

Transitioning to artificial intelligence-based key account management: A critical assessment

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ABSTRACT

Research suggests that Artificial intelligence (AI) use for sales and marketing activities improves firm performance. Underpinning these AI applications are datasets that reflect large volumes of sales transactions and interactions with a broad range of customers. Conversely, key account relationships involve deep and focused engagements with a small number of strategically important customers at multiple levels, and this has important implications for AI data inputs and uses. Whether AI is appropriate or relevant to key account management (KAM) is currently unclear. In this paper, we critically evaluate AI applications for KAM. The paper highlights the amenability of a firm's KAM capabilities to AI and evaluates the opportunities and challenges that AI-based KAM offers. The paper also outlines a set of moderating factors likely to affect the impact of AI on KAM and provides a conceptual model to better understand the potentially transformative effects of AI on KAM. The paper concludes with a set of theoretical and managerial implications of AI-based KAM and develops a comprehensive research agenda to contribute to the further exploration of AI-based KAM.

1. Introduction

Recent research shows that firms that adopt Artificial Intelligence (AI) see improvements in net profitability, net operating efficiency, and return on investment (Mishra et al., 2022; Wu & Monfort, 2022). The benefits of AI can be comprehensive, yet several studies suggest that realizing them can be challenging (Hossain et al., 2022; Letheren et al., 2020). Kozinets and Gretzel (2020) summarize these challenges in terms of three dilemmas: the incomprehensibility of AI, the human-to-human disconnection that AI promotes, and the vulnerability necessary for firms to expose themselves to when adopting AI. While there has been some progress in investigating these issues, a dearth of research exists into their implications for Key Account Management (KAM). As Dwivedi et al. (2021) p.109 claim, “currently, AI research focuses predominantly on the marketing aspect of consumers”. Several authors highlight the limited research into B2B-related phenomena more broadly and argue that there are opportunities for further research in this domain (Chatterjee et al., 2023; Manis & Madhavaram, 2023; Moradi & Dass, 2022). This is despite studies as early as 1984 recognizing the importance of AI in B2B (Collins, 1984).

KAM involves developing and utilizing specific operational and

dynamic capabilities (Guesalaga et al., 2018; Ivens et al., 2018) to nurture and maximize the value of strategic customer relationships (Homburg et al., 2002; Marcos-Cuevas et al., 2014; McDonald et al., 1997). Strategic customer relationships (i.e., ‘key accounts’) are those that represent the greatest contribution to the firm's long-term goals when compared to other customer relationships (Davies & Ryals, 2014; Feste et al., 2020; Gounaris & Tzempelikos, 2013). As such, key accounts significantly impact the firm's strategic direction and require specific investments in relationship building (Gounaris & Tzempelikos, 2013; Guenzi & Storbacka, 2015; Homburg et al., 2002). Hence, KAM is distinct from marketing or sales management more broadly, where there are limited attempts to prioritize strategic customer relationships or to co-create a joint strategic direction due to the typical focus on more transactional forms of exchange.

The term ‘AI’ is now in widespread use, yet its meaning is often lost. John McCarthy, known for coining the term ‘artificial intelligence’ and who played a significant role in the early development of AI, described AI in terms of the ‘ability of a computer to mimic human behaviour’ in his 1955 proposal (McCarthy et al., 2006). As such, anthropomorphism, as it applies to technology-based systems, is a consistent theme in AI marketing and sales research (Hildebrand & Bergner, 2020; Liu-

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Thompkins et al., 2022; Miao et al., 2021). Nowhere is this stream of research more abundant than in the examination of customer engagement with AI online. Hence, AI is evident as chatbots and workflow management engines in customer service contexts, and this has led to questions as to how well AI-based customer interfaces replicate human-to-human interactions (Liu-Thompkins et al., 2022; Noble & Mende, 2023; Perez-Vega et al., 2021). Several studies recognize the important roles that AI plays in producing cues that are central to customer experience, and this also gives rise to questions about the extent to which AI is useful, appropriate, or even acceptable to consumers (Longoni & Cian, 2020; Puntoni et al., 2020; Wirth, 2018). Indeed, the ability of AI to mimic human behaviour raises serious questions as to whether AI will replace human-based service delivery (Grewal et al., 2021; Hermann, 2022; Letheren et al., 2020).

While McCarthy's definition is useful, AI interpretations are now much broader (Duan et al., 2019; Letheren et al., 2020). Many current AI tasks require considerable processing power, and this often exceeds the scope of human capability. AI can access a broader range of data from a wider range of sources than the human mind, while also accounting for its messiness. AI can take this data, analyse it, and produce useful outputs in a fraction of the time a human would take to conduct the same tasks. AI-based outputs may also avoid the need for any human participation since they involve robots and other automated systems (Letheren et al., 2020; Longoni & Cian, 2020; Noble & Mende, 2023; Yadav & Pavlou, 2019). The power that AI resembles is both a cause for excitement and a cause for concern (Chintalapati & Pandey, 2021; Kozinets & Gretzel, 2020; Letheren et al., 2020). Moreover, many AI activities take place separate from the customer experience through a range of support technologies, and this can raise AI-related anxieties, leading some scholars to call for greater AI transparency (e.g., through explainable AI) (Malthouse & Copulsky, 2022; Rai, 2019; Wirth, 2018).

Existing research does not fully acknowledge the idiosyncrasies that differentiate KAM-based AI applications from other B2B marketing or sales management AI applications. Recent B2B AI studies investigate customer journey management (Moradi & Dass, 2022; Rustholkarhu et al., 2022), customer/ partner relationship management (Chatterjee et al., 2023; Saura et al., 2021), digital marketing (Saura et al., 2021), pricing decisions automation (Karlinsky-Shichor & Netzer, 2024), sales (Singh et al., 2019), and value co-creation (Leone et al., 2021). Absent from these studies are considerations pertinent to KAM, such as identifying and developing key accounts, building strategic, multi-level customer relationships, or creating cross-functional customer teams. Hence, there is currently the need to consider the specific AI applications as they apply to KAM. Indeed, an assessment of AI in KAM could help firms and their key account managers understand how and when AI can be useful, and when it may not be. Such an appraisal may also help scholars unpack AI implications for KAM from a theoretical perspective.

The purpose of this paper, therefore, is to critically evaluate the potential effects of AI on KAM. The paper includes three main contributions to the KAM and B2B marketing literature. First, drawing on Guesalaga et al.'s (2018) KAM capabilities framework, the paper assesses the amenability of a firm's KAM capabilities to AI while also evaluating the opportunities and challenges that AI-based KAM offers. Second, the paper outlines a set of moderating factors of the impacts of AI on KAM and integrates these into a cohesive conceptual model. Third, the paper outlines a set of theoretical and managerial implications of AI-based KAM which then informs a comprehensive research agenda, and aims to establish AI-based KAM as an area of scholarly inquiry.

