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The Effect of Organizational Identification on AIS Acceptance: How Gender and Collectivism Shape Usage Patterns

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Abstract

Purpose – This research investigates the impact of organizational identification on employees' usage of newly introduced Accounting Information Systems (AIS), with a particular focus on the mediating influence of attitude and the moderating roles of gender and collectivism. Drawing on social identity theory, the research framework was developed.

Design/methodology/approach – Data were collected using a survey method from 500 service sector employees adapting to a newly implemented AIS. Structural equation modeling (SEM) in Mplus was used for the model testing.

Findings – The results indicate that organizational identification does not directly influence employees' AIS usage. Nevertheless, our findings demonstrate that it exerts an indirect influence on employees' AIS usage through the mediation of their attitude toward the using of new AIS. The moderation of gender and collectivism emerged as crucial, showing the strongest effect of organizational identification on AIS usage among highly collectivist female employees, followed by highly collectivist male employees, and then less collectivist female employees. This relationship is weakest in less collectivist male employees.

Originality/value –This investigation stands as the first to integrate social identity theory with cultural values and the gender of employees, offering insights into the employees' AIS Usage.

Keywords – Accounting Information System usage; Organizational identification; Gender; Collectivism

Introduction

Accounting Information Systems (AIS) have garnered substantial interest from researchers, academics, and policymakers because of their crucial role in enhancing organizational control effectiveness (Papiorek and Hiebl, 2024), facilitating organizational digital transformation (Al-Okaily, 2024), improving solvency averages (Ylä-Kujala et al., 2023), and supporting effective decision-making processes (Yoshikuni et al., 2023). Additionally, the efficient use of AIS significantly contributes to increasing organizational productivity (Magboul et al., 2024, Al-Okaily et al., 2023), advancing sustainability (Tingey-Holyoak et al., 2021), and ensuring organizational success (Monteiro et al., 2022). Employees, as key organizational stakeholders, often face challenges in adopting the implemented AIS (Ylä-Kujala et al., 2023).

Previous studies have identified several key factors that enhance the adoption of AIS. These include the active support of top management for information technology initiatives (Kubota and Okuda, 2023), high levels of user enjoyment and satisfaction (Abu-Shanab and Salah, 2022), and a strong perception of employee empowerment (Qatawneh, 2023). Additionally, the inherent flexibility and scalability of AIS significantly facilitate its integration into existing systems (Eldalabeeh et al., 2021). Recent research has also emphasized the importance of social media use within firms (Duan et al., 2023), and power strategies (Robalo and Moreira, 2020) as crucial elements that promote the effective utilization of AIS.

Prior research has provided a comprehensive understanding of the determinants of AIS adoption, including technological and organizational factors. However, socio-psychological determinants of AIS adoption remain underexplored. Organizational identification, in which employees align their self-concept with organizational values and goals (Ashforth et al., 2008), is a critical factor influencing pro-organizational behaviors, such as organizational citizenship

behavior (Agyeiwaah et al., 2024, Farooq et al., 2017), change-oriented behavior (Van Knippenberg et al., 2006), and innovative behavior (Zhang and Wang, 2022). Despite its significance, the role of organizational identification in shaping employees' attitudes and behaviors toward AIS usage remains insufficiently understood. For example, while research demonstrates that social identification fosters the adoption of Open-Source Software (Gwebu and Wang, 2011), evidence of the impact of organizational identification in AIS contexts is scarce.

Furthermore, a critical analysis of the literature reveals that while the cultural dimension of individualism/collectivism has been studied in broader technology adoption contexts (Abbasi et al., 2015), its moderating effects on employees' AIS usage behavior remain largely unexplored. Similarly, gender differences in technology adoption have been well-documented in domains such as e-learning (González-Gómez et al., 2012, Wongwatkit et al., 2020) and mobile banking adoption (Merhi et al., 2021). However, the interaction between collectivistic orientations and gender in the context of AIS adoption has not been systematically investigated. The current study aims to address these existing gaps by developing a unified theoretical model based on social identity theory to explain the role of organizational identification in influencing employees' AIS usage behavior.

Based on social identity theory (Ashforth and Mael, 1989), we propose that organizational identification significantly enhances employees' positive responses to organizational changes. Employees with a strong sense of identification are more likely to embrace innovations (Ellemers et al., 2004) by developing a favorable attitude towards AIS, subsequently leading to enhanced AIS usage behavior. Thus, we suggest that organizational identification directly and indirectly influences employees' AIS usage by promoting a positive attitude toward new systems, ultimately enhancing their usage behavior.

