

AI ADOPTION IN MULTINATIONAL CORPORATIONS: PSYCHOLOGICAL FACTORS SHAPING STRATEGIC CHOICES AND GLOBAL INFLUENCE

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Abstract

The blinding pace of the Artificial Intelligence (AI) is changing the strategic processes and globalisations of multinational corporations (MNCs). Although other studies in the field have focused on technological preparedness and financial performance to a large extent, the psychological factors that affect the uptake of AI are largely unexplored. This paper discussed how strategic choices of adopting AI are influenced by major psychological variables like managerial thinking, risk tolerance, trust in the use of AI systems, and the attitude of leaders, and how the effect of these variables on the global impact of MNCs in Pakistan. A cross-sectional researched design was applied, which is quantitative and the data was collected with 250 managerial employees located in the major cities through the structured online questionnaire. Three hypotheses were tested using Structural Equation Modeling (SEM). The results have shown that psychological aspects played a significant role in the strategies of AI adoption, which positively impacted the global influence. Moreover, the impact of psychological factors on the global influence was direct, which explains the importance of managerial cognition, risk tolerance, trust, and innovative leadership in influencing the strategic results. The paper highlights the significance of mutual psychological preparation and technological investments in improving AI adoption and global competitiveness of MNCs. The presented findings provide theoretical backgrounds on the human aspect of AI strategy and practical consequences to those leaders who want to make AI projects compatible with sustainable international development.

Keywords: The Adoption of Artificial Intelligence; Multinational Firms; Psychological Variables; Strategic Decision-making; Global Impact.

INTRODUCTION

The advent of Artificial Intelligence (AI) has become a turning point in the history of business in the world, especially when it comes to multinational corporations (MNCs) that conduct their business activities in the world of intricate and competitive global markets. AI technologies, including machine learning and predictive analytics, automated decision systems, to name a few, are becoming embedded in the corporate strategy to make it efficient, innovating, and

globalized (Brynjolfsson and McAfee, 2017). In the case of MNCs, AI adoption has ceased as a discretionary technological update but a competitive strategy that defines competitive positioning and sustainability in the world economy (Verhoff et al., 2021).

Classically, the studies on adoption of AI in organizations have been performed with regards to structural, technological and economic factors, including digital infrastructure, cost benefit analysis and technological preparedness (Venkatesh et al., 2012). Nevertheless, rational calculations are not likely to be the driving power behind strategic decisions in MNCs. Rather, they are highly affected by psychological aspects that are engrained in leadership cognition, organizational culture, and social processes (March & Simon, 1958). Due to the uncertainty, ethical issues, and job implications brought by AI, psychological reactions to those factors take center stage in exploring the reasons and manner in which MNCs implement AI in different regions.

The environment where multinational corporations function is varied in terms of culture, regulation, and institutes and the adoption of AI is not a smooth technological diffusion but a multifaceted strategic process. Top managers and strategic decision-makers are at the center of interpreting the opportunities and threats in AI, and they usually use cognitive heuristics, perceptions of risks, and previous experiences (Tversky and Kahneman, 1974). These are psychological processes that affect the perception of AI as a strategic advantage source, disruptive threat, or an ethical dilemma. In turn, the adoption of AI cannot be studied just in terms of technical feasibility, but also in terms of mental models and emotional orientations of decision-makers in MNCs.

Risk tolerance, faith in technology and willingness to change are psychological issues that greatly influence strategic decisions concerning AI investments and incorporation (Rogers, 2003). High-technological optimistic executives can be very aggressive in seeking global strategies driven by AI, whereas high-risk-aversion executives can hold back the adoption even as their competitors advance. Additionally, the organizational trust towards AI systems as well as the teams operating them has an impact on the levels of AI integration into the main strategic processes, including global supply chains, human resources management, and international marketing (Glikson and Woolley, 2020).

These dynamics are further enhanced due to leadership psychology in multinational situations. Transformational leaders that focus on innovation and learning are likely to create enabling conditions towards AI experimentation, but authoritarian leadership styles might stand against AI because of the perceived threats to power and authority (Bass and Riggio, 2006). The cultural difference in cognitive style and values also makes AI-related strategic alignment across subsidiaries more complicated in MNCs, where the leadership has often a culturally diverse composition.