2. AI in marketing and sales: B2C and B2B perspectives

An extensive and growing body of research into the uses of AI in marketing and sales now exists. Reviews by various authors (Chintalapati & Pandey, 2021; Haleem et al., 2022; Manis & Madhavaram, 2023) highlight a range of AI applications in sales and marketing (see Table 1). Notably, most marketing and sales AI studies centre on

Table 1
Common AI applications in marketing and sales.

AI use	Description	Examples
1. Data collation	Accessing data from diverse sources	• Accessing customer data (Prior et al., 2024; Puntoni et al., 2020). • Managing 'big data' (Alemany Oliver & Vayre, 2015; Duan et al., 2019).
2. Converting data into usable form	Processing data to account for missing records, duplicates, and multiple formats	• Managing unstructured data (Hossain et al., 2022; Jabbar et al., 2020). • Data visualisation (Woo et al., 2005). • Data mining (Mariani et al., 2021).
3. Planning	Developing insights to support planning decisions, informing planning decisions	• Marketing analytics (Alemany Oliver & Vayre, 2015; Hossain et al., 2022; Türkayrağı et al., 2021). • Real-time marketing campaign planning and calibration (Malthouse & Copulsky, 2022; Mehmood et al., 2022). • Integration of marketing and advertising resources (Malthouse & Copulsky, 2022). • Innovation (Bouschery et al., 2023).
4. Automation	Removing human decision-making from marketing and sales tasks	• Marketing automation (including advertising and promotions) (Deng et al., 2019; Looi & Kahlor, 2024; Spais et al., 2023). • Service automation (including customer interactions, experience, and response) (Bergner et al., 2023; Kamoopuri & Sengar, 2023; Liu-Thompkins et al., 2022; Noble & Mende, 2023). • Sales automation (Agnihotri et al., 2023; Dickie et al., 2022).
5. Reporting	Presenting information and analysis in innovative, user-friendly ways	• Marketing and sales performance monitoring (Mishra et al., 2022; Wu & Monfort, 2022).
6. Training	AI-based simulations, training programmes and other tools to help develop new skills in humans	• Sales training (Luo et al., 2020).

business-to-consumer (B2C) contexts. While useful, this brings an underlying set of assumptions that impact AI applications. From the abovementioned reviews, it is apparent that current AI studies centre on consumers at the individual or small group (e.g., family) level. From an AI perspective, this plays out in several ways. First, the individual consumer is the primary unit of analysis. Through interactions with the firm's brand touchpoints, it is possible to capture a wide variety of customer data. Firms can access a range of data sources and combine them to generate insights based on customer order history, demographics, behavioural, and many other indicators. Second, B2C exchange is often relatively simple. Consumer purchase decisions usually reflect habit or impulse, which can be predictable. Third, B2C exchange involves arm's length customer relationships. While a consumer might purchase a firm's products/ services regularly, there is often little depth in this relationship from an emotional or psychological perspective. Fourth, the firm is often more powerful than the individual consumer. This enables firms to collect customer data easily.

While B2B and B2C exchanges have similarities, there are also

significant differences from an AI perspective. Research into AI applications in B2B market contexts is much less voluminous, but it is emerging. Through searches of EBSCO, Web of Science, and Scopus databases, we identified ten studies investigating AI applications in B2B settings specifically. We concentrate on AI applications here rather than studies offering a literature review or conceptual model only. We identified six main themes that summarize this literature: decision support, relationship management, customer communications, customer journey management, sales management, and value co-creation. AI applications in B2B contexts are complementary in that they augment human actions or are supplementary since they involve actions that humans are incapable of undertaking without AI assistance. Table 2 summarizes the current research into AI applications in B2B exchange.

These studies demonstrate the distinctiveness of AI applications in B2B settings. B2B exchanges are often more complex than B2C interactions, centre on deeper buyer-supplier relationships, and emphasize rational decision-making. Several authors highlight the deliberate and considerable effort necessary in B2B partner/customer relationship management, including partner analysis and lifecycle management, from an AI perspective (Chatterjee et al., 2023; Moradi & Dass, 2022; Rustholkarhu et al., 2022; Zhang et al., 2020). Firms more actively manage sales pipelines due to the need to accommodate high value, high risk sales situations frequently, sometimes involving AI-based workflow management systems (Paschen et al., 2020; Rohaan et al., 2022). Several authors also highlight the importance of collaboration (Leone et al., 2021) in facilitating innovation and providing comprehensive support during the customer journey (Moradi & Dass, 2022; Rustholkarhu et al., 2022) as key areas for B2B AI involvement.

Regarding KAM-related AI applications, the most relevant studies focus on AI in sales. Paschen et al. (2020) and Rohaan et al. (2022) highlight a range of AI applications relevant to B2B sales pipeline management. There are significant differences between B2B sales and KAM, however. Table 3 compares a series of common sales processes with their KAM process counterparts, highlighting areas of similarity, and difference. The most apparent differences appear in terms of several main dimensions. First, how firms attract new business – where B2B sales often centre on establishing client relationships (i.e. new business development), KAM focuses on growing and deepening existing client relationships (i.e. maintaining existing business). Second, while B2B sales tend to focus on maximizing transactions in the customer relationship, KAM activities seek to build broader, deeper customer relationships of strategic importance. In this, KAM relationships involve ongoing, multi-level engagements between supplier and customer firms. There are currently no KAM-specific AI studies in the current literature; hence, this is an important oversight, and one which the next section begins to address.

3. AI applications in KAM: Considering the implications

KAM yields a set of unique AI implications, which stem from its focus on sustaining multi-level, complex relationships with a strategic customer. Most firms can only maintain a few KAM customer relationships at a time (Guenzi & Storbacka, 2015; Hengstebeck et al., 2022; Herhausen et al., 2022). KAM-related AI applications must therefore accommodate a narrow set of deep customer relationships. This contrasts with customer relationships that are more superficial and transactional, like B2C customer relationships. In those cases, customer data is broad but shallow since it covers a wide variety of customer relationships which centre on repeat purchases of simple value propositions. Many AI-based algorithms require large datasets since they draw on machine learning and other related processes to train algorithms and to calibrate outputs. As such, the large datasets that correspond to superficial, transactional customer relationships align with the requirements of current AI applications.

For example, Amazon's product recommender system draws on

Table 2
AI applications in B2B contexts.