Secondly, the current study proposed the moderating role of gender and collectivism in the relationship between organizational identification and attitude towards using new AIS. The literature on organizational identification suggests that women identify more strongly with their organization than men do (Fritz and Van Knippenberg, 2017); therefore, they will have a more positive attitude toward using a new AIS. They are more communal and tend to strive for assimilation with their organizational environment. They are more likely to affiliate with a group and opt group-oriented behaviors (Putrevu, 2001). Women like acquiring new skills, working for collective goals, and being more loyal (Babin and Boles, 1998); therefore, they invest more effort and work toward the organization's success and display a positive attitude whenever a new system is implemented. Thus, exploring the conditional impacts of gender on this phenomenon has several implications for managers and practitioners. We argue further that collectivism (Triandis and Gelfand, 1998) is also an important boundary condition that moderates organizational identification's effect on employees' attitude toward using new AIS. Individuals in a collectivistic culture live in groups and may prefer organizational goals in preference to their personal goals (Campion and Wang, 2019); therefore, when new AIS is implemented, those employees who identify with their organization will also develop a positive attitude towards using new AIS because they want to play their role in the organization's success. As Pakistan scores high in collectivism compared to Western countries (Hofstede, 2013), we used collectivism as a moderator in our study.

This study makes significant contributions to the accounting and organizational change literature by addressing socio-psychological determinants of AIS adoption, a dimension that remains underexplored. Specifically, it is the first study to examine the direct and indirect effects of organizational identification on employees' AIS usage behavior, with a particular focus on the mediating role of attitudes toward using new AIS. This expands the understanding of how employees' alignment with organizational values and goals influences their acceptance

of innovative accounting systems, a critical area in organizational change management. Additionally, this study advances literature by integrating cultural and demographic moderators, namely gender and collectivistic orientation, which have received limited attention in AIS adoption research. By examining how these factors shape the relationship between organizational identification and attitudes toward AIS, the study provides nuanced insights into how socio-psychological, cultural, and demographical variables interact to influence AIS adoption. These contributions offer theoretical advancements and practical implications, equipping managers with actionable insights to foster AIS adoption by leveraging organizational identification and addressing cultural and gender-specific factors during the implementation of accounting systems.

To test the model, we chose Pakistan's services sectors (banking and education), in which organizations had recently introduced a new AIS. Our study focused on how employees respond to these technological advancements. We obtained data using a survey method from 500 employees working in different banks and educational institutions in Pakistan. Model testing was conducted using the SEM in Mplus.

Literature review and hypotheses

Organizational identification and employees' AIS usage

Social identity theory has been extensively applied in organizational research (Ashforth and Mael, 1989) to explain individuals' sense of belonging within a group. A central concept of this theory is organizational identification, which refers to the feeling of oneness or belongingness to an organization (Ashforth and Mael, 1989). Previous research has demonstrated a strong link between organizational identification and various positive behaviors, such as innovative behavior (Zhang and Wang, 2022) and change-oriented behaviors (Van Knippenberg et al.,

2006). These behaviors are essential in encouraging employees to actively engage with newly implemented information systems.

Edwards and Peccei (2010) propose that employees who strongly identify with their organization tend to exhibit higher levels of engagement and motivation, leading to more active and effective use of systems like AIS. Organizational identification, which reflects how well employees align with the organization's values and goals, plays a critical role in shaping positive attitudes toward adopting new technologies, including AIS. During periods of organizational change, employees with a strong sense of identification are more likely to put in personal effort and engage in activities related to the change (Specht et al., 2018). This sense of belonging not only enhances commitment (Batool et al., 2024) but also increases extra-role performance (Cheema et al., 2020), and group-oriented behaviors (Giessner et al., 2013). These behaviors are vital for proactive employee engagement with new AIS, as employees are more likely to view the system as supportive of their personal success and the overall mission of the organization.

Moreover, Zhou et al. (2024) emphasize that employees who strongly identify with their organization are more likely to engage in job crafting, a process where they actively modify their job roles to align better with their skills and interests. In the context of AIS implementation, employees with high organizational identification are inclined to adapt their work processes to optimize the use of AIS. This proactive approach to reshaping their tasks and responsibilities in response to the new system not only increases their engagement with AIS but also enhances system integration and overall performance. As a result, organizational identification directly influences AIS usage by fostering commitment, active involvement in system adoption, and role adjustments through job crafting.

Similarly, Sluss and Ashforth (2007) found that employees with strong organizational identification are more likely to embrace changes, such as the introduction of new technology.

These employees are more inclined to learn and adapt to the new AIS, facilitating smoother integration and utilization within the organization. Based on these insights, we propose that:

H1: Organizational identification has a positive effect on employees' new AIS usage.

Organizational identification and employee attitude toward using new AIS

Organizational identification, grounded in social identity theory, significantly impacts employees' attitudes toward adopting new systems like an AIS. Social identity theory suggests that individuals derive part of their self-concept from their affiliation with social groups, including organizations (Ashforth and Mael, 1989). This sense of belonging fosters loyalty, shaping how employees perceive and respond to changes within the organization. Research supports that organizational identification enhances positive job attitudes such as job commitment and satisfaction, as well as job performance (Chen et al., 2013).

Jaich (2022) expands this concept to environmental contexts, showing that organizational identification shapes environment-related attitudes. Similarly, in the context of AIS adoption, an employee's identification with their organization can positively affect their attitude towards the new system. Ashforth et al. (2008) argue that employees aligning their personal identity with their organization are more likely to perceive organizational initiatives positively. Thus, employees who identify with their organization are inclined to respond favorably to the introduction of AIS, as they view it as enhancing the organization's performance.