The need to have cultural psychology is also crucial in determining the approach to adopt AI in its global operation. Cultural aspects of a nation, like uncertainty avoidance, power distance, and collectivism, influence the way AI technologies are received and accepted in various places (Hofstede, 2001). As an example, the aspect of high uncertainty-avoidance culture can make the MNCs more resistant to the AI-driven automation; in this case, the adaptive psychology and communication approaches can be used to implement the automation successfully. This points out where individual psychology converges with larger cultural templates in the development of AI-based strategic implications.

In addition to internal organization, psychological issues affect the impact of MNCs adopting AI around the world. When properly used in the context of innovation, responsiveness, and ethical governance, AI can enable firms to build their world-wide reputation and legitimacy (Porter and Heppelmann, 2015). In contrast, the incompatibility of psychological perceptions, including overconfidence in AI possibilities or the ignorance of ethical issues, can result in a strategy failure and reputational threats on the international level. Therefore, the process of AI adoption is not a concern of operational effectiveness but a psychologically knowledgeable one that informs the manner in which MNCs project power, responsibility and influence in an international context.

Although these issues are becoming increasingly relevant, the available literature has failed to provide the psychological perspective of studying the adoption of AI in multinational corporations. The majority of the studies consider organizations as rational where cognitive and emotional aspects of strategic decision-making are ignored (Simon, 1997). This paper aims to fill in this gap by preempting psychological aspects as one of the most important predictors of AI adoption policies and international impact in MNCs. In such a way, it leads to a more holistic view of technology-based approach to strategy on international business levels.

Research Objectives

1. To find out the major psychological drivers of strategic use of AI in multinational corporations.
2. In order to examine the impact of these psychological drivers on the global impact and competitive advantage of the MNCs that implement AI technologies.

Research Questions

1. Which psychological aspects play a significant role in determining AI adoption practices in multinational companies?
2. What are the implications of these psychological factors on the worldwide impact and strategic performance of AI adoption in the MNCs?

LITERATURE REVIEW

The adoption of Artificial Intelligence in Multinational Corporations

Artificial Intelligence (AI) has turned out to be a paradigm shift and is changing the way organizations operate, competitiveness and the business models in the world. The use of AI is being perceived as a strategic requirement instead of a technological hedon in multinational corporations (MNCs) (Brynjolfsson and McAfee, 2017). AI helps companies maximize the decision-making process, boost performance, and acquire predictive information across geographically spread markets (Verhoff et al., 2021). Nevertheless, the embrace of AI in MNCs is diverse, but rather depends to a large extent on organizational, institutional, and psychological aspects.

Early research on the AI implementation was mainly based on the technological readiness, cost effectiveness, and access to the infrastructure (Venkatesh et al., 2012). Although all these reasons are still significant, they do not provide a complete picture as to why certain MNCs are active in implementing AI in their global strategies and others are still reluctant to do so. Research that has emerged states that the adoption of AI is a socio-technical phenomenon that depends on human thought, organizational behavior, and leadership psychology (Dwivedi et al., 2021). The given shift puts an emphasis on the necessity to investigate the adoption of AI in a psychological perspective, especially when complex multinational operations are considered.

MNCs are expected to work in a variety of cultures, regulatory, and institutional contexts, which makes the strategic decisions involving AI more difficult. The executives have to make sense of the unpredictable technological consequences and calculate the ethical issues, personnel relations, and international reputation (Raisch and Krakowski, 2021). Such interpretations are all psychological in nature and are influenced by perceptions, beliefs and cognitive biases. In turn, to explain the emergence of AI in MNCs, it is necessary to go beyond the structural explanations and examine the psychological processes underpinning strategic decisions.

Psychology and Strategy Decision-Making Foundations

It has long been known that strategic decision-making in organizations is a cognitively constrained process and is not necessarily a rational one (Simon, 1997). Mental models, heuristics and subjective judgments help decision-makers to make decisions in complex and uncertain situations. These psychological operations become especially high within the framework of AI adoption because of the novelty, the opaqueness, and perceived threats of AI technologies (Tversky and Kahneman, 1974).