AI application	Description	Specific uses	Role of AI
1. Decision support	AI is used to provide analyses and recommendations to inform decision-making	- Pricing decision automation (Karlinsky-Shichor & Netzer, 2024). - Partner needs anticipation, partner segmentation (Chatterjee et al., 2023). - Data analytics and insights (Gordini & Veglio, 2017; Jabbar et al., 2020; Zhang et al., 2020).	Supplementary
2. Relationship management	AI is used to automate common relationship management tasks	- Partner relationship management (Chatterjee et al., 2023). - CRM (Saura et al., 2021; Zhang et al., 2020).	Supplementary
3. Customer communications	AI is used to create and distribute communications with customers	- Digital marketing (Järvinen & Taiminen, 2016; Saura et al., 2021). - Marketing automation (Järvinen & Taiminen, 2016).	Complementary
4. Customer journey management	AI is used to manage a series of customer touchpoints which affect their customer experience	Customer lifecycle management (Moradi & Dass, 2022; Rustholkarhu et al., 2022).	Complementary and Supplementary
5. Sales management	AI is used to enhance and automate sales activities	- Sales forecasting (Rohaan et al., 2022). - Sales funnel management (Paschen et al., 2020). - Proposal development (Rohaan et al., 2022).	Complementary and Supplementary
6. Value co-creation	AI-based platforms are used to coordinate joint tasks	- Collaboration (Leone et al., 2021). - Innovation (Han et al., 2021).	Complementary

digital footprints from many customers to develop accurate and useful outputs that help inform customer purchase behaviours. The Amazon recommender system does not require much information about a specific customer to produce useful outputs. Instead, it draws on a large dataset of other, similar customer interactions to produce customer recommendations through its association rules-based algorithms. KAM-based AI applications will not have a similar, broad bank of customer data to draw on. Instead, KAM-based AI applications will need to

Table 3
Comparison of Sales and KAM: areas of similarity and difference.

Sales Processes	KAM Processes	Areas of similarity	Areas of difference	Degree of distinctiveness KAM vs. Sales
1. Prospecting	1. Key Account Identification and Selection	• The qualification of leads conducted by sales professionals use logical methods and pre-defined methods to assess the value of an opportunity.	• Key account managers use a range of criteria to qualify the value of key customers for the supplier organization.	MODERATE. Key focus of sales is on the opportunity. In KAM the focus is on the customer organization.
2. Pre-approach	2. Key Account Analysis and Planning	• For new accounts some of the methods to establish relationships and get to know customer people can be similar in sales and KAM	• Key customers are very often known accounts to the supplier, and thus some relationships are already established between the two organisations.	HIGH. KAM normally adopts methods to grow existing relationships whilst in sales similar methods are used for customer acquisition.
3. Approach		• The supplier tries to identify relevant information to link customer needs with the supplier products and services. • The identified needs are concrete and specific.	• The analysis is often very structured and sophisticated including external and internal dimensions	MODERATE. Factual information and data are used in both sales and KAM.
4. Need assessment			• Several functions contribute to the analysis and the planning often consolidated in a key account plan.	
5. Presentation	3. Value Proposition Development	• In sales ‘presentation’ focuses on connecting relevant features of the product and service with specific customer needs.	• Value proposition statements contain a new description of the capabilities of the customer and how these generate positive impact in the customer organization.	LOW. In both sales and KAM, the emphasis is for the supplier to be able to demonstrable differentiation and ability to address the customer needs.
6. Handling objections	4. Relationship Building and Management	• Objections in sales are often related to the product, or the service and they can be described as customer hesitations, misconceptions, or perceived disadvantages.	• Key account managers build relationships across different functions and levels in the customer organization to address current and future opportunities	HIGH. Objections can relate to a wide variety of factors not just the product/service but contracts inter-organizational performance, etc.
	5. Cross-functional Team Formation and Coordination		• Key account managers ensure integrated communications and coherence of approach with the customer building and developing cross functional teams	HIGH. In professional selling the relationship is mostly established between the seller and the buyer not across levels and functions.
	6. Knowledge Management and Sharing		• In the key account - supplier relationship there are multiple ongoing transactions and exchanges not necessarily of commercial nature but knowledge-related.	HIGH. Most transactions in sales are product or service related and of commercial nature.
7. Closing	7. Co-creation and Solution Development	• KAM relationships are also built on commercial exchanges like sales.	• Suppliers engage in multiple forms of value creation with key customers often beyond the core product or service.	HIGH. There is limited co-creation and joint solution development in sales.
	8. Performance Monitoring and Evaluation		• In KAM there is ongoing relationship between the supplier and the key customer, and well beyond the product/service transactions. The performance is monitored through multiple and complex indicators	MODERATE. In KAM relations there are always ongoing exchanges and interactions. In sales these can be discreet.
	9. Continuous Improvement and adaptation	• There is also ongoing monitoring of the order or the service fulfilment.	• The level of adaption in key customer relationships relate to multiple dimensions: processes, systems, commercial terms,	MODERATE. Says processes rarely incorporate substantial evaluation and improvement between the customer and the seller beyond the product or service.

accommodate a wide variety of behaviours across the KAM supplier-customer interface. As Table 3 highlights, many such behaviours will occur post sale and, as such, KAM-based AI applications will need to accommodate sales encounters as one of a variety of different customer behaviours. Consequently, KAM-based AI techniques or algorithms are less able to rely on big data analytic techniques, which underpin many sales and marketing AI applications, and this necessitates an alternative calibration of AI applications to suit KAM requirements (Jabbar et al., 2020; Zhang et al., 2020).

KAM-based AI implications are most evident when considering KAM as a series of firm-level capabilities. Guesalaga et al. (2018) present a KAM capabilities framework, which categorizes KAM capabilities in terms of whether they are 'operational' or 'dynamic'. Operational KAM capabilities focus on 'making a living', so are important when maximizing the efficiency of KAM activities that the firm conducts regularly, during the normal course of business. Operational KAM capabilities are repeatable, codified as standardised processes and procedures, and are embedded in the business-as-usual activities of the firm. Dynamic KAM capabilities, on the other hand, centre on 'altering how the firm makes a living' and are important when considering how the firm adapts to change in its operating environment. Dynamic KAM capabilities involve significant creativity since they deal with unexpected and evolving situations. As such, AI is likely to impact each KAM capability differently (see Table 4).

Each KAM capability varies in terms of its amenability to AI based on the extent to which it involves repeatable, codifiable processes (with these acting as necessary preconditions to AI adoption). Based on Guesalaga et al.'s (2018) interpretations, operational KAM capabilities are more amenable to AI than dynamic KAM capabilities. For example, customer portfolio analysis is now well-established as a repeatable and process-oriented KAM capability which involves accessing customer data, using some form of cluster analysis to identify key customer groups, and using visualisation techniques to highlight customer groups based on factors such as profitability. From a KAM perspective, this process supports key account identification and selection, while also having characteristics that see it as a viable for AI adoption. On the other hand, a dynamic KAM capability such as market sensing requires a combination of standard insight and creativity. Standard insight can derive from regular market research, market share data, and other similar indicators. These can be factored into market sensing activities. Significant creativity may be necessary, however, to address blind spots in data collection, to interpret incoming data, and to develop appropriate responses. These activities are less amenable to AI (Jia et al., 2023).

Drawing on Manis and Madhavaram's (2023) hierarchy of AI capabilities (see Table 5) to describe AI uses, opportunities and challenges are apparent when adopting AI in KAM capabilities. In terms of opportunities, AI has the potential to help firms develop a deeper and more profound understanding of the KAM customer's world. Accessing and interpreting customer-relevant information at the individual, team, division, business unit, organisation, and network levels are potentially useful domains for AI deployment. This information will be very rich, originate from multiple sources, in a range of formats, with AI assessing it, cleaning it, and presenting it in meaningful ways. AI-based tools will also be useful as means to integrate the firm's internal capabilities with those of the KAM customer, and with actors at the network level, to produce a seamless customer experience (Rusthollikarhu et al., 2022). AI-related technologies will also be useful for securing data flows, through technologies like blockchain (albeit in an enhanced format). This will also allow for the automation of many processes and transactions with the KAM customer organisation. This will provide a platform for joint problem-solving and innovation (Jabbar et al., 2020; Overgoor et al., 2019).