Further reinforcing this, Chen et al. (2015) emphasize the role of trust in the relationship between organizational identification and positive system adoption attitudes. Employees who trust their organization due to a strong identification are more likely to develop favorable attitudes toward new AIS. Aarons et al. (2009) also support this by demonstrating that employees who feel supported by their organization and identify with their organizations are more open to adopting new systems. Hence, we posit that:

H2: Organizational identification positively influences employees' attitude toward using new AIS.

Individuals' negative or positive feelings about specific behavior are their attitude toward that behavior (Fishbein and Ajzen, 1977), and research indicates that attitude positively impacts IS usage behavior (Davis, 1993). Similarly, the findings of Arshad et al. (2019) showed a positive relationship between attitude toward using new IS and banking IS usage behavior. Additional research demonstrates that an individual's propensity to adopt technology is positively influenced by their disposition toward its utilization (King and He, 2006).

Recent studies have indicated that individuals' positive attitudes toward Chat GPT significantly influence its usage (Abdaljaleel et al., 2024). In the field of accounting, Jackson and Allen (2024) highlighted how favorable attitudes toward technology adoption play a crucial role in determining technology use among accounting managers. Similarly, Al-Okaily (2024) found that factors such as perceived ease of use and perceived usefulness positively impact the adoption of technologies by accounting professionals, reinforcing the notion that attitudes are a key determinant in technology adoption behavior.

These findings underscore the potential for an individual's attitude towards using the new AIS to positively influence their actual usage behavior of the AIS. As previously alluded to in the preceding hypothesis, which postulated that organizational identification may play a role in augmenting employees' favorable attitudes towards using AIS, it is essential to recognize that this relationship extends beyond mere attitude. It extends to the realm of actual behavior, wherein organizational identification can potentially enhance employees' practical adoption and usage of AIS through their positive attitude. Consequently, we propose:

H3: Attitude toward using new AIS will mediate the relationship between employees' organizational identification and new AIS usage behavior.

The moderating role of gender

Recent research has increasingly focused on the moderating role of gender in exploring the relationship between various factors and technology adoption behavior (Strzelecki and ElArabawy, 2024, Liu et al., 2024). These studies highlight how gender differences can influence the strength and direction of the connection between key antecedents and the adoption of new technologies (Strzelecki and ElArabawy, 2024, Venkatesh and Morris, 2000). In the current study, we posit that gender differences can play a significant role in shaping the association between organizational identification and employee attitude toward using the new AIS. Venkatesh and Morris (2000) indicates that social factors such as social norms may have a more pronounced impact on the attitudes of women than men. This is because women tend to exhibit greater organizational commitment and invest more effort in fulfilling their assigned responsibilities.

It is noteworthy that women often display nurturing, caregiving, and affiliation-oriented tendencies (Venkatesh and Morris, 2000). Consequently, when organizations implement new AIS, women are more inclined to hold positive views about organizational initiatives. Women with high levels of organizational identification are more actively engaged in organizational activities because they are deeply concerned with collective goals (Fritz and Van Knippenberg, 2017). Therefore, they can play a significant role in the successful implementation of new IS and contribute to enhanced organizational efficiency.

It is also argued that women's positive attitude towards using new AIS may be influenced by their strong identification with the organization, as the concept of unity motivates them to be deeply integrated within the group and more focused on achieving the overarching organizational goal of improved performance through the effective use of AIS (Liu et al., 2017). Women, known for their sociability, warmth, and nurturing qualities, may place greater

emphasis on their connection with the organization (Fritz and Van Knippenberg, 2017), leading to more positive reactions to the adoption of new AIS.

Research by Mackie and Smith (2015) further supports the idea that women's stronger organizational identification often translates into greater openness to organizational changes and new technologies. This suggests that the influence of organizational identification on attitude toward using new AIS may be more pronounced among women. Chughtai and Buckley (2009) point out that employees who strongly identify with their organization are more motivated to enhance their skills, recognizing that their personal growth contributes to the organization's overall success. Therefore, it is suggested that women, who typically exhibit stronger organizational identification may hold a more favorable attitude towards adopting new AIS. This inclination may stem from their belief that using such a system can also foster their personal development and proficiency in technology-related skills. Hence, it is theorized that:

H4: Gender moderates the effect of organizational identification on employees' attitude toward using new AIS so that this effect is stronger for females than for males.

The moderating role of collectivism

Cultural orientations, such as collectivism, significantly influence technology adoption behavior (Zhang et al., 2018). Aguiar-Díaz and Ruiz-Mallorquí (2024) have shown that collectivism directly affects individuals' willingness to adopt technology. The current research explores the moderating role of collectivism in the relationship between organizational identification and attitudes toward using new AIS. While it has been noted that individuals with higher individualism exhibit a stronger inclination toward Internet banking in European countries (Aguiar-Díaz and Ruiz-Mallorquí, 2024), our study proposes that highly collectivistic employees are more likely to adopt new AIS. This is explained by the role of organizational identification in shaping their positive attitude toward using new systems.

