that the criteria received in the evaluation. Holmberg & Cummings (2009) for instance are also distinguishing between two time periods (present and future), when distributing weights to the criteria. Even though the resulting matrix is becoming more complex, it can help in rating candidates for alliance objectives that might be changing over time. This kind of matrix can be observed below, showing the structure of this approach.

Task-related criteria	**Weight**	**Rating**
Criteria 1		
Criteria 2		
Criteria 3		
Criteria 4		
Criteria 5		
Partner-related criteria		
Criteria 1		
Criteria 2		
Criteria 3		
Criteria 4		
Criteria 5		

Table 2 Common decision matrix for evaluating a potential alliance partner.
Adopted from Holmberg & Cummings (2012)

Compared to business practices in which these kinds of assessments are not undertaken, and alliance partners are picked through internal negotiations and arrangements, the presented approach is already improving the objectivity of the selection process. Yet, Chen, Lee & Wu (2008) are outlining that most of the given selection criteria are not quantifiable by data or numeric calculations but are assigned certain values by the subjective estimation of the responsible departments within the firm. The same accounts for the weights that are set to reflect the importance of each criterion and hence directly influence the results of the process. Whereas this might condition the selection of the most appropriate ally collaborator in some cases, it can also distort the original motives of the alliance in setting non-corresponding weights and evaluations, which can lead to a less fruitful alliance through selecting the 'wrong' partner (Chen, Lee & Wu, 2008).

3. Methodology

3.1. Research Design

The primary objective of empirical research, following the work of Kromrey (2002), is to acquire trustworthy knowledge about reality. Thereby, researchers distinguish qualitative and quantitative approaches (Allwood, 2011). The goal of qualitative research is to investigate a certain phenomenon by applying an interpretative approach, analyzing the perspective provided by the research participants (Flick 2009; Adu et al., 2022). Thus, it is more concerned with understanding the various facets of the researched phenomena (Denzin & Lincoln 2011; Adu et al., 2022) than creating objective measurements of variables. The latter falls into the realm of quantitative research, in which statistical methods are employed for analysis and theories are evaluated by looking at the links between measurable variables, with the main target of producing generalizable and repeatable results (Yauch & Steudel, 2003).

Given the exploratory nature of the research question, a qualitative research approach was chosen by the author of this work. Thereby, the ability of qualitative research to understand human perceptions and experience towards the research topic has been of particular interest for the author of this work (Agius, 2013). Thus, for learning about the potential impact of AI on the formation of strategic alliances, with all its different aspects, qualitative data collection was carried out in the form of expert interviews.

3.2. Data collection

3.2.1. Data collection method

As previously mentioned, this work involved expert interviews, which are defined as guide-line based discussions held with individuals who possess above-average experience in a certain field (Cambridge University Press, 2013). Concerning the particular interview form, there are several levels of structure that can be included in the interview guide, allowing for the interviewer to decide upon how much room for maneuver should be given to the interviewee (Heistinger, 2006).

Within the research of this work, semi-structured interviews were chosen, providing the interviewees the possibility to liberally share their respective experiences as well as thoughts and ideas on the research topic (Longhurst, 2003). This is particularly accomplished by asking open questions, creating room for the interviewees to dive deeper into certain aspects or come

up with additional insights as there is a certain flexibility given in the flow of the conversation (Heistinger, 2006; Misoch, 2019). Moreover, an open interview helps the interviewer to recapitulate to which extent the questions were understood by the experts (Mayring, 2016). Still, since all relevant topics must be addressed in the interview to ensure the comparability of the data (Misoch, 2019), adherence to the interview guide remains crucial so that all questions important for the research are answered (Longhurst, 2003).

3.2.2. Construction of the interview guide

Constructing the interview guide for this research, the questionnaire has been organized based on the concepts and insights from the literature review, enriched with the aspects relevant for answering the initial research question. Therefore, the main part of the interview has been divided into five more specific subsections, each capturing a certain area of alliance formation, contributing to answer the research question in an extensive and comprehensive manner.

Before the interviewees were presented with the specific questions, the research question and objective were briefly explained to them, as well as the structure of the interview. As a next step, the interviewees have been reminded of their data protection rights before the recording started. To provide the author of this thesis with an overview of the interviewee's prior knowledge and experience as well as the possibility of enabling a smooth transition towards the main section of the interview, the guide encompassed an introductory section (Patton, 2002; Rubin & Rubin, 2011). Within this section the interviewees were asked about their experience with strategic alliances or AI in the working environment and whether there has been an intersection of these two fields.

In the first section of the main part following the introduction, the interviewees have been asked about their perception of AI in current strategic alliances, regarding the type of alliances in which AI might be involved as well as the respective importance within strategic alliances. Aiming to get a broader picture of the current involvement of AI in formed alliances. The second section was concerned with questions addressing the potential possibility of AI to replace the need for alliance formation and how this would impact the validity of the theoretical concepts, that explain for which reasons companies do enter alliances. Following upon this, the questions of the third section have been dealing with the involvement of AI in accomplishing traditional alliance motives for which alliances are formed. Subsequently, sections four and five were covering the impact of AI on the partner selection criteria and partner selection

process respectively, giving the interviewees the possibility to discuss two major aspects of alliance formation in more detail within the context of this work. Lastly, after the main sections, the interviewees are asked within a concluding question whether there are aspects they want to add, which have been not discussed so far.
The complete interview procedure and guide can be found in appendix B.

3.2.3. Sample Selection

As already briefly described, an expert is a person who has above-average knowledge in a particular field of expertise (Cambridge University Press, 2013). More precisely, experts are considered to possess a variety of abilities, including methodological competence, independence, precise knowledge and expertise. Thereby, the status of being an expert in a specific area can be reached via independent study, the workplace, or personal experience (Bogner, Littig & Menz, 2014). For the purpose of this research interviews were conducted with 13 individuals with expert knowledge and expertise in the field of AI (five Interviewees), strategic alliances (five interviewees) or both (three interviewees). When selecting the interview partners, an important focus was drawn to an above-average level of knowledge and expertise in the area for which they are not explicitly tagged as experts. This means that those individuals that are experts within the field of AI were still also chosen based on their complimentary experience with strategic alliance formation and vice versa. In this way, it has been assured that the chosen interviewees represent the intersection of AI and strategic alliance formation, on which the research question is based, in their own knowledge and expertise. Thereby the chosen interview partners work in a variety of functions across the industry or research institutions, with differing years of experience. Further, the experts were composed of five different nationalities and a broad portfolio of academic backgrounds. By selecting a diverse set of interviewees, the author of this research wanted to gain as many distinctive observations and insights as possible. A more detailed register of all interview partners can be found in appendix A.
Concerning the identification of potential interview partners, the author of this work resorted to her own professional contacts as well as the professional networking platform LinkedIN. Thereby, interviews were scheduled and conducted with nine experts acquired through LinkedIN. Regarding the own professional network of the author, ten contacts have been addressed of which four agreed to and had the availability for the interview in the given time

period. The total number of thirteen interviews took place via Zoom, with the audio being recorded with a mobile device.

3.2.4. Analysis of interviews

Before being able to analyze the qualitative data stemming from the interviews, the interviews needed to be transcribed. Therefore, the transcription tool from rev has been used, providing text transcripts that are already excluding non-verbal elements such as pauses or laughter and verbal statements in the sense of filler words considered irrelevant for the content of the interview (Mayring, 2016). In addition, to verify the accuracy of the transcripts in relation to the original interviews, all transcripts were reviewed again and checked for grammatical errors or transcription mistakes made by the tool applied. Further, personal data has been removed from the transcripts to ensure anonymity of the respondents (Bogner, Littig & Menz, 2014).

The decision upon which systematic approach to apply for the qualitative data analysis is strongly influenced by the research question and objective of the corresponding work. (Saldana) Further, according to Grodal (2020) "Qualitative analysis is, at its core, a categorization process". Hence finding the right codification method for the data analysis is a crucial consideration for researchers (Saldana, 2021). The categories themselves represent aspects of analysis in the form of brief formulations, which are more or less closely oriented to the original material in their wording and can be but do not need to be hierarchically organized (Mayring, 2019).

As the author of this work wanted to establish a close link between the interview responses and the theoretical concepts introduced in chapter two of this thesis, enabling a thorough discussion of the research question, the Gioia methodology has been chosen as the most fitting approach for the analysis. The approach consists of different steps concerning the categorization and analysis of the interview data, targeting the construction of a data structure, which usually includes a table or diagram that shows the relationship between first-order concepts, second-order themes and lastly, the aggregated dimensions. This data structure can be observed in appendix D. Diving a bit deeper into the process, the first step within the Gioia methodology is the identification of first-order concepts. These reflect similar perceptions, ideas and thoughts of the interviewees concerning certain aspects while preserving the original responses

of the experts. Subsequently, the first-order concepts are consolidated into second-order themes which represent broader, more abstract categories corresponding to underlying patterns and themes of the first-order concepts. At this point, the researcher starts to establish connections between the theoretical concepts and the qualitative data. Finally, second-order themes are summarized to aggregate dimensions, condensing the core ideas of the themes (Gioia, Hamilton & Corley, 2013).

4. Presentation of results and discussion

The following chapter presents the main findings from the expert interviews, connecting them to the theoretical frameworks highlighted within the literature review of this work. Thereby, the author aims to emphasize the main observations relevant concerning the underlying research question.