In terms of challenges, data quality, accuracy and access are potential impediments to AI-based KAM. Much of the data that emanates from KAM relationships is informal since it often emerges through casual

conversations between actors and/or is commercially sensitive (Hossain et al., 2022). This means KAM data may be incomplete and difficult to capture accurately. Moreover, it may be that there is an underlying reluctance to use AI in KAM relationships by key actors due to fear, ignorance, and/or a limited appetite for change. The automation that AI-based KAM could yield may also be detrimental to the creative and human aspects of KAM, which are central to the viability of KAM relationships. The reliance on AI could reduce problem-solving and innovation due to the limitations inherent in AI algorithms and data sources. AI could introduce blind spots, where lateral human insight is difficult to substitute. This reduces the ability of AI to contribute to the strategic prospects of KAM relationships.

Overall, KAM-based AI use presents a series of opportunities and challenges. AI could enhance many KAM capabilities by providing information access, analysis, reporting, and through process automation. This may allow for much closer and more efficient KAM relationships. However, KAM relationships are less likely to yield the same sorts of data that superficial, transactional customer relationships do. The design and implementation of AI-based capabilities used for KAM will need to acknowledge this. Moreover, KAM relationships tend to concentrate on multi-level interactions post-sale, meaning that AI-based KAM applications will need to focus much more on customer experience than on marketing, sales and service.

4. Moderators of KAM-based AI capability adoption and success

The observations in this paper thus far lead to a preliminary claim: KAM-based AI adoption and success is not straightforward. In high-volume transactional customer relationships, conditions are more likely to favour AI adoption due to the large number of repeatable, highly codifiable customer interactions. The nuanced nature of KAM relationships suggests the need for a bespoke application of KAM-based AI. The extent to which firms can adopt standard AI solutions will depend on a range of factors, described here as 'moderators' since they are likely to either enhance or dampen the positive effects of AI on KAM capabilities. This section describes each in turn.

4.1. Size and scope

Several studies suggest that managing KAM relationships is fundamentally a human pursuit (Badawi & Battor, 2020; Gounaris & Tzempelikos, 2014; Ojasalo, 2001). Human interaction allows for meaningful and fruitful connections that support problem-solving, innovation and commitment in business relationships. However, the number of meaningful human relationships possible for any individual reaches a natural limitation. Dunbar's number suggests that this limitation is around 150. We can see this playing out in KAM relationships. Most firms can only sustain a few KAM customer relationships at a time (Guenzi & Storbacka, 2015; Hengstebeck et al., 2022; Herhausen et al., 2022). One reason is that the individuals involved are constrained by Dunbar's number, with those relationships manifesting at multiple levels in the KAM customer firm (and their associated stakeholders) rather than with only a few representatives of many non-KAM customer firms (McDonald et al., 1997). To cope with this, firms continue to adopt workflow management tools and enterprise-level systems which can manage large information flows between individuals. The larger the size of the supplier and buyer firms and the broader scope of interactions (which increase with complexity), the more likely AI-based solutions are necessary. If KAM customer relationships are simple and narrow in scope, AI-based solutions will be less necessary.

P1. The larger the size and the broader the scope of KAM customer relationship, the more likely the supplier firm will adopt KAM-based AI.

Table 4

Potential AI use across KAM capabilities and their implications.

KAM capability dimensions		AI amenability	Explanation	Implications of AI deployment for KAM	
				Opportunities	Challenges
KAM operational capabilities	1. Key account selection				
	Customer portfolio analysis	Very High	Using AI techniques, such as machine learning, to reveal features of the firm's customer base	• Applications to individuals and teams in the customer firm	• Data quality • Data accuracy • Data access
	Customer profiling	Moderate	Using AI techniques, such as machine learning, to identify groups of key account customer representatives with common characteristics	• Applications at the customer account level	• Data quality • Data accuracy • Data access
	Developing a comprehensive picture of the strategic customer's 'world'	Moderate	Using AI techniques, such as data scraping and big data analytics to access a comprehensive range of information about the key account customer	• Analysis of the multiple facets of the customer firm's network	• Data quality • Data accuracy • Data access • Ethical concerns
	2. Relationship and trust building				
	Customer journey management	High	Using AI-based resources to provide a comprehensive, deep, and highly customized customer journey at the key account customer network level	• Seamless integration of sales, service and marketing	• Customer reluctance • AI interaction reluctance
	Deep customer network engagement	Moderate	Using AI-based resources to develop and implement personalized and timely communications to key account customer stakeholders	• Seamless and consistent multi-channel customer communications	• Lower human-to-human trust building • Customer reluctance • AI interaction reluctance
	3. Knowledge management				
	Intellectual Property development and protection	Moderate	Using AI-based resources to provide a protected and engaging IT environment for knowledge exchange, storage, and development for key account customer stakeholders	• Secure data sharing • Tracing IP usage/ deployment • Collaborative IP development	• Limited scope for human creativity • Cyber security
	4. Value proposition development				
KAM dynamic capabilities	Dynamic, customized value proposition evolution	Moderate	Using AI-based resources to capture multi-level key account customer requirements and adapt value propositions in real time	• Event/ trigger recognition • Recommender systems for value proposition composition	• Limited ability to identify relevant triggers/ events • Limited set of recommendations
	5. Team design & process co-ordination				
	Activity integration	Very High	Using AI-based resources to augment/ supplement key account customer team activities	• Using collaboration platforms • Using workflow management tools • Task automation	• AI literacy • Customer reluctance • AI interaction reluctance
	Dynamic, multi-level value co-creation	High	Using AI-based resources to augment/ supplement value creating efforts with key account customer representatives, teams and systems	• Augmenting/ supplementing traditional value co-creation approaches through AI	• AI literacy • Customer reluctance • AI interaction reluctance
	6. Measurement				
	Accountability and transparency	High	Using AI-based resources to collate and analyse performance data from multiple sources and to highlight key account challenges	• AI applications to individuals and teams in the customer firm	• Data quality • Data accuracy • Data access
	7. KAM-specific market sensing				
	Disruptive event recognition	Moderate	Using AI-based resources to detect unexpected and profound changes relevant to the key account	• Using AI-based risk monitoring engines	• Data quality • Data accuracy • Data access
	Disruptive event profiling	Moderate	Using AI-based resources to describe a disruptive event and to flag the impacts and risks for the key account	• Using AI-based profiling, including pattern recognition, association rules, and other techniques	• Data quality • Data accuracy • Data access
	8. KAM-specific opportunity creation				
KAM dynamic capabilities	Key account development opportunity recognition	Moderate	Using AI-based resources to define new opportunities that arise through deep knowledge of the key account	• Using AI-based decision-support to identify gaps in customer needs and to recommend marketing/ sales approaches.	• Data quality • Data accuracy • Data access
	Key account development opportunity creation	Moderate	Using AI-based resources to develop targeted marketing campaigns that capitalize on emerging opportunities with the key account	• Using AI-based key account information sourcing, analysis and decision-making.	• Limited scope for human creativity
	9. KAM-specific continuous improvement				
KAM dynamic capabilities	Problem solving	Low-Moderate	Using AI-based resources to define a problem and develop collaborative ways to solve it with key account representatives	• Augmenting/ supplementing traditional problem-solving approaches through AI	• Limited scope for human creativity • Data quality • Data accuracy • Data access