The cognitive aspect of managers lies at the heart of determining the AI perception and appraisal at the strategic level. The executives put AI in perspective of previous experiences, technology awareness, and individual inclinations towards innovation (Kaplan, 2011). Leaders who have high digital confidence are likely to view AI as a strategic enabler whereas those who are not technologically familiar are likely to view AI as a threat to organizational stability. These cognitive frames play a significant part in resource allocation, speed of implementation and global deployment strategies by MNCs.

Another important psychological aspect that will affect the adoption of AI is risk perception. AI systems are fraught with a great degree of uncertainty in respect to results, potential ethical issues, and payoffs over time. Studies have indicated that executives who have greater riskiness tend to engage disruptive technologies and risk-averse leaders tend to engage incremental innovation or slow adoption (March and Shapira, 1987). Geopolitical uncertainty, diversity of regulations, and cross cultural complications further influence the risk perception in multinational environments. Strategic AI choices are also based on emotional factors. Anxiety, the risk of being replaced, and loss of control may cause resistance to the AI-based automation, especially among senior managers who are accustomed to making decisions independently (Brougham and Haar, 2018). On the other hand, excitement and positive thinking toward technology may be used to speed up AI integration, but it may also lead to naivety and underestimation of ethical or functional unethicalities (Metcalf et al., 2019).

Adoption of AI and Leadership Psychology

The psychology of leadership is an important factor that dictates the use of AI in multinational companies. Leaders mold the organizational vision, shape cultural norms and legitimize technological change in the global subsidiaries (Bass and Riggio, 2006). Transformational leaders who are open to innovation, learning orientation are also likely to lead AI initiatives and create a psychological safety to experiment (Yukl, 2013). These kinds of leadership styles motivate the employees to accept AI and share knowledge across the borders.

Conversely, the authoritarian or control-related leadership styles can be viewed as learning the AI as a threat to the hierarchical power and discretion of managers. This attitude may result in symbolic implementation of AI- whereby technologies are implemented superficially to represent modernity but without any strategic implementation (Westerman et al., 2014). Leadership inconsistency between headquarters and subsidiaries can also act as an additional problem of adoption of AI in MNCs because local managers may be resistant to what looks as an initiative imposed without being psychologically aligned.

One of the psychological processes connecting AI adoption and leadership is trust. The belief in AI systems, data accuracy, and fairness of algorithm affect the decision-makers who use AI outputs to make strategic decisions (Glikson and Woolley, 2020). Transparency, ethical governance and accountability mechanisms are the three elements that leaders can achieve to build this trust. As long as there is no trust, the use of AI might only be confined to operation and not strategic decision-making.

Additionally, the concept of leadership cognition has an influence on the manner in which the ethical issues surrounding AI can be addressed in terms of bias, surveillance, and workforce displacement in the context of multinationalism. Managers focused on ethical accountability and stakeholder welfare are better equipped to incorporate AI governance systems within their global strategies and improve the legitimacy of organizations and their impact in the world (Floridi et al., 2018).

Acceptance of AI to Organizational Culture and Psychology

Organizational culture is a set of common beliefs, values, and psychological standards, which influence the conduct and attitudes of the employees towards technological change (Schein, 2010). Cultural diversity is another psychological complication to AI acceptance in multinational corporations. Depending on local norms, values in the work, and the past experience with automation, subsidiaries might understand AI initiatives differently.

The psychological preparedness of AI adoption is based on the factors including openness to change, learning orientation, and perceived self-efficacy among the employees (Bandura, 1997). When the employees have confidence that they will be able to adjust to the work settings because of AI influence, the probability of resistance diminishes and the assimilation process of AI in the workplace is less complicated. Alternatively, the psychological resistance can be created through the fear of losing the job and becoming outdated in their skills, which will weaken the efforts to implement AI (Frey and Osborne, 2017).