Collectivist individuals tend to have a strong affiliation with their organization and prioritize group-oriented objectives over personal ones (Singelis et al., 1995). Those who exhibit collectivism as a cultural trait are more inclined to reside within a collective setting (Hofstede, 2017) and place significance on group identities. They tend to exhibit greater care and support for others (Bond and Smith, 1996). Additionally, collectivist individuals tend to be more attuned to their work environment, adhering to group norms rather than personal ones (Jetten et al., 2002). They attach importance to the values and norms of their organization and tend to avoid conflict, hesitating to voice concerns about undesirable activities (Ho et al., 1989). Consequently, it is expected that the contrast between individualist and collectivist orientations among employees will influence the impact of organizational identification on their attitude toward using the new AIS. Employees with a strong collectivist orientation prioritize their group identity over their personal one, potentially concentrating on achieving organizational objectives such as the adoption of new technologies and the implementation of organizational changes (Jetten et al., 2002). Consequently, employees with both higher organizational identification and a collectivist orientation are likely to perceive the new AIS more favorably. Arshad et al. (2019) noted that these employees' collectivist mindset prioritizes group objectives over individual ones, their practice of aligning their personal ambitions with those of the organization and the cooperative nature of their work environment prepare them to view the adoption of new AIS in a favorable manner. This combination of factors fosters an environment where embracing and integrating a new AIS aligns with their broader commitment to the organization's success and collective well-being. Feeling more closely connected to their group, they may consider becoming more like their fellow group members (Singelis et al., 1995). These individuals have strong attachments to their groups and, consequently, exhibit a higher tendency to reciprocate their commitment to the organization through organizational identification. As a result, they will develop a stronger attitude towards using the new AIS. The

study conducted by Earley and Gibson (1998) has shown that collectivist societies foster an atmosphere where organizational support holds significant importance. This support has the potential to strengthen the positive relationship between organizational identification and the willingness to embrace new AIS, as employees view the adoption of the innovative system as a way to actively contribute to and endorse the organization (Earley and Gibson, 1998). Based on these arguments, we propose the following hypothesis.

H5: Collectivism moderates the effect of organizational identification on attitude towards using new AIS in such a way that the effect is stronger for individuals who have a high-collectivist orientation than those who have a low-collectivist orientation.

Figure 1 presents the hypothesized model.

Insert Figure 1 about here

Research methods

Sample and procedure

We used a purposive sampling method and distributed a self-administered survey to collect data. The target population of this study was the employees working in the services sector of Pakistan, in which an AIS was being implemented. The rationale for selecting a Pakistani sample for this study is primarily due to the country's collectivist culture, where individuals emphasize group cohesion, making it an ideal context for exploring the moderating role of collectivism in the relationship between organizational identification and attitude towards AIS (Nazim and Wajidi, 2016). Additionally, gender dynamics in Pakistan, influenced by traditional societal norms, provide a unique context for studying how gender impacts technology adoption behaviors (Barra et al., 2024). Additionally, Pakistan's growing focus on digital transformation in sectors such as accounting and finance highlights the relevance of AIS

adoption in its organizational landscape (Kouser et al., 2011). While these factors enrich the study's cultural relevance, the findings may be limited in generalizability to other regions with different cultural contexts.

We identified the five banks in the banking sector and nine higher educational institutions in the education sector that had recently implemented AIS. The authors personally visited the work units and collected data from employees. A total of 720 questionnaires were distributed, and 541 completed surveys were returned, with a 75.14% response rate. However, after data screening and cleaning, 41 questionnaires were unusable because of incomplete responses. The final analysis was performed on a sample of 500 employees.

Out of a total of 500 employees, 389 were male (77.8%) and 111 were female (22.2%). The age distribution was as follows: 220 employees (44%) aged between 18 and 28 years, 202 employees (40.4%) aged 29 to 40 years, and 78 employees (15.6%) over 40 years old. Regarding educational qualifications, most employees held a master's degree (62.2%), followed by 33% with an undergraduate degree, and a smaller group of 4.8% with PhDs. In terms of work experience, 171 employees (34.2%) had 2 to 5 years of experience, 123 employees (24.6%) had less than two years, 132 employees (26.4%) had between 5 to 10 years, and 74 employees (14.8%) had over ten years of experience.

Measurements

We used well-defined instruments for our study. The survey was administered in the English language because all the respondents were educated, and English had been their medium of instruction in organizations (Arshad et al., 2019). All constructs were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Organizational identification was measured using five items adopted from Ashforth and Mael (1989). Examples include: “When someone praises my company, it feels like a personal compliment” and “My company's successes are my successes.”

Collectivism was measured using eight items adopted from Triandis and Gelfand (1998). An example is: “It is important to me that I respect the decisions collectively made by my group members.”

AIS usage was measured using two items adapted from Kwahk and Lee (2008) and Chiu and Wang (2008). An example is: “I use AIS as often as possible in my job.”

Attitude to using new AIS was measured with four items adapted from Venkatesh et al. (2003). An example is: “I would feel that using AIS is pleasant.”

Control variables: This study studied different control variables that had established their association with new technology usage. These variables include ease of use and usefulness (Rochmah et al., 2020). Thus, we thought it necessary to include these in our model as control variables.

Perceived ease of use was measured by four items adapted from Horton et al. (2001). An example is: “I would find the AIS easy to use.” Perceived usefulness was measured with four items adapted from Horton et al. (2001). An example is: “I would find the AIS useful in my job.”