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Table 4 (continued)

KAM capability dimensions	AI amenability	Explanation	Implications of AI deployment for KAM	
			Opportunities	Challenges
Innovation	High	Using AI-based resources to identify problems/ challenges and to coordinate key account customer stakeholders to address these	Augmenting/ supplementing traditional innovation approaches through AI	- AI literacy - Customer reluctance - AI interaction reluctance - Limited scope for human creativity - Data quality - Data accuracy - Data access
10. KAM-specific configuration				
KAM capability design	Low	Using AI-based resources to identify best practice and new ideas that then underpin KAM capability design	Using AI-based information sourcing and decision support tools to inform KAM parameter design and implementation	- AI literacy - Customer reluctance - AI interaction reluctance - Limited scope for human creativity - Data quality - Data accuracy - Data access
KAM capability arrangement	Low	Using AI-based resources to identify best practice and new ideas that then underpin KAM capability composition and assortment	- Using AI-based information sourcing and decision support tools to inform KAM capability design and implementation - Using AI systems coupling to facilitate KAM capability task execution	- AI literacy - Customer reluctance - AI interaction reluctance - Limited scope for human creativity - Data quality - Data accuracy - Data access

Table 5

AI capabilities (Manis & Madhavaram, 2023).

AI capability	Definition
Information acquisition	The process of searching for and collecting/ retrieving information
Information integration	The process of standardizing, transferring, and combining information
Information analysis	The application of computational and statistical techniques and methods to information
Information interpretation	The process of synthesizing the meanings, patterns, and insights derived from analyzed information

4.2. Inter-operability

There is considerable scope for AI to automate intra and inter-firm processes. For example, many purchases are handled with smart contracts, i.e. pieces of computer code that conduct transactions based on pre-existing instructions (Agrawal et al., 2022; Gregory et al., 2024; Halaburda et al., 2024). Examples of this appear in AI-based trading on stock markets, direct debit payments from consumer bank accounts, and in the cryptocurrency Ethereum, which resembles a series of smart contracts that are traded on an open exchange platform. Where transactions are simple, smart contracts are straightforward. Where they are more complex, smart contract usefulness declines. This resembles AI applicability more broadly. Many firms are now adopting AI-based approaches to managing their sales and/or procurement functions (Chatterjee et al., 2023). Due to the competitive rivalry of AI software vendors, such systems do not always interact productively. Competitive protections, different coding protocols, and other user features can create situations where AI-based systems cannot productively engage with one another, at least not without costly adaptations. The extent of inter-operability between the supplier's and the customer's AI-based systems will moderate the adoption and use of AI-based KAM. Where the supplier and buyer use complementary sales/ procurement systems, it is more likely that operations will be seamless. Where systems conflict, this will reduce the likelihood of successful AI-based KAM adoption.

P2. The extent of inter-operability between supplier and buyer AI-based systems will moderate the adoption and use of AI-based KAM by the supplier firm.

4.3. Governance and cyber security

An important consideration in KAM-based AI applications is that significant investments in information governance and security are required. As several authors suggest, KAM relationships involve social and task interactions across a diverse network of individuals that operate in multiple locations and who work collaboratively on a range of tasks (Gupta et al., 2018; Ivens et al., 2016). This means that protecting IP is important, as is maintaining the integrity of the information-sharing processes that partner firms adopt and use. Globally, there has been an increase in the instances of cyber-attacks in recent years. Vulnerability to such attacks compromises the integrity of KAM relationships. For example, in 2017, Merck, the global shipping provider, was subject to a massive cyber-attack, which disabled its global fleet. This represented about 25% of global commercial shipping at the time. Situations like this increase customers' likelihood of pursuing other options, including switching business to competitors' offerings. Without the ability to protect data or to ensure the integrity of information flows, KAM relationships are not possible. For firms that can do this, KAM relationships are more durable.

P3. The extent of partners' adoption and adherence to robust governance and cyber security practices will moderate the supplier firm's adoption of KAM-based AI.

4.4. Power imbalances

Where industry concentration is high such that there are only a few buyers, or where buyers can exert high influence over suppliers, KAM relationships are more likely to emerge (Brehmer et al., 2009; Gounaris & Tzempelikos, 2013, 2014; Gupta et al., 2018). KAM relationships are often the result of supplier's need to develop customer-specific relationship management practices to grow and to survive. This allows buyers to appropriate highly valuable outcomes, often at the expense of

the supplier. Consequently, buyer power is a significant consideration affecting the manifestation of a KAM relationship (Marcos-Cuevas et al., 2014). A similar dynamic will likely manifest in terms of the adoption/use of AI in the KAM relationship. Where a powerful buyer exists, the supplier is more likely to adopt practices and to develop associated capabilities most amenable to the buyer. If a weak buyer exists relative to the supplier, then the buyer is more likely to follow the supplier's lead. Where each partner has equal power, this will then produce a negotiated adoption of AI-based KAM.

P4. Relative buyer power will moderate the supplier's adoption of KAM-based AI

4.5. Culture and fit between the supplier and customer firms

Successful KAM implementations require top management support, a willing culture, a series of new processes and process transformation, as well as a skilled workforce (Guenzi & Storbacka, 2015; Guesalaga, 2014; Leischnig et al., 2018). This is the same for AI-based KAM. The willingness and ability of the firm depends on individuals' understanding and comfort with AI. In some cases, AI-based solutions to KAM problems will be topics of debate and sources of potential conflict. Hence, there is a need to develop a firm-level approach to AI adoption and use. Moreover, there is also a need to engage the KAM customer on this journey, particularly in situations where they will regularly interact with AI-based KAM systems. While aligning with customer requirements is productive in KAM relationships in principle, using AI-based KAM in cultural settings that are not amenable to them is unlikely to produce sustainable relationships.

P5. The degree of cultural alignment between the supplier and buyer will promote or restrict suppliers' KAM-based AI adoption.

5. A conceptual model of AI adoption in KAM

Finding an appropriate degree of AI adoption in KAM-related activities has become an important consideration for the firm's overall AI strategy, its KAM strategy, and the interaction between the two. As

Kozinets and Gretzel (2020) argue, AI is an area characterized by mystery for many people at the present time. This makes it difficult to know how to proceed to achieve the desired business outcomes. Many firms know that AI adoption has the potential to yield a competitive advantage, but just how this might be is currently unclear. Most IT applications now have AI properties or features that are now in common use, however, with features that were not available even ten years ago. A similar trajectory is likely for other AI innovations and their integration.