4.1. Perception of AI in current alliances

Evaluating the experts' responses corresponding to the first generic category encompassing the perception of AI in current strategic alliances, some revealing insights could be uncovered. Responding to the first question, addressing whether AI is involved in strategic alliances nowadays, respondents three, four, and eight mentioned the novelty of this particular topic and therefore the limited availability of information (E8) as well as the lack of long-term experience within this field (E3). Yet, building upon the existing knowledge and expertise in this area, four out of thirteen interviewees pointed out that currently, the majority of strategic alliances formed are not creating value with the involvement of AI (E4, E6, E7, E8, E10). Rather, alliances are still formed for gaining a competitive advantage for instance through collective research (E4), developing a new product together (E4, E6) or for entering into a foreign market (E6). Within the realm of these more traditional objectives of alliances (E7), which are also reflected in the research on alliances that was conducted throughout the last decades (e.g. Lamba et al., 2022; Yasuda, 2005), AI was perceived to not play a role, which will be revisited later (E3, E7, E10). According to expert ten it is important to differentiate between AI being part of "regular alliances" and those that "are only formed for certain AI purposes. Yet, experts three, ten and eleven, discussed the involvement of AI in partnerships that are usually composed of an AI solution provider and a company without outstanding expertise in AI capabilities. Thereby, the latter strives for an enhancement of its own activities through the implementation of AI expertise (E3, E10). In contrast to existing literature, suggesting that cross-industry alliances are usually formed for firms wanting to enter into new markets (Gupta et al., 2006, Jiang et al., 2010; Ko et al., 2020), within these kind of partnerships, some of the interviewees mentioned that the firms without explicit AI expertise are not targeting to enter new industries such as the AI-sector (E7, E11). Experts two and ten were of the contrasting opinion that these firms are also looking for ways to enter into new markets through the involvement of an AI partner. More on the role of AI as a motive and facilitator of accomplishing traditional motives of alliances such as the access to foreign markets will be discussed later.

The next main observation within this section has been that firms looking for specific AI capabilities will rather enter partnerships that follow the nature of a sourcing-vendoring relationship (E3, E6, E8). “For companies that just strive for an improvement of their own AI skills, I think it is just easier to buy those capabilities in instead of going through the process of forming an alliance” (E6). In a nutshell, the quoted statement reflects the tendency of firms to rather source certain resources through market transactions than entering an interdependent relationship which requires constant contribution as indicated by the definition of alliances (Todeva & Knoke, 2005).

4.2. Impact of AI on the need and concepts for alliance formation

When speaking about the possibility of AI being potentially able to replace the need for alliance formation, six out of 13 respondents clearly agreed that in the current state, the different use cases available for AI will not replace the needs to form strategic alliances (E1, E2, E3, E7, E9, E12, E13). Thereby the experts stated that the fields of application for AI, that are currently implemented in the business landscape, do not represent a case for companies not to enter alliances as AI is not solving the common motives and objectives leading to partnership formation (E1, E13). However, there were also some respondents that were unsure about the impact of AI on the need for forming alliances whereas the remaining interviewees were either highlighting their lack of knowledge or the broadness of the topic to respond precisely.

Apart from the deployments of AI just described the implementation of AI for use cases in knowledge and information management has been emphasized in the second question, drawing particular attention to this specific field in the realm of this research. As the prominence of NLP models such as ChatGPT increases, which almost all experts mentioned at some point of the conversation and most of them indicated to use frequently, it has been discussed whether there is a sufficient ability of AI to acquire and generate specific knowledge and capabilities by itself. This might result in firms not being dependent upon entering alliances for the purposes of accumulating new knowledge and skills and therefore lead to theoretical frameworks such as the knowledge-based view to become less relevant. However, as the interviewees pointed out, this is not applicable.

First of all, there has been a consensus among the experts concerning the great improvements of AI in the area of knowledge retrieval and organization as well as its support in adapting to

new situations and challenges (E4, E9, E12). Further, the reduction of human effort in information research has been emphasized, as AI is able to unify fragmented knowledge and data (E2), providing sophisticated insights within a short period of time (E2, E6, E13). Hereby it can facilitate decision-making by enhancing the procurement of relevant information (E2, E7, E12). Yet, the idea of AI generating elaborated, new knowledge itself, which would replace the necessity of firms to form research alliances for instance in which resources of intellectual property are exchanged or combined for mutual contributions (Todeva & Knoke, 2005), was rejected by almost all interviewees (E2, E3, E6, E7, E8, E12, E13). These insights align with the current status of research in this particular field (Jarrahi et al., 2023) and can be summarized by the following quote of one of the interviewees:

> "Especially in knowledge management, AI is handy to work with the existing data and maybe come up with new ideas, but all based on the information that firms already have. So, the need to build an alliance for building specific new knowledge still reflects essentially the purpose of resource-based view" (E3).

Hence, as also supported by other experts (E2, E7) the resource-based view as well as the knowledge-based theory do not lose validity. Further it has been pointed out by experts three and eight that researching around AI or enhancing AI solutions collaboratively is another reason for companies to form alliances. This is also backed up by the reality of AI currently not being able to reproduce human thinking and knowledge generation processes (Jarrahi et al., 2023), translating to the non-imitability and non-substitutability of these specific resources by AI (Das & Teng, 2000; Yasuda, 2005). This insight is further being supported by the assessment of researchers in AI such as Brynjolfsson and Mitchell (2017) which conclude that "we remain very far from artificial general intelligence. Machines cannot do the full range of tasks that humans can do". Keeping this statement in mind, the incapability of AI to replace the human component (E1, E2, E3, E4, E5, E7, E9, E12, E13), which is the second reason why AI will not change the need for forming alliances in the near future, can be traced without difficulty. Especially in the realm of alliances that focus on intangible resources such as intellectual capabilities and expertise, the interviewees highlighted the importance of being able to discuss with another human being (E1, E2, E3, E7) the input of human judgement and expertise (E2, E5) as well as the opportunity of building a relationship (E3, E4, E12, E13). After having discussed predominantly knowledge generation, this is also applying for the application of existing knowledge as pointed out by the experts (E2, E4, E5, E9, E13). "Even if the alliance is not about generating new knowledge, the ability to collaborate with another human being still remains top priority" (E9). Moreover, as research in this field suggests, it is not only about

the human preference of human-to-human interaction but also the inability of AI to replace certain processes that can be only undertaken with the involvement of human intelligence (Jarrahi et al., 2023). For instance, the application of existing knowledge within a new context requires some sort of judgement concerning the transferability between the original and new context and potential consequences of adapting the knowledge (Jarrahi et al., 2023). Yet, as literature suggests, those judgmental components as well as the contextualization processes are still profoundly ascribed to humans (Jarrahi et al., 2023).

Concerning the validity of the transaction cost theory in the light of increasing accessibility and involvement of AI in the various aspects of business, there has been a more controversial opinion among the interviewees. On the one hand, three of the experts mentioned the decreasing transaction costs for the involved firms if investments in AI are made collaboratively within an alliance (E3, E11), supporting the existing theoretical framework (Williamson, 1985). Further, the potential involvement of AI in designing the contractual frameworks for the alliance was highlighted as another mechanism to save transaction costs, by reducing manual bureaucratic labor (E3). This possibility of AI being involved in the negotiation of contracts with various suppliers or business partners, their management and maintenance was on the other hand pointed out as one reason for companies to no longer form alliances for the purpose of saving transaction costs in that context (E5, E9). In other words, AI might help in reducing transactions costs for the different relationships of companies with external firms and hence make the need to form alliances to circumvent those costs obsolete (E5).

Lastly within this section, one omnipresent observation in this part of the discussion has been the role of AI as a facilitator in alliances. During the conversation about the role of AI in the formation of alliances as well as the validity of the theoretical frameworks, this insight has been very important to be pointed out by almost all interviewees. It was emphasized that AI will neither replace the role of the human being nor the interpersonal relationships. However, as the majority of experts highlighted, AI will certainly be involved in a variety of tasks within the formation and the alliances themselves (E2, E5, E7, E8, E12).

> “For me, it is not that AI is not present in alliances at all. It is just mainly not about it, and it is not playing the major role for the alliance objectives or motives. But it is certainly used for some tasks within the alliance or those that contribute towards discussions within the alliances, even if it is just designing some concepts visually in

> PowerPoint. Though I must say that I think there is much potential for AI to facilitate operations within alliances, the question is only how it will be used." (E5)

From a current research perspective, these observations are supported as AI was found to be a promising complement to different kinds of alliances, especially in R&D (Lou & Rawley, 2022). Having the potential to reduce frictions within the information flow between companies, enabling an improved exchange of knowledge by accelerating the process of searching for shared data (Goldfarb, Agrawal & Gans, 2018; Wu, Lou, & Hitt, 2019). AI can increase the efficiency of alliances by acting as a sort of catalyst (Lou & Rawley, 2022). Further, AI is enhancing business partnerships as it offers data analytics in real-time, enabling performance monitoring, risk management, and resource optimization. Moreover, proactive modifications are made possible by predictive analytics to guarantee that partnerships are efficient, in line with strategic goals, and equipped to handle possible issues before they become more serious (Azmat, 2023).

4.3. The role of AI in accomplishing traditional motives of alliance formation

This section is diving deeper into the most frequent use cases and how they are reflecting the accomplishment of traditional motives for alliance formation such as new product development or economies of scale as discussed prior within the literature review of this work (Lamba et al., 2022).

During the conversation about the concrete impact of the application of AI use cases within alliances that are formed due to common motives as outlined in the literature review, the most prominent current use cases of AI within the industry, have been pointed out by some of the interviewees. Thereby, the implementation of AI use cases in customer facing functions has been emphasized (E2, E7). Within these, especially chatbots for customer service (E2, E3, E7) were pointed out. Additionally, the usage of these models that apply NLP was highlighted also for internal purposes of firms (E3, E7, E12) and has shown to be able to reduce social barriers in the access to corporate knowledge in current research (Jarrahi et al., 2023). The second important observation throughout the conversations in this context has been the relevance of AI use cases for reducing costs by increasing efficiency (E4, E11). As already brought to attention in the first section of the discussion, use cases such as robotic process automation (E5), the implementation of IoT within manufacturing processes for intelligent analytics (E4, E5, E11), improved forecasting and predictive maintenance (E1, E11) have been pointed out. Thereby, the findings from current literature are supported such as the work of Sestino & De

Mauro (2022), describing different use cases applied within the supply chain and manufacturing, Chan and Petrikat (2022) emphasizing a variety of AI applications reaching from AI-customer interactions such as self-checkouts to diagnosis of medical conditions within the health sector or Sestino & De Mauro (2022) mentioning the involvement of AI in digitalization processes of functions like Human Resource Management. As already indicated during the first section of the result section, AI was perceived to only play a rather small role in alliances that are formed for traditional motives, being still in its early stages within this context. However, as AI becomes an integrative part of the business landscape, some of these use cases were discussed to have a potential in helping future alliances accomplishing their initial motives discussed within the literature review.

