FWU Journal of
Social Sciences

Quarterly Publication

FWU Journal of Social Sciences

Contents

The Plight of Shia Hazaras in Balochistan, Pakistan: From Persecution to Resilience

Shehzadi Zamurrad Awan
Forman Christian College (A Chartered University), Lahore, Pakistan

Naima Shifa
DePauw University, IN, US

The Shia Hazara Community in Pakistan has faced prolonged violence, torture, discrimination, and harassment, which peaked notably from 1999 to 2015. Today, though the frequency of violent incidents has decreased, the Shia Hazara community continues to endure persistent threats, discrimination, and harassment, including sporadic targeted killings. This survey-based investigation draws upon 117 Hazara community members residing in two central localities (Hazara Town and Mariabad) of Quetta, Balochistan, to understand socio-economic discrimination and pervasive insecurity, the intricate interplay of ethnicity and religion, and additional influential factors that contribute to sustained persecution. In this investigation, besides descriptive statistics and visualization, authors utilize robust statistical techniques encompassing Chi-Squared tests for independence, testing independence for ordinal variables, counts, and rates. This study unearths compelling evidence revealing the profound extent of discrimination endured by the Hazara community in the public domain and the tenacious resistance strategies they harness to combat their subjugation .

Keywords: shia Hazaras, Pakistan, Quetta, Balochistan, target killing

The marginalized Shia Hazara community of Pakistan makes up roughly 40% of Quetta city, the capital of Balochistan province. The population is primarily concentrated in the localities of Mariabad and Hazara Town, approximately 10-13 kilometers apart and mainly connected by Alamdar Road.[1] In early 2023, the Hazara population was estimated to be between 560,000 and 900,000 across Pakistan, of which 600,000 are concentrated in Quetta, making up the third largest ethnic group in the city, after the Baloch and Pashtun (Minority Rights Group International, 2018). Hazaras have significantly contributed to the development of Pakistani society in different fields, including armed forces and sports. A notable example is General Muhammad Musa, who served as Commander-in-Chief of the Pakistan Army and later as a Governor of Balochistan.[2] Since 2003, Hazaras has also had its political party, the Hazara Democratic Party- HDP (Qayyum, 2018). Despite this, the community has faced structural violence, making them heavily reliant on remittances from relatives settled abroad, as their businesses have been severely impacted by escalating violence and targeted killings. In addition to persecution, discrimination affects their daily lives, employment prospects, and access to education and healthcare facilities.

Correspondence concerning this article should be addressed to Dr. Shehzadi Zamurrad Awan, Associate Professor, Political Science Department at Forman Christian College (A Chartered University), Lahore, Pakistan. The author can be reached at zamurradawan@fccollege.edu.pk

Through a survey employing a range of robust statistical models, this research aims to understand the severity of violence and the extent of marginalization faced by this community. It includes restricted employment business opportunities and unsafe environments. The purpose is to understand the factors responsible for the "ghettoization" of this marginalized community, their level of trust in state efforts, and their own community-led initiatives for rights movements. In Pakistan, Shia-Sunni sectarian violence erupted in the 1980s when many Sunni militant outfits flourished and were largely ignored by law enforcement agencies. During this period, Shia Hazaras were not directly targeted, although religious intolerance was on the rise across the country. It wasn't until the 1990s that Shia Hazaras became the target of Sunni militants for the first time.

Between 1999 and 2022, at least 261 attacks against the Shia Hazara community in Pakistan took place, resulting in 1046 deaths and 1,262 wounded.[3] Half of the attacks were claimed by Lashker-e-Jhangvi-LeJ, which was 43%, and few others were claimed by Jaish-ul Adal, Jasi-ul Islam, and Islamic State Khorasan Province-ISKP (Alizada & Iltaf, 2023). Since 2013, because of the widespread protest against Hazaras, their self-protection measures, and state actions, including Operation Zarb-e-Azab and the National Action Plan (NAP), the attacks decreased but have not entirely stopped. There are many reasons behind these targeted attacks: the central remaining ethnic and religious identity and broader sectarian-ideological dynamics of the region, supported by other contributing factors like economic objectives and political mileage.