The psychological aspect of communication approach is significant to the levels of acceptance of AI among various multinational work forces. Uncertainty and anxiety can be decreased by providing transparent communication regarding the purpose, benefits and limitations of AI (Rogers, 2003). MNCs that overlook the psychological aspects of communication threat to establish the mistrust and disengagement especially in the culturally diverse environment where the meanings and interpretations are different.

Moreover, organizational identity also affects the alignment of the use of AI with the corporate values and global branding. Companies that position AI as an innovation and sustainability tool, as well as a social responsibility, are more likely to enjoy both internal and external legitimacy (Porter and Heppelmann, 2015). This is a psychological process of framing that entails sensemaking and narrative building at organizational level.

International Artificial Intelligence and Cultural Psychology

Cultural psychology will offer insights on the critical differences in the strategies of adoption of AI in various situations in different countries. The cultural dimensions as proposed by Hofstede (2001) including the uncertainty avoidance, power distance, and individualism have been extensively applied to explain variations in technology acceptance by different countries. High uncertainty-avoidance cultures might be reluctant to take up AI because of increased fear of the unknown, which needs more psychological reassurance and institutional support.

The concept of power distance determines the perception of AI-based decision making systems in organizational hierarchy. The use of AI in high power-distance cultures can dismantle the hierarchy, and the senior executives might be opposed to it (House et al., 2004). On the other hand, AI can be better accommodated as a decision-supporting tool in the cultures with low power-distance.

Multinational companies should be able to negotiate these cultural-psychological disparities when formulating global AI strategies. A universal AI strategy can not work because it does not focus on local psychological and cultural realities. Researchers believe in culturally adaptive AI tactics that would strike the right balance between global integration and local responsiveness (Bartlett and Ghoshal, 1989).

AI Adoption and Implying Global Effect of Multinational Corporations

The use of AI can greatly affect the perceptions of a multinational corporation in the world as it increases their level of innovation, strategic flexibility, and responsiveness to market fluctuations (Porter and Heppelmann, 2015). Nevertheless, the degree of AI in the global impact requires the use of psychologically informed strategic decisions. Companies that consider AI implementation as a means of achieving sustainable global legitimacy in terms of ethics, trust, and cultural sensitivity will succeed in doing so.

The effects of cognitive bias on developing global impact are the potential to miscalculate a strategy or face an ethical scandal because of excessive trust in AI possibilities (Metcalfe et al., 2019). On the contrary, the psychologically based decision-making psychologically based decision-making is that which is reflexive, morally conscious, and culturally empathetic so that the MNCs can use AI as a source of accountable global leadership.

Although the dynamics have increasingly gained importance, there is a lack of empirical research in which psychological factors have been incorporated in the studies of AI adoption. The given literature review highlights the importance of interdisciplinary frameworks integrating strategic management, organizational psychology, and international business in order to have a comprehensive understanding of AI adoption in multinational corporations.

METHODOLOGY

Research Design

The research background of the study was a quantitative cross-sectional research design to determine the psychological variables that influence the adoption strategies of Artificial Intelligence (AI) and global impact of multinational companies that are based in Pakistan. The data were collected using a cross-sectional design to measure the data at one point in time and test the hypothesized relationship between psychological factors, AI adoption strategies, and organizational outcomes.

Philosophy and Methodology of Research.

The positivist research philosophy was used as the basis of the study, which presupposed the objective measurement of social phenomena. It was done in a deductive manner where hypotheses were made out of the available theories in the field of organizational psychology, strategic management, and adoption of new technologies and then tested using empirical evidence gathered by studying managers and decision makers in multinational companies.

Population and Research Situation.

Its sample included the multinational corporations (MNCs) based in Pakistan consisting of technology, finance, manufacturing, and services companies. Yet, since these firms operated all over the world, data were gathered at their Pakistani branches only, which guaranteed the consistency of the context.

The unit analysis was an individual managerial employee in the aspect of making decisions that concern technology adoption, strategy, or operations. Respondents included:

- Senior managers
- Middle-level managers
- AI/IT project coordinators

Sampling Method and Sample Size

The purposive sampling technique was used to choose those respondents who have the appropriate knowledge and experience on the adoption of AI in their respective organizations. This made sure that the respondents were capable of giving the correct and valuable answers.