Concerning the traditional motive of entering new markets, it has been argued by some of the experts, that NLP models such as ChatGPT could support both the (intercultural) communication in a foreign market (Ulas, 2005; Nielsen, 2010); (E3, E13) as well as the facilitated retrieval of knowledge concerning different aspects of the new market environment (E3, E6). Within the motive of new product development, the interviewees pointed out two major findings. One of them being the application of AI in knowledge and information management, assisting with the analysis of market trends and customer needs (E4, E6, E10) to ensure the development of a product that satisfies these two aspects. Secondly, the assistance of AI in the ideation phase of developing a new product has been mentioned (E3, E6). However, the latter has been also brought up by one other interviewee who was of the opposing opinion that AI is currently not equipped with the abilities to brainstorm a truly new product (E5). The third and most discussed motive in which current AI use cases might be involved has been economies of scale and sharing of costs. Hereby, experts two, four, five and eleven pointed out that AI could be used in joint production to further decrease per unit costs while remaining a high level of quality (E4, E13). Thereby, IoT and RPA have been mentioned in connection with AI, to improve analytics and therefore reduce stockouts and incidents (E5). Further, potential savings in certain functions such as marketing or customer service integrating AI for products created by the alliance have been pointed out (E2, E3). For the motive of accessing and transferring resources from a partner firm within an alliance, two of the experts stated that only the transfer of AI capabilities themselves comes to their mind, excluding how AI is supporting in the transmission of other resources (E1, E10). Contrastingly, interviewees three and thirteen highlighted that AI might help in the exchange of intangible assets such as information or

knowledge, which is aligning with the literature previously presented, indicating an enhanced information flow due to AI within alliances (Lou & Rawley, 2022).

4.4. Impact of AI on the partner selection criteria

This section accentuates the main observations stemming from the interview's conversations about the partner selection criteria for forming strategic alliances in the context of AI.
Before laying out and discussing the major findings, it makes sense to acknowledge the dichotomy of the questions within this part of the qualitative research: Whereas the first questions were dealing with the impact of the general accessibility of AI on certain aspects of selection criteria, the second bundle of questions was targeting different points concerning the AI capabilities of a potential partner firm as a selection criterion.

Being asked about whether the partner- or task-related criteria would become less relevant due to the accessibility and involvement of AI in today's business landscape, the answers of the interviewees were quite consensual. The majority of interviewees responded in a similar way, suggesting that they would not anticipate a general influence of AI on these two categories (E2, E3, E5, E7, E8, E9, E12) which have been established throughout decades (Dong & Glaister, 2006). However, the lines of argumentation differed between the experts. As already depicted in the first section of the result discussion, one main finding has been the minor role that AI is currently playing in strategic alliances, which are still mainly formed due to common motives, not involving AI in value creation processes. Therefore, some of the interviewees argued that there will be no universal impact on the established categorization of selection criteria and the criteria themselves by AI (E3, E7, E10). Yet, as highlighted by experts two and nine there should be a differentiation made between these alliances in which AI capabilities are a selection criterion, thus having a direct impact, and the alliances in which AI is acting as a facilitator for some functions such as R&D. The latter might impact the task-related criteria in a way that "even though AI might not be a selection criterion itself, the availability of certain knowledge management tools based on NLP or deep learning might be used within the alliance. And thereby, some task-related criteria such as the ability for information retrieval for instance could become less relevant" (E9). Still, according to the expert, this would be only in very specific circumstances and not transferable to most of the current alliances.
Nonetheless, for those alliances in which AI is involved in a certain way, the potential impact on governance structures of the partnerships has been part of the conversations with a focus on

the creation of intellectual property. Hereby, the consequences of AI being involved in the generation of intellectual property, assisting researchers in different ways, have been discussed in the realm of what this could signal for the governance structures of alliances. Within the interviews, a wide spectrum of opinions could be detected. On the one side, some of the experts were not sure about the impact (E1, E4, E8, E10), indicating that there have been just very few precedent cases (E1, E5, E8) that deal with the ownership and patentability of IP created with the help of AI. Moreover, there is no global legal framework yet that addresses the role of AI in the generation of IP, establishing an uncertain ground for deciding upon who holds the rights for contributions of AI (E1, E10). Therefore, interviewees three, five and twelve suggested that especially R&D alliances might prefer more bonding governance structures such as joint ventures or equity investments, preventing conflicts about the ownership of IP, making the future potential governance structure a more important selection criterion. This has been emphasized particularly by interviewee three, who implied that almost all current legal systems do only recognize human beings as the inventors and owners of patents or intellectual property. Additionally, if AI is involved in the creation of IP, the rights thereof usually go to the person that programmed or operated the AI application, which entails the potential for conflicts. (E3) These insights are in line with current legal assessments such as those from the world intellectual property organization (WIPO) (WIPO, n.d.), implying that firms will be more cautious about AI in alliances within the context of IP.

Speaking about whether the AI capabilities in a potential partner could outweigh other established selection criteria, there has been a consensus among the respondents, concerning the criteria that won't be affected by certain technological competencies of a partner firm such as AI expertise. For the majority of interviewees, those partner-related criteria that encompass humane characteristics such as trust, corporate values, past collaborative experience or the sympathy between executives will not be impacted by the respective importance of AI capabilities as a selection criterion. As already addressed, the human component plays a crucial role in alliances (E3, E5, E6, E9, E11, E12, E13), reflected in the criteria just outlined. Therefore, those criteria should not be neglected for the purpose of finding a partner firm with the best AI expertise (E3, E7, E11, E12). The experts again highlighted the cruciality of the relationship between alliance partners (E6, E13), supporting research indicating that the characteristics which shape a fruitful relationship are most relevant for mitigating failure in alliances (Hoffmann & Schlosser, 2001). Otherwise, when there is too little attention paid to partner-related criteria that might not appear relevant for the task at hand, past research has

shown that this can drastically impact the success of the alliance. By focusing solely on task-related criteria, for instance technological capabilities, research conveyed that these partnerships are more likely to encounter difficulties than the ones that considered multiple facets (Holmberg, & Cummings, 2009).

4.5. Impact of AI on the partner selection process

The following section is shedding light on the findings and discussion concerning how AI might assist in and impact the partner selection process for strategic alliances.

In the realm of finding a set of potential partner firms and how AI could help in detecting them, the respondents discussed different aspects contributing to some valuable observations. One of the insights provided by the experts has been the extensive effort that is generally attributed to conducting a market or network analysis (E2, E8, E9). For the interviewees eight and eleven especially the search for relevant sources internally and externally reflected high workloads. Further, from the information given, the relevant conclusions would still need to be drawn (E2, E11), presupposing that all potential candidates for the alliance could be identified in the first place (E9, E11). Due to those efforts, experts two, four, eight and eleven pointed out that in their perception, many executives still decide upon past experiences and known firms which firms they want to take a closer look at. However, with the potential involvement of AI in this task, the opinions of the interviewees diverged, with some supporting the idea of AI being enhancing and making the process leaner (E3, E7, E9), whereas others were unsure whether the efforts would be reduced and if there is enough specific data available to figure out which firms could be potential alliance members (E8, E10, E11). Concerning the experts which have been in favor of integrating AI into the process of searching for potential partner firms, the main arguments presented have been the facilitated information retrieval, as already discussed previously, as well as the increased objectivity that could be established through that (E3, E7).Yet, the interviewees also pointed out that AI would need access to all resources regarding the information of market participants that could be potential alliance partners, referring back to the question whether there is enough data available (E3, E9).

The issue of non-availability of data has been also highlighted within the conversation about the possibility of AI being used as a solution to replace the manual generation of the typical decision matrix for evaluating the distinctive candidates. Hereby, regarding the variety of criteria that needs to be evaluated, and which differs from case to case (E1, E3, E6, E8), the

interviewees indicated that no universal database can be used (E3, E8) and further questioned the availability and accessibility of all the different data points required for the evaluation. (E1, E6, E10). Yet, as pointed out by expert six, when managers fill in the matrix manually, they usually also rely on the specific data, so this might be less difficult than anticipated. As emphasized by the experts, the criteria can be very specific (E3, E8), depending upon the planned alliance and its motives. More, the interviewees discussed the treatment of qualitative criteria in the sense of both data non-availability and the uncertainty about whether an AI model would be able to assign values to the qualitative criteria, making them comparable amongst the potential alliance partners (E10, E11). In addition, expert six explained the possibility of bias within the AI model, which would lead to falsified estimations of both the quantitative and qualitative criteria in the evaluation, which is especially the case if AI models are not sufficiently trained. Yet, if certain challenges could be overcome, the interviewees emphasized that AI could decrease the subjectivity of the evaluation and thus enrich the process to select the most suitable alliance partner for the respective venture of the partnership (E3, E7, E9, E13).

Lastly, throughout the conversations in the context of the last question of this section, the interviewees brought up multiple considerations concerning whether companies would be willing to integrate AI into their decision-making processes for selecting a partner firm for alliance formation. Thereby, experts five, nine and twelve pointed out that due to the current popularity of AI in almost all areas of business, they do think that managers would be willing to replace the manual work behind the partner selection process through an AI solution. As suggested by interviewee twelve

> "I believe that for many executives it is not really important whether such a decision matrix is filled out by humans or AI, well honestly, I think there are two factions. The ones that don't mind or even support AI to take over some processes and those that are very skeptical, preferring the human input and judgement" (E12).

Contrastingly, experts one and four stated that they do not believe that executives will let AI decide upon the alliance partner, as these decisions still involve a lot of personal experience and preference, that also outweigh the indications of quantitative and qualitative data. Besides the general willingness of integrating and using an AI solution, the interviewees highlighted that it might be more about whether investments want to be made into these solutions (E1, E10, E13). Hereby, expert eight pointed out that there is yet no real-world example, which would prove that the AI solution will evaluate potential alliance partners in a more objective way.