A substantial body of scholarship is available that comprehensively traces the origin and history of the Hazara tribe in central Afghanistan and their gradual and inconsistent migration to other neighboring localities, including Pakistani Balochistan, which dates to 1878 (Devasher, 2018). This community has borne the brunt of many of the destructive forces unleashed by the establishment of the Afghan monarchy. Frequent episodes of ethnic cleansing, mass dispossession, forced displacement, enslavement, and social and economic exclusion have punctuated the history of their relationship with the Afghan state. In a predominantly Sunni Muslim country, the Shia Hazara minority, identifiable by their distinct Mongolian features, became Afghanistan's marginalized group. The first phase of their intense migration was during Abdur Rehman Khan's rulership (1891-1893), who killed many Hazaras and pushed them to leave the country (Poladi, 1989; Monsutti, 2005; Creasy, 2009; Ibrahimi, 2017; Mousavi, 2018). The Hazaras settled in Quetta, Balochistan, assimilating into the culture and living in peace and harmony with the neighboring communities (Owtadolajam, 2006; Ali & Baig, 2017). They also participated actively with other ethnicities in the independence movement in 1947. Their contribution to different fields of life for development and progress remained remarkable, which also made them the third-largest ethnic group in the city.

During General Zia-ul-Haq's regime (1977-1988), Sunni radicalization began as a result of Pakistan's involvement in the Afghan Jihad against the Soviet invasion of Afghanistan. "This radicalism sowed the seed of bigotry and fanaticism in the country. The first message calling the Shia community 'kafir' (infidels) was written on the walls of Quetta in 1981. Quetta's residents largely ignored it" (Tarar, 2018). Sectarian violence intensified during this phase in which Shia Hazaras were targeted specifically because of their recognizable features and religious identity. The persecution, which started in the 1970s, continued, and the community faced systematic attacks, bomb blasts, and killings, profoundly affecting their lives. Many Hazaras migrated abroad seeking asylum due to the unsafe environment (Alizada & Iltaf, 2023; Olszewska, 2013). As

discussed above, their distinct features made their identification easy. Additionally, their daily commute between the two central Hazara localities in Quetta provided further targeting opportunities. Furthermore, Shia pilgrims traveling to holy sites in Iran and Iraq via the Taftan border, 650 km from Quetta, are also targeted. Despite traveling in groups with armed escorts from law enforcement agencies, the long distance and challenging terrain make them vulnerable to militant attacks along this route.

The comprehensive history of sectarian violence in Pakistan focuses on the various reasons behind this violence, ranging from sectarian motives to socioeconomic tensions, which is discussed by different scholars (Ali, 2021; Ahmed, 2011; Majidyar, 2014; Fair, 2014). Ali (2021) explained the genesis of sectarian violence in the country by highlighting the role of the Sunni militant Lashkar-e-Jhangvi (LeJ), which emerged as a militant faction originating from the Deobandi Sunni group Sipah-e-Sahaba Pakistan (SSP) in the 1990s. The political movement LeJ has been linked to Ahl-e-Sunnat Wal Jamaat (ASWJ), with some suggesting a rebranding while others point to collaboration. "LeJ has close cooperation with Harkat-ul-Mujahideen (HuM) and Jaish-e-Muhammad (JeM), as well as with the Tehreek-e-Taliban Pakistan (TTP)" (p. 200). These groups together used some Islamic religious interpretations to justify their violence against the Hazara Shias, as they are prominently involved in such prosecutions. Apart from sectarian reasons, Ali also highlights the socio-economic tensions, particularly the resentment of the local Baloch community towards the Hazara Shia community, as a contributing factor. While adding another dimension to the international actors responsible for this mass killing, Majidya (2014) discusses that the external influences from Iran and Saudi Arabia have escalated sectarian tensions. He further explains:

Iran's growing power in Pakistan enraged both Pakistani Sunni religious groups and Persian Gulf Sunni monarchies. To counter Iranian influence, Saudi Arabia substantially increased financial support for the Pakistani Sunni religious organizations and highlighted the financial support provided to Pakistani Shia and Sunni religious organizations, contributing to inter-sect violence" (p.3).

The result of this sectarian violence was devastating for the Shia Hazara community in Pakistan, severely impacting their businesses and involvement in public life, including education and employment opportunities (Nawaz & Hassan, 2015; Rafiq, 2014; Bakhsh & Haider, 2020; Khan, 2021; Siddiqi, 2015). The unsafe environment resulted in large-scale migration, which, with limited resources, was the biggest challenge to this already marginalized community. While adding another scholar particularly mentioned that the violence between different sectarian groups often leads the already underprivileged population to be caught in between. It was not only the Sunni outfits who were involved. "A minority of Shia groups turned to violence to defend the community, engaging in tit-for-tat terror attacks against militant Sunni groups" (Abbas, 2010).