Previous studies have also examined the effect of age (Lian and Yen, 2014), education (Kiraz and Ozdemir, 2006), and work experience (Kim, 2008) on individuals’ technology acceptance behavior; therefore, it was deemed necessary to control for their effect on employees’ AIS usage behavior. The demographic control variables of this study include age (1 = 18–28 years; 2 = 29–40 years; 3 = 41–55 years; 4 = more than 55 years); education (1 = undergraduate; 2 = masters; 3 = PhD); and work experience (1 = up to 2 years; 2 = 2–5 years; 3 = 6–10 years; 4 =

more than 10 years). In addition, we also controlled the effect of sector and organization during the model testing.

Data analysis and results

Scale validation

We performed confirmatory factor analysis (CFA) in Mplus 7.0 (statistical software) to test the measurement model. Applying the SEM technique, we performed CFA to establish the constructs' reliability and validity. We followed the guidelines of Anderson and Gerbing (1988) and developed two alternative measurement models. Single factor CFA (all observed variables were loaded to the common latent factor) produced a poor fit with the data (X^2 = 4073.66; df = 324; X^2/df = 12.57; CFI = 0.52; TLI = 0.48, SRMR = 0.13; RMSEA = 0.15). In comparison, six-factor CFA showed a good fit with the data (X^2 = 808.32; df = 309; X^2/df = 2.62; CFI = 0.94; TLI = 0.93, SRMR = 0.04; RMSEA = 0.06).

Within the six-factor CFA model, the standardized factor loadings of all constructs were > 0.50 (Kline, 2011). As a result, the average variance extracted (AVE) of all the factors was > 0.50 (see Table 1), which established the convergent validity of all variables (Fornell and Larker, 1981). To estimate the discriminant validity, we followed the technique recommended by Fornell and Larker (1981) and compared the square root of AVE values of all variables with their correlations. The results (see Table 1) showed that all variables also enjoyed discriminant validity. To estimate the internal consistency of variable items, we calculated the composite reliability. The reliability of all variables was > 0.70 and ranged from 0.74 to 0.90 (see Table 1). For a further understanding of the relationships between variables, the descriptive statistics and correlation matrix are also presented in Table 1.

Insert Table 1 about here

Common method variance

Because we used a cross-sectional design for the data collection, the issue of common method bias arose (Podsakoff et al., 2003). Researchers suggest several techniques to identify the common method variance, including single-factor CFA, Harman's (1960) One-factor analysis and common latent factor. Single-factor CFA produced a poor fit with data at different indices (as mentioned earlier). In Harman's single-factor analysis, first, all the factors were forced to extract one factor, which showed a 35.92% variance. In the second step, using principal component analysis, six factors together accounted for 69.02% of the variance; the first factor yielded a 34.82% variance. Finally, we also used the common latent factor, which produced < 25% variance (Podsakoff et al., 2003). Thus, we conclude that common method bias is not an issue for this data.

Direct and indirect effects

We used the SEM technique in Mplus 7.0 to calculate the direct, indirect, and interaction effects in one unified structural regression model. As suggested by a previous study (Davis, 1993), we used two control variables (perceived ease and perceived usefulness) while model testing and an additional five demographic control variables (age, work experience, education, organization, and sector). We tested the hypothesized model, which produced a good fit with the data (X^2 = 1128.45; df = 516; X^2/df = 2.19; CFI = 0.92; TLI = 0.93, SRMR = 0.04; RMSEA = 0.05).

Hypothesis 1, which proposed the direct effect of organizational identification on employees' AIS usage, was not supported by the results (direct effect = -.02, p >.05). Hypothesis 2, that organizational identification positively influences employees' attitude towards using new AIS, was supported by the results (direct effect = 0.45, p < .001; see Table 2).

Hypothesis 3 proposes that organizational identification positively influences employees' AIS usage through the mediation of attitude to using new AIS. To test the mediation, we followed

the guidelines proposed by Iacobucci et al. (2007). The results showed that the indirect effect of organizational identification on AIS usage via attitude to using the new AIS was positive and significant (indirect effect = 0.14, $p < 0.01$; see Table 2). As a result, Hypothesis 3 was accepted, and the full mediation of attitude toward using the new AIS appeared.

Insert Table 2 about here.

Hypothesis 4 states that gender moderates the effect of organizational identification on attitude towards using new AIS in such a way that this effect is stronger for females than for males. We found support for this hypothesis (interaction effect = -0.10, $p < 0.05$; see Table 2). As such, the effect of organizational identification on females' attitude toward using new AIS was stronger compared to its effect on males' attitudes (females = 0.509, $p < 0.001$; males = 0.364. $p < 0.001$; see Table 3). Hypothesis 5 states that collectivism moderates the effect of organizational identification on attitude towards using new AIS. This effect is stronger for individuals with a high-collectivist orientation than those with a low-collectivist orientation. We found support for this hypothesis (interaction effect = 0.17, $p < 0.001$; see Table 2), showing that the effect of organizational identification is different for higher and lower levels of collectivism (low = 0.360, $p < .001$; high = 0.513, $p < .001$; see Table 3).