Additionally, letting AI evaluate the potential candidates is no promise for choosing the candidate that yields the most successful future alliance (E4, E8, E10). Last but not least, the frequency of the partner selection processes has been part of two of the conversations, suggesting that alliance formation is not a frequent event in many firms and thus questioned whether it makes sense to invest in a use case that is only applied seldomly (E4, E13).

5. Summary of main findings and implications

This chapter aims to summarize the main findings and propose managerial implications derived from this dissertation.

5.1. Perception of AI in current alliance formation

From the expert interviews, the minor role of AI in current strategic alliance formation could be extracted as the main finding of the corresponding section. Yet, as addressed by some of the interviewees, some firms are already forming alliances with AI solution providers to gain more expertise or capabilities concerning this emerging technology. The competitive advantage stemming from such cooperation has been also outlined in existing literature (Azmat, 2023) which is why managers should consider such partnerships as an opportunity to become on one of the first movers within their industry (Azmat, 2023).

5.2. Impact of AI on the need and concepts for alliance formation

Following the assessment of the provided expert input, AI will not decrease the validity of the theoretical frameworks introduced in chapter two. The main reason therefore is both the inability of AI to fully replace human competencies, as it has not yet reached artificial general intelligence (Brynjolfsson and Mitchell, 2017) and the irreplaceability of the human component. Yet managers should rather consider AI as an ally in strategic alliances to increase efficiency of collaboration. Further the exchange of AI capabilities or investments in AI undertaken within alliances are more in the sense of theoretical frameworks such as RBV or TCT and can thus enhance companies' operations.

5.3. The role of AI in accomplishing traditional motives of alliance formation

Within the current use cases of AI within the business landscape, many AI applications were found to support the target of economies of scale (Lamba et al., 2022) by enhancing efficiency, leading to a cost reduction. Thus, as already pointed out, managers should consider AI as an ally within alliances, supporting of reaching the alliance's motives for initial formation. Further, executives might already consider the involvement of AI in reaching the alliance motives even before the formation takes place. This implicates the discussion about AI involvement in the alliance beforehand, establishing a certain selection criterion such as the willingness or ability of a potential partner to integrate AI.

5.4. Impact of AI on the partner selection criteria

Within this section of research in the dissertation, one main finding proposed that the accessibility of AI will not change the traditional categorization of criteria into partner- and task-related (Dong & Glaister, 2006). Further, the importance of partner-related selection criteria reflecting human characteristics such as trust or common values have been highlighted, supporting past research (Hoffmann & Schlosser, 2001). Managers should be very careful not to neglect these criteria when dealing with a potential partner firm that has outstanding task-related capabilities such as AI-expertise. It is crucial to always consider the human connection within the alliance (Hoffmann & Schlosser, 2001). as well as both categories of criteria (Holmberg & Cummings, 2009). Lastly, AI in alliances that target the creation of IP has been connected to potentially more binding governance structures to avoid any conflicts. Therefore, due to the insecure state of legal regulations concerning the ownership if AI is involved in the creation of IP (WIPO, n.d.), managers might consider the governance structure as a more relevant selection criteria for these types of alliances.

5.5. Impact of AI on the partner selection process

Concerning the involvement of AI in the partner selection process, one of the main insights has been dealing with the uncertainty about the applicability of AI for finding potential partner firms and replacing the current, manual and more subjective evaluation of possible alliance partners (Chen, Lee & Wu, 2008). Further, the willingness of executives to let AI take over the decision and more to invest into such solutions has been controversially discussed. As for now, there seem to be too many unknown variables for implementing AI solutions in the process, such as the unavailability of specific data concerning potential partners. Yet, finding a way to bring more objectivity into the process of identifying possible alliance candidates and evaluating them, could lead to more successful alliance formation for the responsible executives.

6. Conclusion

Throughout the research of this work, many distinctive aspects about how the availability and increasing usage of AI could potentially impact the alliance formation have been uncovered. The majority of these findings goes hand in hand with the theoretical concepts presented in the realm of this work. The most relevant take-ways of this dissertation connected to the research question has been the non-replacement of alliance partners by AI as well as the utmost significance of the human component within alliances which won't be replaced by AI in the near future. Thus, AI is not replacing the need for alliance formation but might be considered in the accomplishment of certain motives for alliance formation. Further, the thirteen expert interviews conducted, provided insights linked to the existing literature, supporting the idea of existing concepts such as the RBV or TCT, the categorization of selection criteria and importance of partner-selected criteria for alliance formation. The relevance of these concepts has been detected to only be impacted by the involvement of AI to a minor degree, highlighting AI to be more in the role of a facilitator and ally within alliance formation than an adversary towards it. Still, it has been questioned whether AI is currently capable of making a real impact in processes such as the evaluation of potential partner firms, pointing out the uncertainties of implementing AI for certain challenges.

To conclude, this work offers valuable contributions towards the yet unaddressed intersection of the two research fields of AI and strategic alliance formation. It provides managers with an idea about how AI might impact strategic alliance formation, and which aspects might become more important with an increasing involvement of AI in strategic alliances. Lastly, an emphasis has been placed upon the irreplaceability of the human component in alliances and the cautiousness that managers should apply when evaluating the relevance of AI within a partnership.

7. Limitations & future outlook

As the research of this work focusses on the interplay of two distinctive fields of expertise, namely AI and strategic alliance formation, the primary target group of experts are individuals with expertise and knowledge in both areas. However, due to the specialization of many researchers and employees, there is only a little number of professionals or academics with equal expertise in both areas. Therefore, as already described in chapter three, individuals with expertise in either AI or strategic alliance formation were chosen, who still indicate higher levels of experience of the respectively other field. Yet, this can lead to a larger range of opinions and perceptions, potentially leading to a lower level of consensus among the experts. Further, the limited number of interviewees can lead to biases within the results, excluding a range of experiences or perspectives of other experts and should be thus considered before transferring the results. This might also come into being through imbalance of years of work experience within the sample. The majority of interviewees indicated a longitude of their professional careers between two and ten years, which might limit the representativeness of this work as there has been no interviewee with a work experience of over 25 years. Further, as both AI and strategic alliance formation reflect broad areas of research, the interviewees could assign more importance to certain aspects than others, further increasing the spectrum of ideas and perceptions towards the research objective of this thesis. In addition, there is a gap within the existing literature for the intersection of these two fields, giving rise to another potential limitation.

For the limitations just outlined, future research could consider different aspects to enrich the current research. One aspect to be applied could be the survey of a larger number of experts concerning their perceptions and ideas on how the availability of AI use cases might impact strategic alliance formation. Further, to provide a narrower perspective on a certain aspect of alliance formation or to shed light on a specific industry, future work could be undertaken focusing on a specific aspect within the intersection of the two fields of AI and strategic alliance formation. As AI is often used in combination with other emerging technologies such as blockchain or IoT, the potential impact of the interplay of these technologies on alliance formation could be investigated as well, extending this path of research. Last but not least, since AI supposed to play a larger role in alliance formation, future research might dive deeper into the legal and ethical implications of AI-driven partnerships. This could include studies on intellectual property rights, data privacy, and the ethical use of AI.

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9. Appendices

Appendix A – Register of interview partners

Code	Industry	Position	Years of experience
E1	Pharmaceutical	R&D alliance coordinator	9
E2	Automotive	Specialist for strategic business development	5
E3	Education	Professor for emerging technologies in strategic management	21
E4	Consulting	Partnership/Alliance consultant	3
E5	Chemical	Technology procurement manager	7
E6	Chemical	AI specialist	4
E7	AI/High-tech	M&A manager	12
E8	Financial services	Senior IT consultant	5
E9	Automotive	Manager for technological alliances	11
E10	Aerospace	Innovation manager	7
E11	Consumer goods	Manager of a joint venture	23
E12	IT	AI-consultant	3
E13	Consulting	Expert technology strategy	4

Appendix B – Interview Guide

Introduction

- Greeting and short introduction of interviewer
- Short summary of the thesis topic, research question and the objective of the interview
- Explanation of interview structure and timeframe
- Inform interviewee about data protection and anonymity
- Ask consent to start recording
- Start recording

Questions

Own experience and expertise

1. Are strategic alliances and/or AI playing a role in your work environment?
   1.1 If so, can you name some examples?
   1.2 Has there been an intersection of these two fields?

Perception of AI in current alliance formation

2. Do you think AI is playing an important role in current strategic alliances?
3. In which kind of alliances is AI currently involved the most?

Impact of AI on the need and concepts for alliance formation

4. Do you think that AI might replace the need for firms to enter strategic alliances?
5. Thinking in particular about AI use cases in information and knowledge management, what do you think about the capabilities of AI in this field?

   5.1 Do you think AI can replace the need for alliances for knowledge contribution/generation?

6. Is there an impact of AI on the theoretical frameworks in the sense that the reasons for entering alliances would be no longer valid?

The role of AI in accomplishing traditional motives of alliance formation

7. Is gaining AI capabilities becoming an important motive for firms in industrial alliances?
8. What are for you the most prominent AI use cases in the business landscape right now?
9. What do you think about the possible role of these use cases for achieving the common alliance motives (entering of new markets, new product development, economies of scale, access & transfer of resources)?

Impact of AI on the partner selection criteria

10. Do you think one of the two categories for partner selection criteria is becoming less relevant due to the accessibility and involvement of AI?
11. Do you think that the AI capabilities of a potential partner can outweigh other established ones such as trust?

    11.1 Which category would this affect more, partner or task related?

12. Do you think the involvement of AI will impact the choice of the governance structure considering the creation of intellectual property?

Impact of AI on the partner selection process

13. Within finding potential partner firms, do you think AI could help detect potential candidates outside a company's network? Do you have ideas how?
14. Do you think that an AI model could be used instead of a typical decision matrix?
    14.1 E.g. to replace the subjective estimations?
15. Do you think that industrial companies would be willing to integrate AI into the decision-making processes of alliance formation?

Conclusion

16. Do you want to add anything that has not been covered yet?

Appendix C – Example transcript of the interview with expert eight

Are strategic alliances and/or AI playing a role in your work environment? If so, can you name some examples? Has there been an intersection of these two fields?