This human cost of the sectarian conflict has been addressed in different studies, where the focus remained on the challenges and experiences of Hazaras, particularly their mental health issues, community-driven solutions, and the media coverage provided to this targeted group (Tanveer, 2017; Azad, 2014; Khan & Amin, 2019). These studies contributed to a nuanced understanding of the Hazara community's struggles and resilience in adversity by providing a comprehensive examination of their socio-cultural profile, emphasizing their historically peaceful co-existence with other communities in Quetta. Majeed (2021) explained, "The insecurity caused

by fear of movement has turned both of densely populated Shia Hazara Community of Quetta in slums engulfed with the constant threat to their lives" (p.82). To address the mental trauma experienced by the community, Tanveer (2017) explains that the Hazaras focus on community-driven initiatives. These initiatives provide relief and amplify their voice against aggression and violence. In this regard, the role of media remained crucial; according to Azad (2014), the newspapers highlighted the community's persecution and killings in Pakistan, and many journalists published articles debating the reasons behind the mass killings.

The reviewed scholarships above have primarily focused on the Shia-Hazaras' history in Pakistan and various types of violence against this community, often attributing its causes solely to ethnic and religious characteristics. This study expands on prior research in several ways. First, it explores other potential reasons behind the targeted violence against the Shia Hazara community. Second, it investigates their opinions on safety and discrimination, considering factors such as age, education, profession, and socio-economic status. Third, it examines workplace discrimination, employment opportunities, high business and rental property costs, and unequal payments. Fourth, the study assesses the community's trust in state efforts to provide safety and address grievances, as well as the community's involvement in advocating for their demands and their views on the effectiveness of these efforts.

Method

Data collection and sampling
A multifaceted sampling method is employed to comprehensively understand the gravity and level of violence against Hazaras of Quetta. The initial invitations for the survey were conducted through telephonic communication, followed by in-person meetings. The principal investigator strategically established gathering points at various locations, including local restaurants, public libraries, fitness centers, martial arts training centers, community organization facilities, and BUITEMS University. This approach ensured a comprehensive representation of the Hazara community while meticulously maintaining participant confidentiality. Every session was initiated with an introduction explaining the academic motivations behind the research. The researchers emphasized independence from NGOs or security agencies to demonstrate transparency and gain respondents' confidence. The survey was conducted from 10 a.m. to midnight to ensure the inclusion of voices from a diverse group of community members. Data was collected between August 25th and September 2nd, 2023.

In recognition of the participants' contributions, each was given a thoughtful gift as a token of appreciation for their invaluable involvement. The target was to collect data from 100 Hazara members residing in Mariabad and Hazara Town in Quetta. However, the principal investigator and the team successfully completed 117 interviews from diverse locations within the same localities.

Tools
To comprehensively understand the situations of the Hazara community suffering from extreme violence and discrimination, descriptive analysis, visualizations, univariate and bivariate contingency table analysis-have been employed. To check the significance of their findings, the authors used statistical tests like the Wald test, Chi-square test, Fisher's Exact Test, and Cochran-Mantel-Haenszel Test. All their analyses were done using the popular statistical software R.

Ethical Considerations

The Institutional Review Board of the principal investigator institution approved the questionnaire and ethical considerations related to this study. Researchers involved in data collection signed a contract to formalize their commitment to the project's data collection and translation phases, ensuring adherence to ethical guidelines and confidentiality standards. Due to safety concerns and life threats faced by the community, no audio or video recordings were made. Instead, in some cases, researchers took notes on important information with the participants' permission. Participants were allowed to withdraw from the survey at any stage, emphasizing their agency in the process. To strengthen the ethical foundation of research, participants were presented with an informed consent form, outlining available resources for any assistance needed after completing the survey.