Fig. 1 depicts a conceptual model, which summarizes the arguments in this paper. Firstly, the adoption of AI in KAM is more likely in KAM operational capabilities. The repeatable, codifiable and process-oriented nature of KAM operational capabilities make them better positioned to deliver efficiencies in supplier-key customer relationships. AI has the most potential in KAM capabilities relating to key account selection, relationship and trust building, knowledge management, value proposition development and.

measurement. This is also likely in terms of established B2B AI applications like CRM and customer journey interfaces (Prior et al., 2024; Rustholkar et al., 2022; Saura et al., 2021). Other KAM operational capabilities also show potential for AI use. The main advantage of adopting AI in these KAM operational capabilities is the automation and streamlining of current KAM processes. The main challenges are in terms of data quality, accuracy and access, as well as user willingness / ability to engage in AI-based KAM operational processes (see also Table 4).

On the other hand, KAM dynamic capabilities are less likely to experience the immediate benefits of AI adoption. Capabilities such as market sensing, opportunity creation, and continuous improvement have very specific configurations and they continuously evolve to deal with uncertainty. AI, in these cases, is most beneficial when complementing existing KAM processes due to its ability to access and analyse diverse information. Workflow engines can also be useful in problem-solving and innovation-related tasks. KAM dynamic capabilities are most likely to draw on the creative insight and the interpersonal connections across the buyer-supplier dyad. These interactions are more likely to help craft a pathway through an uncertain future. While AI could be helpful in supporting related tasks, it is currently not capable of deciding a firm's future, particularly when counterintuitive thinking can

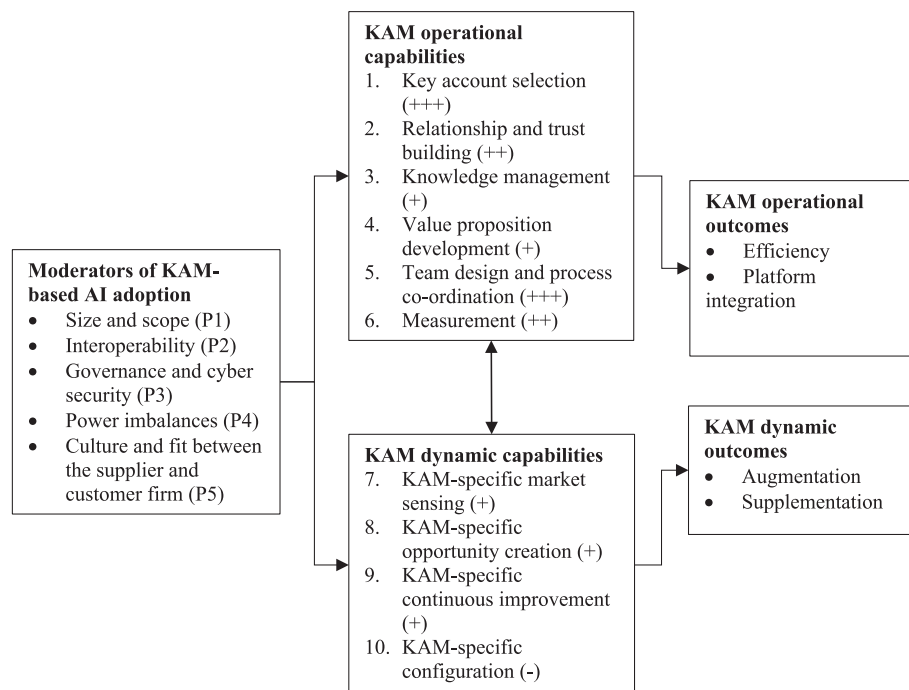


Fig. 1. AI-based KAM.

*('+' indicates a positive level of AI affinity, '-' indicates a poor level of AI affinity).

help redefine the firm's trajectory. This is not to say this is impossible. With advances in AI, it may be that it can account for the data-related challenges that characterise KAM relationships at present while also providing substitutes for human interaction (see also Table 4).

6. Discussion

6.1. Implications for theory

The emergence and increasing adoption of AI in KAM, has the potential to redefine key dimensions of supplier-key customer relationships. This begs the question as to whether KAM relationships require alternative theoretical perspectives to help explain the AI-driven transformed nature of KAM. While KAM research is a 'big tent' in that it includes a diverse set of theoretical interpretations of related phenomena, we have chosen to focus our commentary to four bodies of theory that we suggest are most likely to require revisiting.

6.1.1. Social exchange theory

Social exchange theory (SET) is a prominent theory in the marketing and sales literatures when explaining buyer-supplier exchange. SET holds that interactions between individuals involve costs and benefits. Where benefits outweigh costs, exchange occurs and, where this happens repeatedly, a relationship emerges and is characterised by the emergence of trust and commitment between partners (Cropanzano et al., 2017; Cropanzano & Mitchell, 2005). The traditional interpretation of SET sees individuals as rational, non-emotional decision-makers. This has led to criticism that SET does not reflect the social and emotional nature of relationships well (Cropanzano et al., 2017). The rational, emotionless notion of individual-level interaction aligns with B2B exchange settings, however (Prior, 2021). KAM-based AI could lead to an affirmation of the non-emotional, calculative decision-making that SET advocates in its original form. A twist to this situation, though, is where humans must interact with machines to fulfil their needs. There is already a considerable body of research into the attempts of firms to humanise AI-based service and sales activities (Kamoonpuri & Sengar, 2023; Noble & Mende, 2023). Whether emotional and social connections are possible with AI-based machines is debatable. KAM amounts to a context where social and emotional connections are often profound and have significant implications for partners. How and where SET helps explain AI-based KAM is now questionable.

6.1.2. Technology adoption

The technology adoption model (TAM) explains how and when individuals will begin using a new technology, based on their perceived usefulness, ease of use, and their attitudes towards use (Davis, 1989; Davis et al., 1989). The TAM has been used to explain a range of marketing and sales-related technology adoptions in multiple contexts (Iranmanesh et al., 2024; Kumar & Srivastava, 2022; Li & Wang, 2021; Oakley et al., 2021). The TAM is relevant when considering KAM-based AI. Some of the factors that emerge as moderators in the analysis above are similar to TAM variables, particularly in terms of intra-and inter-firm culture. The advent of AI, however, could reduce the relevance or power of individuals' perceptions, attitudes and their use due to AI-based decision automation. For example, AI-based systems enable user personalisation based on tracking their online behaviours. This involves an AI-based decision-making process. While the initial parameters and design of such systems are currently subject to the abilities of individual programmers, once they are operational, human decision-making becomes unnecessary. The TAM assumes that humans will always be involved with new technology implementation, but what happens when humans are no longer making (all) the decisions? For KAM-based AI, elements of the customer journey could be fully automated, for example. The TAM, in this case, then becomes more relevant to KAM customer firm representatives. Yet, this still assumes that KAM customer firm representatives are human. Revisiting the TAM regarding AI-based KAM may be a

fruitful and necessary step forward given the analysis presented in this paper.