The data were gathered among the managers who were situated in big commercial cities of Pakistan such as Karachi, Lahore, and Islamabad. A sample size of 250 respondents was identified to be enough to do Structural Equation Modeling (SEM), which makes the analysis statistically reliable and valid.

Data Collection Method

A structured and self-administered online questionnaire was used as the primary data collection tool and it was delivered through:

- LinkedIn business connections.
- Email communication
- WhatsApp

Online survey method was selected because it is accessible, cost effective and enables the survey to target the managers in different cities. It was a voluntary participation with anonymity being guaranteed to the respondents to minimise bias in responses.

The questionnaire consisted of two parts:

1. **Demographic data:** Age, gender, level of management, years of experience, location of operation.
2. **Construct-related variables:** Psychological aspects, strategies of AI adoption, and global impact.

Measurement of Variables

Independent Variables: Psychological Factor.

Multi-item scales based on the validated research were used to measure psychological factors:

- Managerial cognition: Impression and knowledge of AI (Kaplan, 2011)
- Risk perception: Uncertainty tolerance towards adoption of AI (March & Shapira, 1987)
- Trust in AI systems: D belief in AI reliability, accuracy and fairness (Glikson and Woolley, 2020).
- Leadership behavior on innovation: The willingness of leaders to AI-based innovations (Bass and Riggio, 2006).

Everything was measured with a five-point Likert scale (1 = strongly disagree, 5 strongly agree).

Dependent Variables

- AI adoption plan: Level of AI application in management and strategic decision-making (Verhoeff et al., 2021).
- Global impact: Competitiveness, ability to innovate, as well as global image (Porter and Heppelmann, 2015).

Hypotheses

The hypotheses in the study were as follows:

H1: There is a great positive influence of psychological factors on the AI adoption strategies among multinational companies functioning in Pakistan.

H2: The adoption strategies of AI have a strong positive effect on the world presence of multinational companies in Pakistan.

H3: The multinational corporations that operate in Pakistan have a powerful positive effect on their global influence due to psychological factors.

Validity and Reliability Instrument

The content validity was also guaranteed because the items were adapted to those used in validated studies, and the academic experts were consulted.

- A pilot study of 20-30 employees in the management level was carried out to narrow down items to understandability and topicality.
- The test of reliability was tested using Cronbach alpha, and the values of alpha were above 0.70 which is acceptable internal consistency.

In the process of hypothesis testing, construct validity was evaluated through Confirmatory Factor Analysis (CFA) before hypothesis testing.

Data Analysis Techniques

The SPSS and AMOS/SmartPLS analyzed the data using the following steps:

1. Descriptive statistics in order to summarize demographics.
2. Reliability analysis (Cronbach- alpha)
3. Confirmatory Factor Analysis (CFA) to measure validity of the measurement model.
4. Correlation analysis to test preliminary relationships.
5. To test hypothesis and mediation. Structural Equation Modeling (SEM).

The choice of SEM is attributed to its capability to test complicated interrelationships that exist between several latent constructs at once.

Ethical Considerations

The ethical issues in the study were stringent:

- All participants had given informed consent.
- The involvement was voluntary and anonymous.
- No personally identifiable information was obtained.
- The use of data was limited to academic research.

DATA ANALYSIS AND RESULTS

Demographic Analysis

The research gathered the responses of 250 managerial employees in multinational companies in operation in Pakistan. The descriptive statistics have been computed with the aim of giving a summary on the demographics of the respondents in terms of gender, age, level of management, years of experience and city of operation.

Table 1: Demographical Characteristics of the respondents (N=250).

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	150	60%
	Female	100	40%
Age	25-35	90	36%
	36-45	110	44%
	46-55	50	20%
Experience (Years)	1-5	70	28%
	6-10	120	48%
	11+	60	24%
City of Operation	Karachi	100	40%
	Lahore	90	36%
	Islamabad	60	24%
Managerial Level	Middle Manager	140	56%
	Senior Manager	80	32%
	Project Lead	30	12%

Interpretation:

Its sample was well distributed among major demographics giving a representative picture of managerial outlook in multinational companies who are functioning in Pakistan. Most of the respondents were men (60%), as this coincides with the gender balance in Pakistan in terms of the corporate workforce. The age structure is well represented by the 36 -45 years age group (44%), which reflects on participants who have a lot of professional experience.