Results

To understand the profile of the community, their socio-demographics, discrimination and safety concerns, reasons for mass killings and violence, unequal employment and business opportunities, community confidence in state measures, and Hazara's involvement in their rights advocacy movement are analyzed in Table 1. The socio-demographic profile of Hazara participants shows that most participants (58.12%) are aged 18-25, followed by 15.39% aged 26-30 and 17.95% aged 31-40. It is evident that younger Hazaras (18-25) are more likely to participate in studies due to their availability, better access to education and technology, and presence in targeted environments like universities and social media. They are also more vocal and engaged in discussing violence and discrimination issues. Females make up 52.14% of respondents, surpassing males at 42.15%, with the remaining identifying as LGBTQ+ and transgender.

The education levels of these participants vary, with the most common being completion of higher secondary education (FA, 35.04%), followed by bachelor's degree holders (BA, 24.79%), master's degree holders (MA, 20.51%), and those with secondary school completion (Matriculation, 14.53%).The education levels of these participants vary, with the most common being FA (35.04%), followed by BA (24.79%), MA (20.51%), and Matriculation (14.53%), while the rest fall into lower education categories, higher level of education shows a greater willingness to participate in research[4]. Most respondents are students (39.32%), followed by professionals (35.9%), 11.11% in various jobs, 6.84% business owners, and 5.98% are skilled and unskilled labor. More students and professionals in the study reflect more availability and interest in survey. Only one woman reported being unemployed.

Most respondents (77.63%) earn a monthly income between 40,000 to 100,000 PKR, likely reflecting the higher education and professional status of the majority, who tend to have better-paying jobs. The smaller percentages earning 20,000 to 40,000 PKR (11.84%) and less than 20,000 PKR (10.53%) may represent those in entry-level, part-time, or less skilled positions. Most (90.6%) of the Hazara community members have lived there since birth, reflecting a strong sense of community and long-term settlement. The 8.54% who have settled in the past 10 years likely include recent migrants or those displaced by conflict. Approximately 53.85% of having family abroad suggests significant migration due to seeking safety or better opportunities, while 46.15% not having family abroad indicates a substantial portion of the community remains local and possibly more connected to their roots and cultural ties.

Table 1
Descriptive Variable Analysis

Socio-demographic Characteristics of Participants (N=117)	
Variable	%
Gender	
Male	42.15
Female	52.14
Others	1.71
Age	
18-25	58.12
26-30	15.39
31-40	17.95
41-50	3.42
51-60	1.71
Education	
Uneducated	1.70
Primary	2.57
Matriculation (10th grade or equivalent	14.53
FA (Intermediate)	35.04
BA (Baccalaureate/ Bachelor)	24.79
MA (Master)	20.51
Occupation	
Unemployed	0.86
Student	39.32
Professional (Doctor, Lawyer, CA, Teachers, etc.)	35.90
Employment (Govt servant, bank officials, factory workers, company executives, etc.)	11.11
Business	6.84
Skilled Laborer (Beautician, tailor, etc.)	2.56
Unskilled Laborer (Housekeepers, cleaners, workers, etc.)	3.42
Monthly household income (PKR)	
15,000-20,000	10.53
20,000-40,000	11.84
40,000-80,000	34.21
80,000-100,000	15.79
100,000 to above	27.63
Duration of Living in Quetta	
Since Birth	90.60
Last 10 Years	8.54
Family Members Settled Abroad	
Yes	53.85
No	46.15
Discrimination, Segregation, and Safety Concerns	
Identity-Based Discrimination & Segregation	

Yes	75.21
No	23.08
Safety Outside Community	
Safe	11.97
Not Safe	82.05
Safety at Workplace	
Safe	16.23
Unsafe	72.65
Travel Preference	
Alone	19.66
In a Company	57.26
Child Safety Outside Home	
Safe	6.84
Unsafe	88.71

Reasons for killings and violence

Awareness of Violence Involving Family or Community Members	
Yes	77.78
No	19.66
Factors in Community Exploitation (Preference in Order)	
Ethnicity	57.27
Religion	42.74
Reasons for Hazara Exploitation (Preference in Order)	
Ethnic & Religious	68.38
Target Violence	12.82
Socio-Economic Factors	5.98
Historical Tensions & Conflict	5.13
Political Marginalization	4.27

Unequal Employment and Business Opportunities

Discrimination during Job Applications	
Yes	71.80
No	24.79
Equal Salary for the same job	
Yes	35.04
No	55.56
Equal Business/Work Opportunities	
Yes	12.60
No	79.49
High rental costs	
Yes	64.10
No	14.53

Community Confidence in State Measures

Unhappy with the government's efforts	
Satisfied	12.82
Dissatisfied	81.20
Involvement in Rights Movement	
Yes	55.56
No	44.44
Effectiveness of Hazara Community Efforts	
Effective	40.17
Non-Effective	49.57

A significant 75.21% of respondents reported discrimination outside their Hazara community, indicating widespread prejudice and targeting based on their identity. This high level of discrimination contributes to the majority (82.05%) feeling unsafe, as they likely face threats and hostility regularly. Only 23.08% had no experience of discrimination, and just 11.97% felt safe, highlighting severe safety concerns and the pervasive impact of discrimination on the Hazara community's sense of security.