6.1.3. Transaction cost economics

Transaction cost economics (TCE) has become an important body of theory that explains how and why exchanges take place. TCE follows the basic idea that the costs associated with exchange determine the appropriate form of exchange governance (whether this is market-based or firm-based) and that this determines institutional form (John & Reve, 2010; Rindfleisch & Heide, 1997; Williamson & Ghani, 2011). AI could involve altering the costs and benefits of KAM such that they differ from traditional buyer-supplier relationships. AI-based KAM could result in new types of costs such as those associated with AI systems adoption/use, data collection, data analysis, data cleaning, AI acceptance, and sacrifices in human creativity. AI-based KAM could also offer new types of benefits such as efficiency, personalization, information routinization, and competitive advantage. This could impact institutional form and governance structures. For example, some KAM relationships may align easily with AI-based customer journey management. This could see AI-based KAM systems responsible for the fulfilment of promises made under contractual agreements. Indeed, contracts may exist between machines in the form of smart contracts (Agrawal et al., 2022; Gregory et al., 2024; Halaburda et al., 2024). TCE holds that human interaction is essential in buyer-supplier interactions and forms the basis of trust-based relational contracts (Heide & John, 1992; Rindfleisch & Heide, 1997). AI-based KAM could see the emergence of new types of AI-based buyer-supplier contract, particularly for KAM operational capabilities.

6.1.4. Network theory

KAM relationships resemble a broad network of interactions between individuals employed by the supplier firm, those employed by the buyer firm, and other stakeholders (Gupta et al., 2018; Ivens et al., 2016). Each individual performs a set of tasks, depending on their role designation, which contribute to KAM customer outcomes. KAM-based AI could include the ability to gain real-time network visibility at a deep level. This means that identifying and deploying resources could involve much less friction. Resource visibility could be higher, as is the ability to integrate them through workflow management engines. AI could lead to the acceleration of information creation and transmission across networks. This could lead to a more efficient network. AI could also limit KAM networks through access. Technologies such as Blockchain require the granting of access permissions to users, without which their access is denied. This could manifest into network-level power structures that increasingly favour only a few powerful users. While current network theories can help explain structure, AI-based KAM could represent a different type of network where information acceleration and control distorts network properties in interesting new ways.

6.2. Managerial implications

AI-based KAM is likely to impact the work of key account managers and members of key account teams. The ability to rely solely on 'gut feel' as the basis for KAM is quickly declining. With its ability to enhance account planning and delivery through real-time and comprehensive analyses of strategic customers and their networks of stakeholders, as well as the accessibility of related information through smartphones and tablets, modern KAM is likely to see a growing reliance on AI. In some cases, this will see a streamlining of the KAM function whereby KAM personnel are likely only to be those who successfully blend AI with their roles. This will lead to a reduction in those personnel who are unable to do this. Moreover, the role of the key account manager will involve significant data access and utilization, so it will be necessary for at least a basic understanding of computer science in future KAM roles.

AI-based KAM may see an increase in the efficiency and effectiveness of KAM activities by allowing a sharper focus on specific, customer-centric goals. An in-depth understanding of the customer's world is a

long-held objective for KAM managers since this offers a basis for better account planning (McDonald et al., 1997). AI-based tools can help perfect customer understanding and to recommend KAM actions in real-time. AI-enabled KAM is more likely to cater to the emerging developments in the customer's world. This more nuanced understanding of the customer's world can also allow for a more granular method of goal setting. While AI-based KAM systems will be able to accommodate multiple goals simultaneously, they will also be able to help estimate the probability of success more accurately. Moreover, AI-based KAM systems will be able to establish causal relationships between KAM activities and customer outcomes, thus helping KAM managers establish evidence that validates KAM activities, and which supports experimentation.

KAM-based AI capabilities will also scale easily, once the correct parameters are in place. This is already evident in workflow management systems, CRM systems, and partner information exchange systems. This will continue to grow. As digital infrastructure grows and is integrated within the firm, KAM activities will be easier to manage centrally while also coordinating with other, related activities (e.g., sales, marketing, and service provision) more effectively. Through blockchain and similar technologies, the firm will also be able to integrate with customer systems more efficiently. This will allow for rich data exchange at the intra and inter-firm levels. AI will allow for data fusion between multiple sources and thus allow for very high levels of transparency and accountability. Table 6 summarizes the managerial implications of AI-based KAM.

6.3. Towards a research agenda

There is a need for a concentrated body of research into the AI impacts on KAM, (summarized in Table 7). These include research directions that are more theory-relevant in that they expand on one or more of the theoretical perspectives outlined in section 6.1, and in terms of managerial perspectives. This section concentrates on research directions that are managerially relevant, since section 6.1 already canvasses some theory-driven research directions.

There are several implications for individual key account managers and for personnel in the KAM team. There is a broader concern that AI will replace people in key roles (Grewal et al., 2021; Kozinets & Gretzel, 2020). Current research suggests that AI will have a complementary or supplementary impact on KAM-related activities. Individuals such as key account managers are likely to benefit from AI. AI developments should allow key account managers and KAM team members to focus on creative tasks and less on administrative tasks, although research is necessary as to how KAM teams might achieve an optimal usage of AI. Future research could also explore key account manager and KAM team member role evolution in the wake of AI. There is scope for the KAM manager role to shift from one that centres on inter-personal relationship building, to more of an analyst or planner that uses AI to structure KAM activities. This evolution would parallel the shift of other, related roles in sales and marketing towards more AI-centric conceptualisations.

Table 6
Managerial implications of AI-driven KAM.

Traditional KAM	AI-based KAM
Intuitive and based on judgement	Based on advanced analytics
Focused on the key customer	Focused on the key customer and the key customer's customers/consumers
Medium-term oriented	Multiple time orientation: Short, medium, and long-term oriented
Customer centric and bespoke offerings	Hyper personalized and fully customized offerings
KAM effectiveness measured with a few discrete measures	KAM effectiveness measured with multiple measures obtained in real time
Scalable processes	Scalable and optimized customer processes
Supplier key account teams	Key account teams comprised of both supplier, customer and relevant third-party teams

Table 7
A research agenda for KAM-based AI.