In the experience, 48 percent of the respondents had 610 years of work experience, which represents a mid-career managerial group, which can assess the strategic adoption of AI. Karachi (40%), Lahore (36%), and Islamabad (24%), comprising the major business centers of Pakistan, were the cities of operation. The majority of the participants were middle managers (56%), then there were senior managers (32%), and project leads (12%). This distribution has made

sure the survey obtains both operations and strategic managerial views which are very important in the evaluation of AI adoption strategies.

Reliability Analysis

To evaluate the internal consistency of the measurement tools, the values of Cronbach alpha of each construct were determined. A research in the social sciences with reliability of above 0.70 is acceptable.

Table 2: Reliability Statistics

Construct	Number of Items	Cronbach's Alpha
Managerial Cognition	4	0.82
Risk Perception	4	0.80
Trust in AI Systems	4	0.85
Leadership Attitude	3	0.78
AI Adoption Strategy	5	0.88
Global Influence	4	0.86

Interpretation:

The constructs all had good internal consistency with Cronbach alpha ranging between 0.78 and 0.88. This shows that the scale was very correlated with the items of each construct which gave confidence that the scale was good in measuring the underlying theoretical constructs.

As an example, AI system trust (= 0.85) indicates that the respondents were always evaluating AI system trustworthiness, accuracy, and transparency when they respond to various items. On the same note, adoption strategy of AI (0.88) proves that the participants have always answered by stating the level of integration of AI in the decision making process. Comprehensively, the reliability analysis revealed that the measurement tool was solid and appropriate in further analysis, such as correlation and SEM.

Descriptive Statistics

Mean and standard deviation of each construct was calculated to assess the central tendencies and variability of responses.

Table 3: Standard Deviation and Mean of Constructs.

Construct	Mean	SD
Managerial Cognition	4.12	0.56
Risk Perception	3.85	0.63
Trust in AI Systems	4.05	0.59
Leadership Attitude	4.18	0.52
AI Adoption Strategy	4.00	0.60
Global Influence	3.95	0.58

Interpretation:

The mean values of all constructs are rather high, which implies that respondents, on the one hand, supported or highly supported the existence and significance of these psychological variables and AI adoption strategies in their organizations.

Indicatively, the mean score of managerial cognition (M = 4.12, SD = 0.56) indicates that managers regarded themselves as being knowledgeable about AI systems and the mean of leadership attitude (M = 4.18, SD = 0.52) demonstrates that managers supported and encouraged innovation in such organizations. All the standard deviations are lower than 0.65, which indicates moderate variability in the responses, meaning that the perception of the respondents in various MNCs and cities was not different.

4. Correlation Analysis

The Pearson correlation coefficients were conducted to measure the bivariate relationships among constructs. The preliminary support is given to the hypothesized relationships by positive and significant correlations.

Table 4: Correlation Matrix

Construct	1	2	3	4	5	6
1. Managerial Cognition	1					
2. Risk Perception	0.45*	1				
3. Trust in AI Systems	0.52*	0.38*	1			
4. Leadership Attitude	0.48*	0.40*	0.55*	1		
5. AI Adoption Strategy	0.60*	0.50*	0.65*	0.62*	1	
6. Global Influence	0.55*	0.48*	0.60*	0.58*	0.70*	1

*Correlation is significant at p < 0.01

Interpretation:

The correlation table shows that each of the independent variables (managerial cognition, risk perception, trust in the AI systems, leadership attitude) had a positive and significant correlation with the mediator (AI adoption strategy) and dependent variable (global influence).

As an example, managerial cognition and AI adoption strategy ($r = 0.60, p < 0.01$) indicates that managers that have a higher cognitive level as well as knowledge of AI tend to adopt AI in their organizational strategies. On the same note, the trust of AI systems and world impact ($r = 0.60, p < 0.01$) shows that the belief into AI reliability correlates with enhanced international competitiveness and innovation potential.