Both, definitely both. In the banking industry, they're usually two types of, well, not different examples of alliances. First of all, probably the most common kind of alliances are corporations with external vendors and typical large bank groups in Germany work each with one central service provider. So basically one bank group is one provider, the other group is the other provider, and that's kind an alliance because the provider only exists because of the bank group. So I would call this an alliance actually. Yes, the best example of an alliance actually because. Another kind of alliance, probably more market driven. For example, in the area of Bausparkassen, they have corporations with either other banks, maybe some insurance companies or external partners. Third example is more on public sector side an alliance between public sector providers and Förderbankenumfeld

Concerning the intersection of the fields, well, all the providers are kind of building up some AI capabilities or trying to build up AI capabilities, but the thing is that they're not really aligned with the demand from their clients. So the banks have different demands than the providers are

actually providing, which is an issue in some cases. So currently it looks like the alliance partner as well as the other alliance partner are building up the capabilities separately, which is definitely not a deal. However, at the same time the providers are kind of limited in their solution space because they are also regulated and have to follow the bank's directions. And sometimes banks have stricter, not really regulations, but more like they demanding strict regulations and the demand, the provider to follow strict regulations than they do themselves sometimes just to be on the safe side. So they're experimenting with some AI cloud stuff, whatever, but demanding from the provider that they have everything onsite in-house and don't outsource much. The thing is no provider in Germany has the capability to build up an AI thingy, whatever on their own. So they are reliant on some hyperscaler and that's why the banks then directly go to the hyperscaler.

Do you think AI is playing an important role in current strategic alliances?
So you know that there is not so much information available even well let’s say for experts. So it is quite obvious that it is a rather upcoming research area. But for alliances within the financial services industry, so not these between an AI provider and a regular company, but really within this sector, I would say that AI is not playing a major role.

In which kind of alliances is AI currently involved the most?
I mean the thing is companies already have a partnership with the outsourcing provider and now they are demanding AI capabilities from the sourcing provider and either sourcing provider can deliver or not. And if not, then they will look for AI capabilities from a different provider probably directly with the hyperscaler and having some contractual agreements and some general contracts done with some hyperscalers currently I'm on a project, they have a contract with Google, but they basically have a Abrufvereinbarung from Google, but it can demand capabilities like they need, but this doesn't include AI capabilities yet. So currently they are figuring out whether they should stick with Google if their sourcing provider can set up something or if they will negotiate with Microsoft. For alliances within the financial services industry, so not these between an AI provider and a regular company, but really within this sector, I would say that AI is not playing a major role**.**

Do you think that AI might replace the need for firms to enter strategic alliances?
Again, I can only tell from the financial services perspective, but I mean actually maybe there is a trend in the trading and commercial banking area. There are some current, it's not really ai,

but there are some standard automatic procedures for commercial banking and stuff like that. And maybe AI can play a role there also for clearing and stuff like that. But still, I don't think that we'll replace the alliance because no one wants to have the capability inhouse done. And rather it will play an even more important role because the current provider, current partner will have the better capabilities in these areas. They have the expertise.

Thinking in particular about AI use cases in information and knowledge management, what do you think about the capabilities of AI in this field? Do you think AI can replace the need for alliances for knowledge contribution/generation?

Again, I think it's even more important to have a specific knowledge, to have a specific AI for a specific purpose and without a specific purpose. And in that knowledge in this area, you can't build up the capability in the AI area,AI is not generating knowledge by itself, so it's always relying on knowledge already existing. AI can't generate new knowledge and that's the issue. So you always need the expertise and I mean what would you do currently? Currently you would probably hire the chief engineer from the competitor and in the future maybe you will buy the AI service provider from your competitor, but still you need the foundation for the knowledge. AI is just a distributor is just a facilitator for applying it and multiplying it, but it's not really the source for the knowledge. Even if you don't have the knowledge and or let's say the insights, even if we're talking about some AI or some self learning stuff, which actually kind of generates knowledge or generates insights from some data, then you still need the data. So still you need some resources for that. So yeah, strong no. But I consider AI more as an ally in alliances, like a third party.

Is there an impact of AI on the theoretical frameworks in the sense that the reasons for entering alliances would be no longer valid?

Again, strong no. I mean I would rather question whether these frameworks are still valid in general but this has nothing to do with AI.

Is gaining AI capabilities becoming an important motive for firms in industrial alliances?

No, not in Financial Services.

What are for you the most prominent AI use cases in the business landscape right now?
Well I mean depends a lot on the industry, Of course, things like GPT are used everywhere but that's not the point right? But keeping it so broad, I cannot do an assessment and honestly don't want to as it is just to wide you know. Could be talking about everything here.

What do you think about the possible role of these use cases for achieving the common alliance motives (entering of new markets, new product development, economies of scale, access & transfer of resources)?
Again, too general for me. But for the financial service, let me think of an example. Yeah, I mean first we have to talk about what AI use cases are there because as a foundation and then the question is who masters these use cases better than the respective company? But yeah, there's one specific case right now where a lot of companies are, a lot of banks are going into alliances because of the EU taxonomy. There you need information for buildings, energy certificate stuff. It's super hard to really motivate and incentivize your customers to send you these kind of certificates. And most of the times they don't even have it. Yeah, there's the service provider now, they basically created an AI based on Google images and I don't know, three or four sources and can basically tell your energy consumption level based on your address and based on the photo of your house basically. And yeah, that's what a lot of banks use now. So they are going into this alliance with the startup. Probably would say half of the banks in Germany use the Service now and also a lot of banks in Austria and even Eastern Europe. And yeah, this particular alliance which only exists because of the AI stuff they have. So for me this would be probably for access to new resources right? Yeah, also a case was there already years back with SM 52, the regulation for rating product risk basically. So financial products like certificates and these kind of things. There was an AI startup in Switzerland specialized in rating these kind of products because there are millions, maybe billions of financial products out there. And at the time it was not possible to do it manually because also the timeline was kind of short for the extent of the regulation. And so there various rating or risk rating startups and some of them were just bought by banking group usually to do this exclusively for time. Reflecting economies of scale I guess. At least in a way**.**

Do you think one of the two categories for partner selection criteria is becoming less relevant due to the accessibility and involvement of AI?

My opinion that AI is currently not really part of let's say regular alliances hasn't changed. So I don't really believe that there will be any impact of AI on these two categories whenever alliances are formed.

Do you think that the AI capabilities of a potential partner can outweigh other established ones such as trust? Which category would this affect more, partner or task related?

All of these are requirements to have a functioning aligned alliance. AI is just a tool, can't replace anything with AI. It's just making things easier. But I think this is on a too high level in detail probably. Yeah. But not on this level. Yeah.

Do you think the involvement of AI will impact the choice of the governance structure considering the creation of intellectual property?

I don't want to say something that I am not sure of, so for this question I actually don't know. Especially because I have not heard of cases that are falling into this area so yeah, I don't know

Within finding potential partner firms, do you think AI could help detect potential candidates outside a company's network? Do you have ideas how?

Well, it's already happening for individuals. There are AI seeing spots out there, screening all social networks and stuff, and then spamming with automated headhunter, senior requests basically. So it's basically replacing the typically headhunter. But for alliance partners I don't know if the case is strong enough. I mean the effort for finding potential partners is huge, no question. Because probably there are only 10 partners. And then again, you need really detailed information about them and it puts under the question if you have the data or not. And once you have the data, probably it's not that far to have a conclusion about the potential case of the partnership.

Do you think that an AI model could be used instead of a typical decision matrix? E.g. to replace the subjective estimations?

Well again, probably it can help and probably it's also quite strong case for using ai. But the question again will be do you have the data or not? And most of the times probably the answer will be no. And without the data you just can't supply any AI model. So if you have the data, it's probably a good way to make it objective. But also you don't know, most of the time you

don't know the biases of your ai. So I think it can help, but still, I don't believe that it would be stronger than any traditional model once you have the data. And no universal database exists. You do not just go into the internet and have a page that could cover all the different criteria that firms need to consider. The data is just not available or accessible.

Do you think that industrial companies would be willing to integrate AI into the decision-making processes of alliance formation?

I mean, it's just the model, it's just data. At the end of the day, it's always up to the management and to report to decide what to do with the data. It doesn't change anything to the current situation. I mean also now you have data and then you are basing a decision on data and you can decide that the data might be accurate or not. And I don't think it'll change anything. At the end of the day, it's always the overall situation which has to be accounted for trends and stuff. So it's one factor to consider. That's always based on the individual situation, how strong the factor will be. And I don't think any major management decision in the exercise industry the last three years have been based on an AI model, but I don't know. Plus there’s no real-world example that shows AI can objectively evaluate potential alliance partners better than humans can. AI just doesn’t guarantee that it will choose the partner that leads to the most successful alliance.

Do you want to add anything that has not been covered yet?

No, currently not, I think.