AI use	KAM implications	Example research questions
Theoretically informed research directions		
Social exchange	- The actors in an exchange are different, depending on the extent of AI involvement in a KAM relationship. - The norms of trust, commitment and reciprocity may not hold true in AI-based KAM relationships.	- How will AI tools, algorithms and techniques alter KAM characteristics? - How will AI tools, algorithms and techniques affect trust and commitment in KAM relationships? - How can AI tools, algorithms and techniques be integrated into KAM to promote positive relationships? - How can firms create reciprocal relationships or social obligations if their KAM relationships involve significant AI-based customer engagement?
Technology acceptance	- AI-based KAM may involve reduced human decision-making, so technology acceptance may not be subject to human evaluation. - Technology acceptance must work well for the KAM relationship, which is different to superficial, transactional relationships.	- How can firms sustain control over KAM processes in the wake of AI-based decision-making? - How might firms build AI systems that contribute to more robust KAM capabilities without sacrificing relationship value? - How can firms increase the chances that their AI-based KAM capabilities align with customer requirements? - What might firms do if their AI-based KAM capabilities are compromised?
Networks	- AI-based KAM could support better network visibility and increase the speed and coherence of network engagement. - Network properties will still reflect the underlying power of dominant actors.	- How might KAM customer network properties change when firms adopt AI-based KAM? - How can firms ensure KAM network transparency through AI tools and techniques? - How can firms pre-empt KAM network changes in the wake of AI adoption? - How might AI impact the vulnerability of KAM networks?
Transaction costs	- AI-based KAM gives rise to a shift in transaction cost types and effects. - AI-based KAM could alter transaction governance approaches, particularly where substantial activities are automated.	- What new types of transaction costs and benefits can AI-based KAM yield? - How might firms measure and assess transaction costs for AI-based KAM? - What new types of governance form may emerge through AI-based KAM?
Practically informed research directions		
Individual level	- KAM Manager roles - KAM work tasks - KAM team roles and responsibilities	- How might the role of key account manager change in the wake of AI-based KAM? - What is the best mix of AI-based tasks and manual tasks for AI-based KAM? - How can key account managers optimize AI utilization? - What role does the key account manager have in supporting AI capabilities (e.g., through new data input requirements)?

(continued on next page)

Table 7 (continued)

AI use	KAM implications	Example research questions
Interpersonal level	- Relationships within the KAM team - Relationships between the KAM team and other teams in the firm - Relationships between the KAM team and the customer's team	- What are the consequences for job roles and task allocations in the wake of AI-based KAM and how might these be mitigated? - How might AI-based tools be used to enhance KAM team efficiency/ effectiveness? - What new provisions (e.g., systems, processes, procedures) will be necessary to support AI adoption in KAM? - How might AI-based tools be used to enhance KAM integration with other activities of the firm? - When might AI be acceptable for service provision in KAM?
Firm level	- KAM structure versus other departments - KAM AI integration with corporate data architecture	- What new governance mechanisms might be necessary in AI-based KAM? - How might sales and marketing capabilities evolve to support KAM? - Will KAM still be relevant as an aspect of the firm's sales/ marketing strategy with the increasing commoditization of strategic products/ services?
Inter-firm level	- Inter-firm, multi-level data sharing and protection - Inter-firm innovation - Inter-firm stakeholder networks	- How might stakeholders relevant to key accounts respond to AI-based service provision? - How might firms continuously provide strong impetus for relationship cultivation in the wake of AI-based KAM?

The need for computer science skills will increase for key account managers and KAM team members so that they are able to work with programmers and systems architects to develop systems that help achieve KAM outcomes. Further research into these areas could help in developing a path forward for the KAM profession.

AI is likely to influence interpersonal relationships within the KAM team. This is due to the impacts of AI on workflow management and coordination. Research into the impacts and uses of AI-enabled workflow management tools on KAM team activities would be useful. While suppliers of workflow management software promote its usefulness, there is a plethora of such tools available at the current time. Whether these deliver the value they promise is questionable. There are also questions as to the role of AI tools in deciding on the task allocations to KAM team members. An AI-driven tool could potentially develop KAM plans and allocate tasks. This might reduce the need for deliberate planning and team coordination, with the AI tool acting as the primary team management mechanism. If this is the case, decentralized KAM team structures become more viable. This also begs questions in terms of how KAM teams interact with other teams within the firm and with their customer counterparts. If an eventual evolution of KAM-based AI allows for seamless system-to-system coordination, the nature of work becomes very different from its current state. Understanding how this will evolve, and impact KAM is another area in need of research attention.

At the firm level, AI-based KAM is likely to have a range of impacts. If AI-based workflow management tools take a central role in KAM team management, there will be a need to integrate other, related systems in user-friendly ways. KAM activities will rely on CRM systems and involve sales, marketing, and service automation. KAM activities will, as they

currently do, involve integration with order management and finance systems. Noting the implementation challenges that appear above, research into the integration of KAM-based AI with other existing systems and their associated change management processes would be useful to promote smooth transitions while maximising the benefits of KAM-based AI. Since AI-based KAM has the potential to support decentralized KAM team structures, it may be the case that this is also possible throughout the firm more broadly. Key research questions could explore firm structure and governance arrangements in terms of their ability to optimize the use of KAM-based AI and to integrate it with AI-based and manual systems throughout the firm more broadly.

At the inter-firm level, there is scope to automate the nature of relationships through a variety of process automations. It is likely that customer firms will adopt AI-based procurement, contract management, production, and operations systems. KAM-based AI will need to accommodate these systems. Specifically, KAM-based AI systems will need to integrate with them to promote information exchange and utilization across the buyer-supplier dyad, noting the multi-level, rich and complex nature of information. KAM-based AI systems will have a central role in ensuring the competitiveness of the firm. The use of AI-based procurement in customer organisations, it is likely that many products/ services will become commoditized. AI-based searches will allow customer organisations to identify product/ service options globally and to prioritize criteria, including price. Human input into procurement decisions may decline, with AI-based approaches becoming the norm through technologies such as smart contracts, for example. This reduces opportunities for new sales. AI-based KAM, however, will need to acknowledge these situations and to play to its strengths. Research into how firms can use AI-based KAM to remain competitive will also be useful.

7. Conclusion

Sam Altman (Altman), CEO of OpenAI claimed that “*our mission is to ensure that artificial general intelligence [AGI] —AI systems that are generally smarter than humans — benefits all of humanity. If AGI is successfully created, this technology could help us elevate humanity by increasing abundance, turbocharging the global economy, and aiding in the discovery of new scientific knowledge that changes the limits of possibility*”.

This paper outlines the implications of AI for KAM, and concludes by claiming that these implications open new possibilities for transforming key account relationships. There are many marketing and sales-related AI applications currently available and useful for KAM. Nevertheless, specific applications of AI in KAM are still in development, and thus, further work is necessary to address this situation. The transition to AI-based KAM will require, just as for traditional KAM programs, top management support, an amenable company culture, and a careful change management process. The user-friendly features of many KAM-relevant AI functions will help push forward the boundaries of value creation. AI is expected to reach \$110 billion annually by 2024 from \$50 billion in 2020 according to IDC, a technology research firm. Ease of access and use will accelerate AI adoption in KAM. Finally, our view of the highly debated question, ‘will AI replace KAMs?’ We do not think AI will replace the role of the key account manager, but a key account manager who has mastered the use of AI will probably replace a key account manager who hasn't.

CRediT authorship contribution statement

Daniel D. Prior: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Javier Marcos-Cuevas:** Writing – review & editing, Writing – original draft, Resources, Project administration, Investigation, Formal analysis, Data curation, Conceptualization.

Data availability

No data was used for the research described in the article.

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