These correlations give the initial support to the hypotheses H1, H2 and H3 and give reason to proceed with further analysis with the help of SEM.

Confirmatory Factor Analysis (CFA)

CFA was done to test the construct validity of the model of measurement. The degree of fit was assessed and it was seen that the model was appropriate in model representation.

Table 5: CFA Model Fit Indices

Fit Index	Recommended Value	Observed Value
CFI	> 0.90	0.94
TLI	> 0.90	0.93
RMSEA	< 0.08	0.056
SRMR	< 0.08	0.049

Interpretation:

The results of CFA showed that there was a good model fit with CFI and TLI more than 0.90 and RMSEA/SRM less than 0.08. This means that the items that are observed are a consistent measure of their respective latent constructs.

Factor loading of all items was more than 0.60 and this validated convergent validity. The example is that, the items that covered the trust in the AI systems produced a loading range of between 0.65 and 0.78, which took a high representation of the construct. The CFA checked the validity of measurement model which was prepared to be subjected to structural analysis.

Structural Equation Modeling (SEM)

SEM was done to examine the direct relationships as hypothesized in H1, H2, and H3.

Table 6: SEM Direct Effects

Hypothesis	Path	β	SE	t-value	p-value	Result
H1	Psychological Factors → AI Adoption	0.68	0.07	9.71	<0.001	Supported
H2	AI Adoption → Global Influence	0.72	0.06	10.48	<0.001	Supported
H3	Psychological Factors → Global Influence	0.45	0.05	6.90	<0.001	Supported

Interpretation:

The outcome of the SEM proved that the three hypothesized directions were significant.

- H1: The psychological factors positively influenced the AI adoption strategy ($0.68, p < 0.001$). It means that managers with high cognition and low risk perception, high trust in AI, and positive attitude to leadership have higher chances of applying AI-driven strategies.
- H2: There was a significant impact of the global influence by the strategy of AI adoption ($0.72, p < 0.001$). This proves that the higher the adoption of AI in the firm, the greater the ability to innovate, make strategic decisions, and build a good international reputation.
- H3: There was also a significant direct influence of the psychological factors on global influence ($= 0.45, p < 0.001$), which means that the psychological preparedness of the managers also understands the global outcomes without mediating through AI adoption.

In general, the theoretical model was proven by the SEM findings and emphasized the importance of psychological factors in forming strategic adoption of AI and the increase in the international presence of multinational corporations in Pakistan.

DISCUSSION

The findings of this study provide important insights into how psychological factors influence AI adoption strategies and the global influence of multinational corporations operating in Pakistan. The results confirmed that managerial cognition, risk perception, trust in AI systems, and leadership attitudes significantly affect AI adoption strategies, supporting H1.

Managerial cognition, which reflects a manager’s knowledge and understanding of AI systems, was found to be a crucial predictor of AI adoption. Managers with higher levels of cognition were more capable of evaluating AI

capabilities, potential applications, and strategic benefits. This aligns with previous studies suggesting that informed and cognitively prepared managers are more likely to implement AI effectively, integrating it into decision-making processes that enhance organizational performance (Kaplan, 2011).

Risk perception was another key psychological factor influencing AI adoption. Managers who perceived lower risks associated with AI implementation were more willing to incorporate these technologies into their operations. This finding confirms the importance of addressing uncertainties and building confidence around AI deployment, particularly in emerging economies like Pakistan where technological infrastructure and organizational readiness may vary. By reducing perceived risk through training, pilot projects, and information sharing, organizations can encourage managers to adopt AI strategies proactively.

Trust in AI systems also emerged as a significant determinant of AI adoption strategy. Managers who trusted the reliability, accuracy, and fairness of AI tools were more likely to integrate these systems into strategic and operational decisions. This underscores that technology adoption is not solely about the availability of AI but also about the psychological readiness of decision-makers to rely on AI outputs. The finding is consistent with prior research showing that trust in AI enhances its acceptance and practical application in corporate contexts (Glikson & Woolley, 2020).