To further understand the moderation effect of gender and collectivism between the relationship of organizational identification and attitude towards using new AIS, we examined the specific effect of organizational identification on male and female individuals' attitude toward using new AIS with lower or higher collectivistic orientations. The results indicate that organizational identification has a stronger effect on high-collectivist females (0.586, $p < .001$; Table 4) than on low-collectivist females (0.432, $p < .001$). Similarly, the results revealed that the effect of organizational identification on males with a high collectivistic orientation was

stronger (0.441, $p < .001$) than on those with a low collectivistic orientation (0.287, $p<.001$). Further comparative analysis showed that among males and females, the effect of organizational identification was higher for collectivist females than for collectivist males.

Insert Tables 3 & 4 about here

Discussion

This empirical study investigated the factors that affect the use of Accounting Information Systems (AIS) among employees in Pakistan's service sector. It builds on prior research into the determinants of AIS adoption, which identified various influences. These include organizational factors such as top management support (Kubota and Okuda, 2023), strategic use of power (Robalo and Moreira, 2020), and employee empowerment (Qatawneh, 2023). Additionally, technology-related aspects like user enjoyment and satisfaction, along with the flexibility and scalability of AIS (Eldalabeeh et al., 2021), were examined. External factors, such as the use of social media within firms (Duan et al., 2023), were also explored for their role in enhancing the effective utilization of AIS. Unlike these prior studies, the current research developed a theoretical framework based on social identity theory, examining the impact of organizational identification on employees' AIS usage, with attitude serving as a mediator.

Our results show that organizational identification has a significant positive effect on AIS usage, supporting H1. Furthermore, the findings also confirmed H2, showing that organizational identification positively influences employees' attitudes toward using new AIS. These findings extend the work of Hassandoust et al. (2024), who demonstrated a positive effect of employees' IT identity and IS infusion role identity on IS usage behavior. However,

their study did not consider how an employee's identification with their organization impacts their attitudes and behavior regarding AIS usage, which our research addresses.

For H3, our structural equation modeling results supported the hypothesis that attitude towards using new AIS mediates the relationship between employees' organizational identification and their AIS usage behavior. These findings suggest that employees who strongly identify with their organization develop a positive attitude toward AIS implementation, which further motivates them to increase their usage of AIS. Our study extends previous research that demonstrated the positive effect of attitude on IS usage (Bhattacherjee and Premkumar, 2004, Arshad et al., 2019). However, our research introduced the determinants of attitude by explaining the role of organizational identification.

H4 proposed that gender moderates the effect of organizational identification on employees' attitudes towards using new AIS, with the effect being stronger for females than for males. This hypothesis was supported by the results. Our findings align with previous studies that have shown gender to moderate the relationship between various antecedents and technology adoption behavior (Venkatesh and Morris, 2000, Rani and Kumar, 2024). However, these studies primarily focused on determinants such as perceived ease of use and usefulness while largely overlooking the potential impact of organizational identification on technology adoption behavior, which our study addresses.

In H5, our study examined collectivism as a cultural factor moderating the relationship between organizational identification and attitude towards using new AIS. The hypothesis proposed that the effect of organizational identification on attitude would be stronger for individuals with a high collectivist orientation compared to those with a low collectivist orientation. The results supported this hypothesis. Our study differs from Faqih et al. (2015), who explored the moderating role of collectivism in the relationship between various antecedents (such as ease of use, usefulness, and subjective norms) and technology adoption behavior. However, they

did not investigate its moderation in the relationship between organizational identification and attitude towards AIS, which our research addresses.

Implications

Theoretical Implications

This study addressed a research gap by identifying the socio-psychological factors influencing AIS usage through the development of a theoretical model grounded in social identity theory. This approach differs from previous studies, which primarily relied on the technology acceptance model (TAM) to explain the determinants of technology adoption behavior (Ezeudoka and Fan, 2024, Scherer et al., 2019, Sharma, 2017, Al-Okaily, 2024). This is the first study of its nature, which established the relationship between organizational identification and AIS usage.

This study took a step further by uncovering the mediation of attitude in the relationship between organizational identification and employees' AIS usage, demonstrating that social identity theory is validated in the context of employees' technology adoption behavior. Organizational identification emerged as a key antecedent, influencing AIS usage both directly and indirectly through employees' attitudes. To the best of our knowledge, these findings are novel and align with those of Arshad et al. (2019), who found that institutional forces affect IS usage behavior through the mediation of attitude.