The sense of unsafety in the workplace among Hazaras is high, with 72.65% feeling unsafe, likely due to discrimination and threats they face based on their identity. Only 16.23% feel safe at work, underscoring serious concerns. This fear influences their preference for traveling in groups (57.26%) rather than alone (19.66%) to ensure safety. Additionally, 88.71% of respondents fear for their children's safety when they are outside, indicating that daily commute to schools and colleges, especially outside Hazara areas, are perceived as highly dangerous and life-threatening. This pervasive fear reflects the hazardous environment Hazaras face both at work and in their daily lives.

The findings show that 77.78% of respondents are aware of incidents where Hazara individuals were targeted because of their identity. This high awareness is likely due to the frequent occurrence of such incidents within the community, making them a common experience. Only 19.66% mentioned being unaware of such identity-motivated violence. Table 1 presents that a majority (57.27%) of respondents attribute ethnicity as the primary factor, followed by religion (42.74%) as the second reason. Further investigation shows that in the preference-based question, 68.376% of respondents ranked ethnicity/religion as first, followed by targeted violence (12.82%), socio-economic (5.98%), and historical tensions (5.13%) as other reasons behind the violence. These findings suggest that though religion and ethnic identity are significant factors, however, based on this, the other reasons cannot be totally ignored, which will be debated further in the discussion section.

The unsafe environment and targeted violence have significantly impacted the Hazara community's business and employment opportunities. A substantial number of respondents (71.80%) reported facing discrimination while applying for jobs, 55.56% believe they are not paid equal salaries, and 79.49% feel they lack equal business or work opportunities compared to other communities. This discrimination is also evident in the high rental costs charged to Hazaras, as approximately 64.10% stated that, compared to other communities, they have to pay higher rents for their shops because of their identity.

The analysis reveals significant dissatisfaction among Hazaras with the state's efforts to ensure safety and address community grievances, with 81.20% of respondents expressing discontent. This emphasizes a prevalent concern within the community regarding safety and security, motivating them to engage in their own community-led advocacy efforts, in which 55.56% of respondents are actively involved. However, a considerable proportion (44.44%) still are not part of the community-led rights movement. This may be because the majority believe the advocacy efforts are ineffective (49.57%), whereas 40.17% consider them successful.

After a detailed examination of the respondents' social demographics, feelings of safety, experiences of discrimination, beliefs regarding the Hazara rights movement, and their respective levels of engagement, the analysis further investigates the associations between various factors

(gender, age, occupation, and income) and the Hazaras' sense of safety, workplace and business discrimination, and social biases in Table 2.

Table 2
Bivariate & Chi-Square Analysis

Vaiable1	Variable2	Chi-Square Statistic	P-value
Gender	Victim of violence or killing (%)	11.00	0.0265***
	Safety at workplace	96.26	<0.001**
	Experienced discrimination when applying for job	6.1522	0.188
	Being paid an equal salary	32.28	<0.001***
	Work opportunities available	2.81	0.589
	Higher rental costs	90.13	<0.001**
	Sending children outside home	11.675	0.166
	Traveling outside neighborhood	10.093	0.121
Age	*Victim of violence or killing(%)*	6.833	0.741
	Sense of safety in neighborhood	54.27	<0.001***
	Segregation	4.764	0.906
	Sending children outside the home	31.238	0.0521**
	Traveling outside neighborhood	27.518	0.025***
	Hazara rights movement	10.965	0.052**
	Advocating equal rights	11.859	0.294
	Government's efforts	30.64	0.060
Occupation	Being Equal Paid	7.0142	0.857
	Business/ work opportunities	6.267)	0.902
	Higher rental costs	7.938	0.7899
	Hazara rights movement	3.321	0.768
	Advocating equal rights	21.575	0.043**
Income	Hazara rights movement	41.88	<0.001*
	Advocating equal rights	5.419	0.712
	Government's efforts	29.06)	0.024***