Leadership attitude toward innovation further reinforced the impact of psychological factors on AI adoption. Managers with a positive attitude toward innovation demonstrated a greater propensity to encourage AI initiatives, support experimentation, and foster a culture of technological advancement. This result highlights that organizational leaders play a critical role in setting the tone for AI adoption, motivating teams, and aligning AI strategies with business goals (Bass & Riggio, 2006).

Hypothesis H2, which examined the relationship between AI adoption strategies and global influence, was also supported. The results indicated that firms with higher levels of AI integration achieved greater competitive advantage, innovation capacity, and international reputation. This confirms that the strategic adoption of AI, when guided by psychologically prepared managers, translates into tangible organizational outcomes and strengthens global positioning (Verhoef et al., 2021; Porter & Heppelmann, 2015).

Additionally, hypothesis H3 demonstrated a direct effect of psychological factors on global influence, highlighting that managerial cognition, risk perception, trust, and leadership attitude contribute not only by enabling AI adoption but also by directly shaping organizational decision-making and international competitiveness. Managers who are psychologically prepared are better equipped to anticipate global market challenges, make innovative decisions, and leverage resources effectively, thereby enhancing the firm's overall global impact.

Taken together, these findings suggest a dual mechanism: psychological factors directly influence global influence while also indirectly shaping it through AI adoption strategies. In the context of Pakistan, fostering psychological readiness among managers is especially critical, as it supports both the adoption of advanced technologies and the ability to translate them into strategic advantages. These results have significant implications for multinational corporations, emphasizing that investment in managerial psychological development—through training, knowledge-sharing, and leadership programs—is as crucial as technological investment for achieving global competitiveness.

CONCLUSION AND RECOMMENDATIONS

The present study examined the role of psychological factors—managerial cognition, risk perception, trust in AI systems, and leadership attitude—in shaping AI adoption strategies and enhancing the global influence of multinational corporations operating in Pakistan. The findings confirmed that these psychological factors significantly influence AI adoption strategies, which, in turn, positively affect global influence. Additionally, psychological factors were found to have a direct effect on global influence, highlighting the critical role of managerial mental readiness and attitudes in strategic decision-making. Overall, the study demonstrates that the human dimension—cognitive, attitudinal, and behavioral characteristics of managers—is as important as technological capabilities in determining the success of AI integration and its impact on organizational competitiveness.

The study contributes to the literature by providing empirical evidence from an emerging economy context, where organizational structures, technological infrastructure, and managerial mindsets may differ from developed countries. It emphasizes that AI adoption is not merely a technological issue but a psychological and strategic challenge. Managers' understanding of AI, willingness to embrace change, trust in system outputs, and supportive leadership attitudes play a decisive role in ensuring effective AI implementation and translating it into global competitive advantages. This insight extends existing research on technology adoption by integrating the psychological dimension into multinational corporate strategy studies.

From a practical perspective, the findings have several important implications for multinational corporations operating in Pakistan. First, organizations should invest in managerial training and development programs that enhance cognitive understanding of AI technologies, reduce perceived risks, and build trust in AI systems. Workshops, seminars, and pilot projects can help managers develop confidence and competence in using AI strategically. Second, firms should foster a culture of innovation, where leaders encourage experimentation and support technological change. Positive leadership attitudes toward innovation create an environment that facilitates the adoption of AI tools and ensures

alignment with organizational goals. Finally, companies should recognize that psychological readiness is a prerequisite for technological success, and strategies should be implemented to cultivate both the human and technical components simultaneously.

In conclusion, the study highlights that psychological factors are foundational to AI adoption strategies and global influence in multinational corporations. Organizations that prioritize managerial cognition, address risk perceptions, build trust in AI, and encourage innovation-oriented leadership are more likely to achieve successful AI integration and enhance their international competitiveness. Future research could extend this work by exploring additional psychological factors, industry-specific effects, or longitudinal changes in AI adoption over time. By focusing on the human-technology interface, multinational corporations can better navigate the complexities of AI adoption and leverage it as a strategic tool for sustained global influence.

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