Appendix D – Data structure for interview analysis based on Gioia et al., 2013

First-order concept	Second-order theme	Aggregate dimension
Before answering more precisely to your question, I think it's crucial to say that the intersection of these two fields is still in its early stages with only short-time expertise around. (E3) Also for me, I have to admit, the topic is quite new, just been around for like 4 or 5 years, which is not much compared to other fields.(E4) So you know that there is not so much information available even well let's say for experts. So it is quite obvious that it is a rather upcoming research area. (E8)	Novelty of topic	Perception of AI in current alliance formation
Honestly, from what I've seen so far, AI isn't really a big deal in most strategic alliances out there. It just doesn't seem to be a major player. (E3) Even though AI is such a buzzword these days and seems to be everywhere in business, I honestly think that most firms in alliances are still finding ways to gain a competitive edge without really relying on AI. For example, they're often collaborating with industry peers or even cross-industry partners to come up with new products or services, or something along those lines. (E4) When I think about the alliances I've come across in recent years, they've mostly been about things like entering new markets—like what a lot of chemical companies do in China—or developing new products together. AI doesn't really seem to be involved in those kinds of alliances. (E6) The thing is, a lot of people today think everything has some AI in it, but the funny part is, what they call AI is often just basic statistics. So, yeah, AI might be used within the companies forming an alliance—like with ChatGPT etc.—but the alliances themselves are still pretty traditional, you know, focusing on the usual goals without much AI. (E7) For alliances within the financial services industry, so not these between an AI provider and a regular company, but really within this sector, I would say that AI is not playing a major role. (E8) Like for now, I would say that AI is not really part of regular alliances. Though I think this needs to be differentiated from alliances that are only formed for certain AI purposes. (E10)	Non-involvement of AI	
Speaking about AI in current alliances, I believe it is mostly in partnerships that give one firm the possibility to enter a new field or market. For instance, an automotive producer forming an alliance with an AI specialist or a startup etc. to be able to participate in the autonomous driving market. (E2) But if AI is a part of alliances, what I can say from my research and expertise throughout the last years is that these are usually alliances in which one company is trying to gather certain AI capabilities for its own from a company that acts as an AI solutions provider, you know, an expert in this field. (E3) What we have right now are industrial firms or firms from the services industry that integrate copilots into their own programs like in Word or Outlook from companies like OpenAI or Microsoft or you name it. That's the most common that is happening I would say. We do not really see companies forming an alliance with an AI company to enter this specific market. Like, just from common sense, why should AI companies help other companies enter their own market. (E7) Those alliances that are exclusively formed for AI purposes are very frequent between a company that has the average AI expertise for its industry and firms that are solely specializing on AI, which are often also some start ups in my experience. The goal for the regular companies so to say is mostly either the enhancement of their value creation processes through AI or the possibility of entering new markets. (E10)	Alliances with AI solution providers	

I think that if AI is involved in alliances it is more about firms getting access to specific AI use cases from firms with a focus on that. So that they can implement these with their own company. For me, it does not reflect the idea that these companies want to enter the AI market as well, it is rather about keeping up to date in its own processes. (E11)		
What we see even more is that companies enter license agreements or buy certain AI software, not entering any alliance for that. (E3) For companies that just strive for an improvement of their own AI skills, I think it is just easier to buy those capabilities in instead of going through the process of forming an alliance (E6) And if not, then they will look for AI capabilities from a different provider probably directly with the hyperscaler and having some contractual agreements and some general contracts done with some hyperscalers currently I'm on a project, they have a contract with Google, but they basically have a Abrufvereinbarung from Google, but it can demand capabilities like they need (E8)	Sourcing of AI capabilities	
I would say definitely no. How would AI replace an actual alliance partner currently? And more I don't see how the current use cases of AI like predictive maintenance or improved forecasting should replace the motives of alliance formation. Does not add up for me (E1) From my point of view this is not the case, there will always be the need for alliance formation independent of AI as it just cannot replace some things like investments, existing patents or the ability to discuss with a human being (E2) When thinking about this I believe it is necessary to see where AI could potentially, in a very futuristic, hypothetical world be able to do those things that a alliance partner is usually taken for. So for example when developing a new product, AI might be capable to contribute with creative ideas and resources in the ideation phase, and might one day replace the need for firms to enter alliances for this reason. Yet when thinking about more tangible things like investing in a new plant together, how should AI replace this. (E3) I do not see the case how AI could currently replace the need for alliance formation. Acting as a facilitator within the alliance, yes, but replacing them no. (E7) Instead of making an alliance, you just get a better AI and you don't need to make this alliances anymore? I don't think so because I mean I also don't have so many examples of alliances to think of, but I think sometimes you're looking for specific capabilities that also stem from expertise and they are on very specific use cases that maybe an AI would not entirely fit with, but also with an alliance, you also want to unlock sometimes like a customer base of player that you get the alliance with. You want to unlock new sales. It's not only about capabilities. (E9) For me, considering this makes currently not really sense. AI might be capable to support operations within alliances but it is not in a state to replace them as it is not capable of replacing the human input or the real assets created within the alliances. (E12) Let's put it differently, firms are forming alliances for a variety of reasons like doing research, investing in a new facility together and so on and so forth. Having this in mind, like the regular motives for alliance creation - for me AI, represented in ChatGPT or advanced analytics - is not replacing or solving these. (E13)	(Non-)replacement of alliances by AI	

In the past we had fragmented sources of information. And now, thanks to AI, we succeeded in connecting the fragmented sources of information. So for me, it is a kind of unifier that has the capability to take the fragmentation, to transform it and then unify the information so that it adds a value. What I mean with adding value is that it can be taken as a base for decision making. A human being would just not be able to go through all the available data and summarize the essentials, especially not in this short amount of time, that's for sure. (E2)	Capabilities of AI for knowledge & information
For instance in consulting, you are often asked about things that you are not an expert in either. So what I do is I go into ChatGPT and just search for the most important concepts or look for past approaches to solve a specific problem that might help me with the new challenge ahead (E4)	
Nowadays I just use ChatGPT to get information about almost everything, in a matter of seconds (E6)	
Sometimes I just ask ChatGPT if I should rather go for option A or B, and most of the times it really gives a sophisticated answer with good reasoning and valuable information. (E7)	
Because okay, you didn't know that while you were looking something on the internet you have been prompting the whole time. Now, the interesting part in the prompting is that, you can get a creative result, not only a documented result. And this is the main difference. The main difference is that when you are searching, you are just finding different sources that you need to go through and take the one you believe is more appropriate. But now what you are prompting, you are getting all the sources of information again specific to your prompt, not generic, and also with a layer of creative if you want so. (E9)	
Whenever I have to brainstorm when I need to work on a task that I haven't done before, I use our internal LLM to just get some let's say inspiration or as a next step validate what I've been thinking so far. Just to make sure that I am on the right track you know, feeling less insecure about my potential solution. And the other thing is that it also helps me in deciding with which solution I should go, that's quite handy as well. (E12)	
So something that you have been doing for instance, in one hour you do it in five minutes now without a loss in quality of the information and data. Like for research purposes or something in that area. (E13)	
Yet what is missing for AI is the ability to really come up with new ideas, and what I mean by that are not new designs or something like that. But really something that has not been there before and is not based on existing data or knowledge. (E2)	Inability of AI to generate knowledge
Especially in knowledge management, AI is handy to work with the existing data and maybe come up with new ideas but all based on the information that firms already have (E3)	
As AI is not able to generate any knowledge by itself, at least as far as I know, there is also no way to replace human research right? Intellectual property like patents etc. is not coming solely from AI so far, maybe one day, who knows. But in the end it is also always a human prompting or programming even if we would have come so far one day. (E6)	
In the end, AI is just a tool, you can't replace things like research and creation of new knowledge with it. It's just making the way to get there more comfortable (E7)	
Even if you don't have the knowledge and or let's say the insights, even if we're talking about some AI or some self learning stuff, which actually kind of generates knowledge or generates insights from some data, then you still need the data. So still you need some resources for that. So yeah, strong no. (E8)	

AI is not generating knowledge by itself, so it's always relying on knowledge already existing. AI can't generate new knowledge and that's the issue. So you always need the expertise and I mean what would you do currently? Currently you would probably hire the chief engineer from the competitor and in the future maybe you will buy the AI service provider from your competitor, but still you need the foundation for the knowledge. AI is just a distributor is just a facilitator for applying it and multiplying it, but it's not really the source for the knowledge. (E12) Is AI being very helpful in information retrieval, connecting various sources and also detecting patterns that might remain hidden within data? Definitely yes. Is AI capable of human creativity and imagination that often leads to new inventions? Can you discuss, no matter if existing or new things, with AI in the way you can discuss with another human? Definitely no. At least where we are standing right now. (E13)		Impact of AI on the need and concepts for alliance formation
And I mean this is what many alliances do, bundle their resources in the sense of expertise and knowledge and create something new together, so the RBV is still valid no matter whether AI acts as a facilitator in the alliance or not. But there will be definitely no replacement. (E2) So the need to build an alliance for building specific new knowledge still reflects essentially the purpose of resource-based view" (E3) So from that point of view, AI will not be able to replace alliances that conduct research and develop truly new things. Knowledge-based theory, that I believe is that most fitting theory explaining these kind of partnerships for R&D. Well it will be still in place and reasoning why firms form alliances. AI cannot change this for now. (E7)	Impact on RBV	
In the past, everybody was trying to do exactly the same thing, but slightly differently because they want to make these, let's say proper expertise of something. Okay, now, we do know that reinventing the wheel brought us to multiple solutions. The multiple solutions produce data, to be more specific an unimaginable amount of data and AI comes and say, okay guys, peace and love. Now I'm going to unify all of those things, and I can digest it in a way that you don't need to reinvent the wheel. Yeah. Okay, now the interesting part is that the alliance is still needed because you are talking with human experts, you want to be able to discuss. And the human experts can have ideas, ideas on how to apply AI ideas, how to train AI ideas. What is an innovative way of doing things? That's my perspective (E1) That's it for me. The human expertise is the human judgment and the sign off. That means somebody validates that something can go out. That can be anything created by AI like a concept or proposal based on certain input or even just to verify the sources proposed by AI. From my point of view this is not the case, there will always be the need for alliance formation independent of AI as it just cannot replace some things like investments, existing patents or the ability to discuss with a human being (E2) The major incentive for building alliances, is to put experts together because you want to see people working together, right? You want to have the collective effort, that is created by a relationship. This relationship becomes more intense the more you work together, the more you are able to discuss. (E3) From my perspective, the relationship about the partnership is fundamental. So it will never be irrelevant for the simple reason that you want to have the possibility to dialogue with a human being that shows responsibility for his or her actions and also important, has the accountability in front of the law. (E4) And still with the existing data and knowledge you will always need the human component for their expertise and decision-making capabilities. (E5)	Human component	