*** p-value<0.05, ** p-value<0.10

Table 2 reveals several significant differences and some unexpected similarities in the experiences of men and women in this study. Men are demonstrably more likely to experience violence (p-value = 0.0265). Furthermore, feelings of safety at work and perceptions of equal pay significantly differ based on gender (p-value < 0.001). Interestingly, both genders report similar experiences with discrimination during job applications (p-value = 0.188) and perceive work opportunities equally (p-value = 0.589). While high rental costs significantly impact both men and women (p-value < 0.001), concerns about children's safety and travel comfort outside their neighborhood appear similar (p-value = 0.166 & 0.121 respectively). These findings highlight the gender-based disparities in violence, workplace safety, and pay equity. However, shared experiences in job application discrimination, work opportunities, children's safety, and travel suggest some common ground for addressing these challenges.

Age presents a complex picture when it comes to safety and involvement in the Hazara rights movement. While there's no significant link between age and witnessing killings (p-value = 0.741), younger age groups are demonstrably more fearful of letting their children play outside their communities (p-value = 0.052). Similarly, age significantly influences travel behavior, with younger people venturing outside the neighborhood more frequently (p-value = 0.025). Interestingly, the analysis suggests a marginally non-significant association between age and participation in the Hazara rights movement (p-value = 0.052). While younger people show lower

participation rates, the connection is not statistically conclusive at the 5% significance level. Additionally, age doesn't seem to impact the overall sense of safety in the neighborhood (p-value <0.001) or the level of segregation within the community (p-value = 0.906).

The statistical analysis indicates that occupation does not significantly affect factors such as equal pay (p-value =0.857), business opportunities (p-valie= 0.902), or rental costs (p-value=0.7899) among the Hazara community. However, occupation does show a statistically significant connection to involvement in the Hazara rights movement with a low p-value of 0.0423. This suggests that individuals in certain occupations are more likely to participate actively in advocating for Hazara rights, possibly due to their social influence, access to resources, or personal experiences related to discrimination and injustice faced by the community. Similarly, income levels do not significantly impact participation in the Hazara rights movement (p-value = 0.712), indicating that individuals across different income brackets are equally likely to engage in advocacy efforts. However, higher income groups express greater trust in government security measures (p-value = 0.024), which could lead to lower participation in advocacy as they may perceive less need for it.–This suggests a complex relationship between economic status and activism, where financial security might influence trust in government solutions, but not necessarily deter involvement in the movement itself.

Overall, the analysis reveals a complex interplay between demographics and experiences. Gender significantly impacts feelings of safety at work, pay equity and exposure to violence. Interestingly, both genders share similar experiences with job application discrimination and work opportunities. Age shows a connection to fear for children's safety and travel behavior, but not witnessing violence. While there's a hint of a link between age and participation in the Hazara rights movement, it's not statistically conclusive. Occupation seems to influence involvement in the movement, while income impacts trust in government efforts but not necessarily activism itself. These findings highlight the need to consider how various social factors interact and influence safety, discrimination, and activism within the Hazara community.

Discussion

The Shia Hazaras of Pakistan endure severe discrimination and face significant safety challenges, primarily due to targeted killings and violent attacks. These incidents have increased the sense of fear among them, as 82.05% express worries about their own safety, while 88.71% fear for the safety of their children outside the home. These threats to their lives influence their preference to travel in the company, as only 19.66% are willing to travel alone. These findings confirm various reports and studies on systematic killings of Shia Hazaras in nearly all public places (Human Rights Watch, 2014). The major contribution of this study is to investigate the contributing effects and strengths of different variables on experiencing extreme violence, discrimination, and inequality.

The most significant among all are the age and gender, which influence their experiences of unsafety, discrimination, and violence. Although there is no significant relationship between age and the experience of violence or killings, it is important to consider factors such as small sample size and confounding variables that could impact the analysis. These variables might influence the findings, potentially masking any true associations that could exist between age and the experience of violence or killings within the Hazara community. However, it has an association with unsafe feelings while traveling outside the neighborhood (p-value = 0.025) and sending children outside the home (p-value = 0.052). The fear and unsafety concerns for

themselves and their family members might have pushed this community to be involved more in the rights movement (p-value=0.052), which will be discussed in detail in the last paragraphs of the discussion.