Our study contributes to social identity theory by exploring the boundary conditions of gender and collectivism that influence the relationship between organizational identification and employees' attitudes toward AIS. These findings align with previous research in sociology, which suggests that men and women respond differently to workplace attitudes (Moncrief et al., 2000), with women tending to be more collectivist and group-oriented than men (Gerber, 2009). Our results indicate that women are more likely to identify strongly with their organizations, leading to quicker AIS adoption due to a heightened sense of loyalty and

responsibility to support organizational success (Venkatesh and Davis, 2000). While some studies have shown that men are generally more inclined to adopt technology (Kotze et al., 2016, Tsourela and Roumeliotis, 2015, Karjaluoto et al., 2010), our findings suggest that fostering organizational identification is a more effective strategy for encouraging AIS adoption among women. Additionally, this study examined the role of collectivist cultural orientation and its impact on AIS usage. Our findings support the idea that collectivism moderates the relationship between organizational identification and employees' attitude toward AIS. Those with a stronger collectivist orientation are more likely to develop positive attitudes towards AIS through organizational identification, consistent with research showing that individuals with high collectivism place the organization's goals above their own (Epitropaki and Martin, 2005, Chen et al., 2011). These individuals are more likely to rapidly adopt new AIS, which is in line with the findings of Arshad et al. (2019), who also noted the moderating effect of collectivism on institutional forces and AIS attitudes.

Building on social identity theory, Hassandoust et al. (2024) found a positive link between IT identity and IS usage behavior. However, these studies did not consider how organizational identification affects AIS usage at the individual level. Our study uniquely contributes to the literature by demonstrating how organizational identification, rather than solely IT or IS identity, plays a crucial role in influencing employees' AIS usage behavior.

In conclusion, this study extends the understanding of the social identity theory to determine the antecedents of AIS usage by emphasizing the roles of organizational identification, gender, and collectivism. It provides new insights into how these factors influence employees' attitudes and behaviors toward AIS adoption in the service sector.

Managerial implications

Our findings offer several key implications for organizations. They show that organizational identification positively influences employees' attitudes toward adopting a new AIS, which in

turn enhances their AIS usage behavior. Therefore, we recommend that managers focus on fostering greater organizational identification, as it not only improves job involvement (Riketta and Van Dick, 2005) but also encourages new AIS acceptance.

We also identified gender as a moderator in the relationship between organizational identification and attitude toward AIS. Our results show that women are more influenced by organizational identification in developing a positive attitude toward new AIS compared to men. To enhance organizational identification among women, managers should implement family-friendly policies and create a flexible work environment. For men, it is important to assess the factors hindering their AIS adoption and foster a culture where they can openly express concerns and suggest improvements.

Managers should prioritize strengthening employees' identification with the organization to foster a greater sense of belonging, ultimately improving AIS usage. These findings provide guidance on motivating both men and women to adopt newly implemented AIS. Furthermore, our exploration of collectivism as a moderator highlights how cultural differences affect attitudes toward AIS adoption across countries. Managing a diverse workforce from different cultural backgrounds is increasingly challenging, and our study informs managers on how to better support employees with varying levels of collectivism during AIS implementation. Based on our findings we suggest that managers should identify employees who prioritize organizational goals over personal ones, as collectivistic individuals are more responsive to organizational identification when adopting new AIS. Given that Asian cultures, including Pakistan, are more collectivistic than Western cultures, organizational identification is a crucial factor in promoting AIS usage.

Limitations and future research directions

Although this study has various theoretical and managerial contributions, it has some limitations. Firstly, we collected cross-sectional data from the banking and education sectors;

thus, the results cannot be generalized to other industrial sectors. Data collected from other industries will help future researchers to provide generalized implications. Future studies should use a longitudinal design and collect data from other industry sectors where a new system is to be implemented. The current study did not consider the job role because the data were collected from the managerial and non-managerial staff who were users of AIS. Therefore, we suggest that future studies may identify the impact of job role on AIS usage. Furthermore, Qualitative data collection, including interviews, case studies, and face-to-face discussions, will provide a further understanding of the factors influencing employees' AIS adoption behavior. Lastly, we applied social identity theory in our model to explain the factors influencing employees' AIS usage behavior. However, other theories may also be applied to explain the determinants of AIS usage behavior, such as resource conservation theory, goal contents theory, and self-determination theory.

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Table 1: Convergent validity, discriminant validity, reliability and correlation analysis

Variable	Mean	SD	CR	AVE	1	2	3	4	5	6	7	8	9	10	11	12
Sector[a]	1.26	0.44	-	-	-											
Organization	4.89	3.85	-	-	0.83**	-										
Gender[b]	0.56	0.83	-	-	0.01	0.01	-									
Age[c]	1.73	0.76	-	-	0.10*	0.00	0.18**	-								
Education[d]	1.72	0.55	-	-	0.10*	0.08	-0.10*	0.26**	-							
Experience[e]	2.31	1.00	-	-	.20**	0.02	0.11*	0.54**	.28**	-						
Organizational identification	3.90	0.80	0.88	0.59	-0.03	-0.06	-0.08	0.05	-0.04	0.06	**0.77**					
Collectivism	4.01	0.75	0.90	0.54	-0.04	-0.09	-0.02	0.03	-0.02	0.01	.34**	**0.73**				
Attitude to use new AIS	3.85	0.80	0.87	0.63	0.08	0.00	-0.02	0.05	0.00	0.08	.52**	.40**	**0.79**			
AIS Usage	2.55	0.60	0.74	0.58	0.13**	0.06	0.00	0.03	-0.02	0.09	.25**	.18**	.45**	**0.76**		
Usefulness	3.84	0.87	0.87	0.62	0.11*	-0.01	-0.11*	0.03	-0.05	0.08	.39**	.33**	.60**	.45**	**0.79**	
Ease of use	3.81	0.90	0.89	0.68	0.11*	0.04	-0.06	0.06	-0.04	0.07	.32**	.29**	.53**	.45**	.61**	**0.82**