Plus, especially in R&D you will always profit from individuals that question the status quo, not only taking the existing concepts as given but discussing them proactively (E7) And you know even if the alliance is not about generating new knowledge, the ability to collaborate with another human being still remains top priority (E9) Very often, an alliance is not so much about the outcome itself but more about building a relationship, setting a basis for future strategic moves, at this point AI is not really involved at all. (E12) Is AI capable of human creativity and imagination that often leads to new inventions? Can you discuss, no matter if existing or new things, with AI in the way you can discuss with another human? Definitely no. At least where we are standing right now. (E13)			
Speaking about the other major theory for alliance formation, I think it is more about decreasing the expenses if you build an alliance and work on AI solutions together instead of separate, that's what I can think of there in the context of AI or also, well when you build an alliance it is usually a lot, like really a lot of work to set everything up from NDA's to the whole contracts etc. Maybe, and I am thinking out loud here, AI could support there, in reducing the whole administration stuff that is very repetitive and takes so much time you know (E3) What I believe is that AI can automate a lot of things when it comes to contract design and process automation in the field of designing agreements. So if applied to all the partnerships with external vendors and contractors that a firm has, I don't see why this could not reduce the costs that usually come along when someone has to do all these things. And if those costs are much lower for contract creation etc. I don't see why firms should still enter alliances to save on these. (E5) I read about the theory that described the costs occurring from management of traditional market relations through contracts and their management. The transaction cost theory, yes I remember and for me AI could solve this problem. At least when I think about all the tools available for contract work and so on, why should these not be used for a firm's operations like procurement agreements. For me, this would only make sense to reduce the costs there. (E9) And I think in terms of the transaction costs it only makes sense to partner up with another firm for R&D. I come to that in a second but why I focus so much on R&D here is because it is a function that you spend a lot of money on even though there is no certainty on whether a certain product or service will evolve from that. So, for me this has huge potential for lets say enhancement and facilitation. To come back to transaction costs – we have seen that AI cannot replace an alliance partner in R&D, so either you do research on your own or you "team up". With the latter you can save in certain costs and reduce your own risks when trying to develop very specific new patents. (E11)	AI and transaction cost theory		
And I mean this is what many alliances do, bundle their resources in the sense of expertise and knowledge and create something new together, so the RBV is still valid no matter whether AI acts as a facilitator in the alliance or not (E2)			

For me, it is not that AI is not present in alliances at all. It is just mainly not about it, and it is not playing the major role for the alliance objectives or motives. But, it is certainly used for some tasks within the alliance or those that contribute towards discussions within the alliances, even if it is just designing some concepts visually in PowerPoint. Though I must say, that I think there is much potential for AI to facilitate operations within alliances, the question is only how it will be used." (E5) In the end, AI is just a tool, you can't replace things like research and creation of new knowledge with it. It's just making the way to get there easier. (E7) I consider AI more as an ally in alliances, like a third party (E8) For me, considering this makes currently not really sense. AI might be capable to support operations within alliances but it is not in a state to replace them as it is not capable of replacing the human input or the real assets created within the alliances. (E12)	AI as a facilitator	
First of all, which AI use cases are currently available and more importantly also applied, right? For me there is definitely a focus at the last step of the value chain, meaning for those functions that are directly related to the end-consumer. Nowadays firms are more and more offering chatbots to cut down expenses in customer service or to enhance the customer experience with some kind of virtual assistants. (E2) I mean for this discussion I think it makes sense to only consider the currently well-established solutions and don't fantasize about what could potentially be in 15 years if this or that. For me, the use case that has found wide application and acceptance throughout industries is the usage of chatbots, both internally and externally. (E3) Main goal for firms implementing AI is certainly cost reduction through for instance automation. So, use cases of AI are normally wherever things can be done in a leaner, more intelligent way. I have seen this especially in manufacturing so far, where instead of letting a person check the temperature, the pressure etc. of a facility, smart sensors can do the trick. (E4) What I have been confronted with so far were especially things like robotics or IoT, being supported by AI to provide better insights into production processes. At least this is what is often advertised, from my perception there is still room for improvement you know. Not being afraid of implementing other things as well. (E5) Most prominent. Let me think- I believe for sure the use of LLMs for customer interaction like handling questions or complaints, as a let's say first level support. The same accounts for internal processes. (E7) I would say buzzwords such as predictive maintenance, demand forecasting, smart warehouse management, IoT etc. All things that companies do as an effort to decrease costs trying to increase throughputs. (E11) Whenever I have to brainstorm when I need to work on a task that I haven't done before, I use our internal LLM to just get some let's say inspiration or as a next step validate what I've been thinking so far. Just to make sure that I am on the right track you know, feeling less insecure about my potential solution. And the other thing is that it also helps me in deciding with which solution I should go, that's quite handy as well. (E12)	Current AI use cases	

Let's go through the motives step by step, for entering a new market, I believe that LLMs could help in translation and concerning cultural aspects. Plus, I think it might be helpful in answering questions about the new environment. (E3) For the first motive, I can only think about getting information quickly about what matters in the new market. (E6) Communication in a foreign language would be definitely one point for me which can be solved by like ChatGPT (E13)	Entering new markets	The role of AI in accomplishing traditional motives of alliance formation
So for example when developing a new product, AI might be capable to contribute with creative ideas and resources in the ideation phase, and might one day replace the need for firms to enter alliances for this reason. (E3) What you could do is asking for information on current customer needs, wants and trends (E4) For me, there is no potential of AI to create a new product. As already said earlier, the outputs of AI are currently still reliant on certain inputs. So how should AI come up with a truly new product or idea if everything is based on existing data? (E5) I would think of two ways AI could help accomplishing new product development, one would be analysing the current market through AI and second, assisting in brainstorming ideas for new products. For instance giving a warning if a certain idea already exists in a very similar way or contributing with new input, especially regarding potential design. This is what I was thinking of. (E6) I am not really sure about this and it still depends largely on the industry but I believe that AI could maybe assist in the ideation phase when you sit down and brainstorm ideas. Does that make sense to you? (E10)	Product development	
To go back to my response to your last question. I also think that chatbots can assist in the customer service for a joint product or even if its just similar products offered. I mean why not? You can put down the unit costs and share a certain resource. (E2) First thing that comes to mind is production when I hear unit costs. But honestly, I think AI can also have a good impact on cutting costs when alliance partners apply it in other areas. So for instance, marketing or general administration, functions like that I guess (E3) By implementing the things discussed in the previous question, just for instance in the joint production of an alliance, costs for the output units can be minimized while still having the same product, with same quality and characteristics etc. (E4) Amongst all motives I would say economies of scale is the most fitting for AI to, well, show it's potential. I know that I said I would not really believe in AI being deeply involved in accomplishing alliance motives. That it would be only facilitating and supporting certain tasks of the alliance but not really working towards the main goal. Thinking now about it I must admit that for this motive, AI could have the potential to be more involved. Still I say could have the potential. I already told you that I think there is much room for improvement at least in the common industries. But potentially IoT and robotics could be quite useful in reducing unit costs. Especially when I think about disruptions in the production that are just because people are not able to make the calculations right and then being surprised by shortages or surplus. (E5) Even tough I think that AI does not really have an impact on helping to accomplish other alliance motives, the reduction of unit costs and maybe even an increase in quality through smart manufacturing is already now implemented. So it would make no difference if this is implemented at one company or in the joint production, right? It aims for the same goal. (E11)	Economies of scale and sharing of costs	

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So the fact is how you can be more productive, how you can be more, competitive in pricing, because automatically we are going to bring a level of automation of high quality that will allow you to minimize the human effort in the task. (E13)		
Honestly, I don't know how AI should help for this motive. Will it move real assets from A to B? Definitely no. And also for intangible stuff, how should it be involved here? The only thing that I was thinking of, in which AI would be included, would be the exchange of AI capabilities themselves. But I don't think that this is the purpose of the question. (E1) What I was thinking of was like data or knowledge that is accessed, transferred, exchanged etc. Here, AI could assist in shared data pools for information retrieval. Finding the right data. But more than that, I don't know. (E3) Only if its about accessing AI capabilities. Other than that I cannot think of how AI could potentially help here. (E10) This is really difficult. Maybe in managing information flows and storing. (E13)	Access and transfer of resources	
For me, I don't really see why AI should impact the relevance of the two categories. I mean, of course you need to differ between those alliances in which AI capabilities are a selection criteria, when firms search for a partner with expertise in AI for instance. But for all other alliances in which AI might or might not support there is no direct impact I would say. (E2) What I said before about AI not being a big player in current strategic alliances still applies here. From what I have experienced, AI is not really involved that much in alliances. So why should there be an impact on the selection criteria then? At least not a universal one that applies to this categories of criteria for common alliances (E3) Earlier on as we were talking about AI in the role of a facilitator within alliances, I said that I see AI in supporting tasks like searching for info's or preparing slides. Those kinds of things are not changing anything crucial about the alliance. Like it is not as if this would determine the outcome, it's just an assistance, that's it. Following this argumentation I don't see why AI should impact the relevance of task- and partner-related criteria. Would not make sense for me, to be honest. (E5) Again, I don't really believe that AI has the influence - talking about current alliances, not what could be in some years- to pose any greater impact on those things like criteria categories or criteria itself. (E7) My opinion that AI is currently not really part of let's say regular alliances hasn't changed. So I don't really believe that there will be any impact of AI on these two categories whenever alliances are formed. (E8) In general I would say no but I mean it depends on whether AI will be a distinctive part of the alliance or not. Because even though AI might not be a selection criterion itself, the availability of certain knowledge management tools based on NLP or deep learning might be used within the alliance. And thereby, some task-related criteria such as the ability for information retrieval for instance could become less relevant. But this is a very specific case. In general, I would still say no to the question.(E9)	General impact on criteria (categories)	

For me, this is one of the most interesting playing fields right now. I mean you have to see there are millions of patent applications every year. In the past, you had a individual or a team of humans behind every patent. What is happening now is that people say, okay, AI is involved in the creation. And I mean assisting here, not generating a patent on its own. So what should we do now? I don't know of so many cases here yet but what if in an alliance one partner says, well, I programmed the AI, so the majority of work for the patent came from my side. As far as I know there is no global or even local regulation on this. So if I was to enter an alliance right now with the goal to create a patent with the involvement of AI, I would make very sure that my partner firm agrees to setting up a binding contract or something in that sense. (E1)		
As far as I know, and if I am not wrong, this is a global thing, that only humans can be the inventors or owners of a patent. This means, if AI is involved in the creation of IP, the ownership usually goes to the operator of the AI solution. As you can imagine, in alliances that are not really bonding, this has the potential for a lot of conflict. So from what I think, I would say that especially R&D alliance partners will focus on the potential governance structure even before entering an alliance, perhaps even as a selection criteria. What I want to say with that is companies don't want to lose any valuable assets just because AI has been involved in a more or less loose partnership. So I guess they would rather build a joint venture or something like that to make sure that there is no loss of IP afterwards. (E3)		
Honestly, I am not really sure about this. On the one side I think it is not really a matter yet but as AI is also progressing fast in its capabilities, I am not so sure about how this could be in like 3 years. (E4)	Impact on Governance structure as a criterion	Impact of AI on the partner selection criteria
Until now, there have been not so many cases dealing with AI and patents. At least what I know of. Still, even if I think AI is not really involved in the research of alliances, I would rather be safe than sorry as a company. Meaning I would rather look for an alliance partner willing to set up certain agreements beforehand so that you will be never in a situation of conflict over ownership you know. (E5)		
I don't want to say something that I am not sure of, so for this question I actually don't know. Especially because I have not heard of cases that are falling into this area so yeah, I don't know. (E8).		
There is no current framework on how to deal with situations where someone claims AI to have a, well lets say "right" to the ownership of AI. So I personally don't know whether I would change anything in an alliance if I know that AI will be involved. Of course this only applies for like R&D alliances. If AI is just used by alliance partners for things like translations, there is no conflict over IP. (E10)		
What I think is that R&D alliances might become even closer. In a sense that there are more explicit agreements and contracts to make sure how to deal with certain situations such as AI and IP. (E12)		
I know that sometimes AI expertise is put on a higher level than it actually deserves, because honestly, it's the human factors like trust and shared values that really make an alliance work. These should never take a backseat just because a partner has strong tech capabilities. In the end, having a partner that is providing excellent AI solutions but is no match at a personal level, will probably lead to worse results than an alliance in which the partner-related criteria are fully met. That's what I am thinking right now. (E3)		

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At the end of the day, the real success of an alliance comes from the relationship between the partners. As said before, it`s still about the human expertise and the option to have an exchange with another person. And, I don't like to repeat myself but still AI is not playing that important role in alliances. So I don't see how established and crucial criteria within a partner should now become irrelevant. (E5) AI is great, but let's be real—it's the human connection, the relationship, that holds everything together. The history you have with a partner and the personal connection are what truly matter for me. (E6) Finding a partner with top-notch AI skills is definitely a plus, but you can't overlook trust and shared values. Those human elements are what keep alliances strong. (E7) If there's no solid trust-based relationship, the whole thing could fall apart. Things like sharing similar values, past experiences or simply getting along well among the involved teams is just key. (E9) In my experience, successful alliances strike a balance between tech expertise and human connection. Even with cutting-edge AI, the relationship and trust are what make things work. (E11) You can't underestimate the partner-related criteria in alliances, like past collaborations and shared values, even when you're looking at a partner's AI capabilities and think this is the most important thing. No it isn't. (E12) The relationship between partners is crucial. No matter how advanced AI gets, it can't replace the need for trust, shared values, and that personal touch in partnerships. So, the partner-related criteria dealing with those human characteristics are definitely not gonna be outweighed or at least they shouldn't .We know that executives sometimes decide in a, well, not optimal way (E13)	Non-replacement of humane criteria	
In general, I think conducting a market or network analysis is a massive effort. It's time-consuming in a way as you need to dig through a lot of data to find potential partners and in the end also see which ones you choose for the next step. Like which candidates make it to the, well, next round in which they get evaluated. From my experience, executives tend to avoid costly processes and rather go with firms they already know. (E2) I think AI could really streamline this process. It could help retrieve information more easily and objectively, thinking about much more candidates than usually, which might really be able to make a difference. For instance, considering a smaller start-up, that otherwise would have never been on the list of potential partners. But, and there is always a but, as always with AI, the question is do we have enough data? (E3) For me, it seems like managers are more comfortable sticking with familiar firms, they don't really want to find out about others that could be potential partners. I think it's often also knid of a responsibility to team up with a certain firm (E4) In my opinion, AI has the potential to bring new players into the partner selection process. Make it easier to find them than through manual research. And another relevant point, It could take away some of the biases that come with relying on past experiences and known firms alone. (E7) I mean the effort for finding potential partners is huge, no question. (E8)	Finding potential partners	

The challenge isn't just gathering information; it's also about drawing the right conclusions from it. And that's assuming we've identified all the potential candidates in the first place, which is, unfortunately, mostly not the reality. And honestly, I am not sure whether this will change if AI is applied. I mean definitely I believe the process of finding potential allies could be leaner if AI is involved but still about the data, I am not sure. (E9) I'm not entirely convinced that AI will reduce the effort needed for this process. We also need to consider whether there's enough specific data available for AI to work effectively. (E10) Finding all the possible alliance partners is easier said than done. Even with all the data at hand, it's still a tough job to make sure that you are not missing any key players. I mean you select a bundle of potential candidates from a bigger bundle that you believe are all possible partners. This is mostly just no true, you are never looking at all potential partners. No, there will be always partners that you do not even consider and that's, well, normal. Even if you use AI in a certain way here, I really doubt that you will have all relevant data for identifying all potential candidates. (E11)		
The question here is whether all the data points needed for an evaluation are even available. You have very different things you are looking for in each of these assessments, getting this data on other firms could be very difficult I guess. (E1) One of the big challenges with using AI for evaluating candidates is that the criteria vary so much from one case to another. There's just no one-size-fits-all database. Especially not when thinking about how specific the criteria can be. In one alliance you might search for very explicit tech capabilities whereas in others you look for a partner that is acquainted with the Turkish culture. Just to give an example. If one can overcome the data challenges, I believe that AI has the potential to reduce subjectivity in the evaluation process. This could really help select the best possible partner for an alliance. (E3) When I think about replacing the input of these matrices with the output of an AI model, mainly two things come to my mind. First, we are talking about very specific data needed, that differs from case to case. Honestly I am not sure where to access such data about other firms. Also the fact that the criteria are always different brings me to the second point. If the model is always confronted with new data, I am unsure about the performance and the bias. I guess the subjectivity criticized by human input could, in the worst case, get not really better but worse. Still, when I think about that normally, managers also have to get the data from somewhere to evaluate criteria, it should be not that big of a hurdle. Or maybe its often just gut feeling from managers and not really data existing. I don't know. Just thinking out loud at this point. (E6)	AI in evaluating candidates	Impact of AI on the partner selection process
Yes, I believe that AI could be a good tool in making the evaluation process more objective. (E7) No universal database exists that could cover all the different criteria that firms need to consider. The data isn't always available or accessible, which is a big hurdle for using AI in this way. (E8) I believe it would be not easy to implement AI here but the option is certainly there and would also has its benefits. I just don't know whether managers see the case. I mean this would include to admit that the process is currently not optimal. From my experience, not all managers like to do this. (E9) For me there is the issue of the data availability but also some concerns regarding the ability of AI to scale qualitative criteria. I don't know if this is going well. (E10) When it comes to qualitative criteria, I'm skeptical about AI's ability to make fair comparisons. (E11)		

I mean why not, nowadays you have so much progress here, so why should it not be used to enhance this process as well? Of course, you would need to see whether executives are willing to spend money on this. Imagine a firm is entering an alliance once in a decade, why should it put such an extensive model in place? Would not really be profitable from my point of view. Yeah so that's the one side of the medal. The other would be is there even the AI expertise within a firm to build such a solution? Many question marks for me here when I think about it now (E13)			
Assuming that all relevant, qualitative and quantitative data is available and there is a model that could be build or bought, I still think many executives won't let AI take away their own judgement in this question. Maybe let it assist but even there I am not sure. Plus, I don't really see managers willing to incest money into this use case, especially with the upcoming recession, at least in Germany. (E1) Two, no three things I want to say: First, AI might be good at crunching numbers, but when it comes to choosing an alliance partner, personal experience and preference still carry a lot weight for many executivesSecond, and this is for me the most important, you have to be clear about that just because AI evaluates a candidate doesn't mean it will pick the one that ensures a successful alliance. What I want to say with that is even if all criteria are fully met by a candidate, there is still so much potential of conflict and failing of an alliance. I know this from my own experience. Sometimes a partner that wasn't the optimal choice at first glance is in the end the perfect alliance partner. If something like perfect even exists. And last, third point would be considering how infrequent alliance formation is, it's questionable whether investing in AI for partner selection makes sense. (E4) I mean given how popular AI is in the business world right now, I think a lot of managers would be open to letting AI take over Not necessarily because they know it improves the decision-making but because it is expected to be used. I think this is how it is going right now in many companies, putting AI implementation as a top priority. (E5) There's no real-world example that shows AI can objectively evaluate potential alliance partners better than humans can. AI just doesn't guarantee that it will choose the partner that leads to the most successful alliance. (E8) With AI being present in all areas of business, I do believe executives would be willing to replace manual partner selection tasks with AI. It's seen as the future, as it is with almost all AI solutions right now (E9) Even if there's a willingness to use AI, the real question is whether companies are ready to invest in these solutions. The cost is a significant factor. And there are other use cases of AI that seem to be much more relevant and promising to me. Those that really have a direct impact that has been also proven already throughout the industry. The case for this solution is just not big enough from what I see. I mean we don't have any proof that AI would really choose the most suitable partner. And still, the alliance could fail. Humans and relationships are not fully predictable. That's the thing that many people forget. They are just hyped about AI (E10)	Willingness to integrate AI		

For once, there is this popularity of AI everywhere and I have the feeling that some managers just want as much AI solutions as possible. More specific to this case I believe that for many executives it is not really important whether such a decision matrix is filled out by humans or AI, well honestly I think there are two factions. The ones that don't mind or even support AI to take over some processes and those that are very skeptical, preferring the human input and judgement (E12) Of course, you would need to see whether executives are willing to spend money on this. Imagine a firm is entering an alliance once in a decade, why should it put such an extensive model in place? Would not really be profitable from my point of view. Yeah so that's the one side of the medal. The other would be is there even the AI expertise within a firm to build such a solution? Many question marks for me here when I think about it now (E13)		