N = 500, * p < 0.05; ** p < 0.01;

a 1= Banking sector; 2 = Education Sector

b 1 = male; -1 = female

c 1 = 18-28 years; 2 = 29-40 years; 3 = 41-55 years; 4 = over 55 years

d 1 = Undergraduate; 2 = Master; 3 = PhD

e 1 = up to 2 years; 2 = 2-5 years; 3 = 5-10 years; 4 = over 10 years

Note: The bold values on the diagonal represent the square root of convergent validities (AVE). For adequate discriminant validity, each diagonal element should be greater than its corresponding off-diagonal correlation coefficient.

Source: Created by Author

Table 2: Direct, indirect, and interaction effects

Independent Variables	Dependent Variable			
	Attitude to use new AIS	AIS Usage Behavior		
	Direct Effects	Direct Effects	Indirect Effects	Mediation
Organizational identification	.45***	-.02	.14**	Full
Attitude to using new AIS	-	.30***		
Gender	.07*	.03		
Gender × Organizational identification	-.10*	-		
Collectivism	.17***	-		
Collectivism × Organizational identification	.17***	-		
Ease of use ©	.17**	.23**		
Usefulness ©	.34***	.20*		
Age ©	-.01	-.03		
Education ©	.06	-.02		
Experience ©	-.01	.05		
Organization ©	-.01	.02		
Sector ©	.05	.06		

Note: The cell values are standardized regression weights

N = 500; * significant at .05; ** significant at .01; *** significant at .001; © Control variables

Source: Created by Author

Table 3: Specific effects in the moderation of gender and collectivism

Independent Variable	Moderator	Category/Level	Dependent Variable: Attitude towards using new AIS
Organizational identification	Gender	Female	0.509***
		Male	0.364***
	Collectivism	Low	0.360***
		High	0.513***

Note: The cell values are unstandardized regression weights; *** significant at .001

Source: Created by Author

Table 4: Specific Effects in the combined moderation of gender and collectivism

Independent Variable	Gender	Collectivism	Dependent Variable: Attitude towards using new AIS
Organizational identification	Male	Low	0.287***
	Male	High	0.441***
	Female	Low	0.432***
	Female	High	0.586***

Note: The cell values are unstandardized regression weights; *** significant at .001

Source: Created by Author

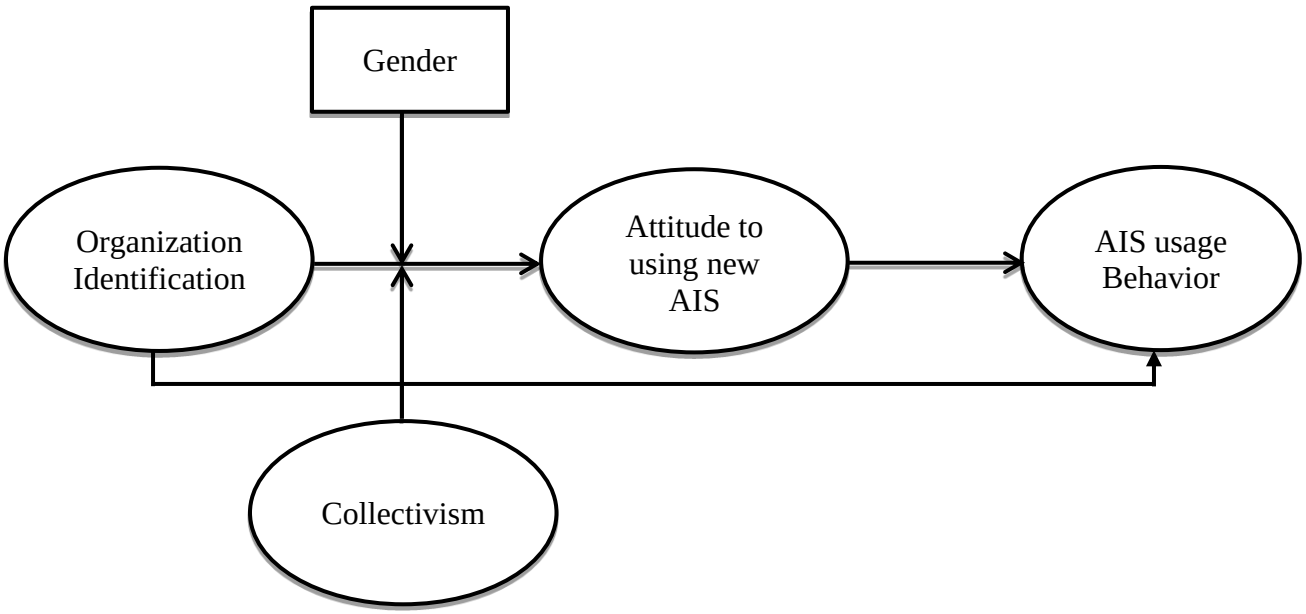

Figure 01: Hypothesized Model

Source: Created by Author