Gender has a significant association with experiencing (p-value=0.0265) however, it is inconclusive and motivates further investigation into its relationship with unsafe travel, workplace discrimination, and higher rental costs for businesses. The findings did not determine any significant relationships. It could be because the Hazara women cover their heads and face as a religious and cultural practice, making them less likely to be targeted based on their identity. Our findings also confirm that females are approximately 82.02% less likely to experience killing violence than males. It is because, in Pakistani society and especially in religiously conservative communities like Hazaras, males are the main breadwinners, which enabled fewer women to be exposed outside the home, especially to workplace surroundings, let alone their experience of high rental cost. Similarly, they have limited exposure to workplace discrimination, which is also confirmed by this study. However, there is a possibility that including more respondents in the sample might produce different results.

The survey results indicate that there are various reasons for discrimination and violence against the Shia Hazara community. Notably, 77.78% of respondents believe that violent incidents against Hazaras are due to their identity, which, for this community, includes a combination of their distinct Mongolian features and their religious affiliation with the Shia faith. This is further confirmed by 57.27% of respondents who considered ethnicity as the first and religion (42.74%) as the second reason behind community exploitation.

These findings are aligned with studies that identified distinct features and sectarian affiliation as factors making this community vulnerable to targeted violence, primarily perpetrated by Sunni militant groups (Nawaz & Hassan, 2015; Rafiq, 2014). In response to a separate question, the participants identified additional potential causes, ranking them by preference, as shown in Table 1. Though ethnicity and religion are the most significant causes of discrimination and violence, however, other reasons like socioeconomic factors, historical tensions/conflict, and political marginalization cannot be ruled out. These factors might become more relevant with a larger sample in future research, as some current studies have noted these potential reasons, albeit not in detail. For instance, Olszewska (2013) argued that state law enforcement agencies are indirectly supporting 'targeted violence' against Hazaras by taking no action against those Sunni militant outfits who claim responsibility. This growing insecurity provides the agencies with justification to maintain their presence in the province, which they require to deal with the Baloch separatist insurgency.

The respondents also considered socio-economic tensions as a reason for the killings, which aligns with some studies. These studies mention that other communities, particularly Baloch and Pashtuns in Quetta, view the Hazaras as rivals. The Hazaras are seen as progressive businessmen with a strong community sense, and the Baloch and Pashtuns, who see themselves as the only custodians of the province, believe the Hazaras are taking away their opportunities (Dedalus, 2009). This hostility is directed toward the 'economic reasons' for violence. Another reason, which though statistically less significant yet debatable, is the 'political marginalization' of Hazaras as they neither have adequate representation in the provincial assembly nor are being heard during policymaking, which is also aligned with conducted studies (Human Rights Commission of Pakistan, 2019). By discussing all these possible reasons, this research has opened new avenues for future studies on the causes of Shia Hazara marginalization in Quetta.

The unsafe environment, target killings, and violence manifest in discrimination against this community in terms of their employment and business opportunities. Most respondents (55.56%) reported being paid unequally for the same work and facing high rental costs for shops within the Hazara area (64.10%), which is consistent with previous research on this issue (National Commission for Human Rights, 2018). Here, it is important to explain that high rental costs are demanded from Hazaras within their locality for two reasons: first, Hazara areas are densely populated due to security threats, resulting in fewer available homes and shops to rent out, which upsurges the cost. Second, as they cannot go outside the Hazara area because of life threats, they have no choice but to rent shops within the community, further limiting their choices and increasing the rental costs. This is the factor that the community has migrated outside the country, which is confirmed by the respondents, as 53.85% of them have family members settled abroad.

During data collection, respondents shared in informal discussions that young Hazaras still residing in Quetta contemplate migrating to other provinces as they do not face life threats, particularly in metropolitan cities like Lahore, Peshawar, and Karachi, where their identity becomes either blurred or irrelevant. Another important contribution of this research is to investigate job discrimination, as a large number (71.80%) mentioned that they face discrimination while applying for a job in Quetta because they are Hazaras.

The Shia Hazara community expresses strong dissatisfaction with the state's efforts to ensure their safety and security, with a significant majority of respondents (81.20%) indicating dissatisfaction with state measures. These findings resonate with reports highlighting the lack of significant action or investigations by law enforcement agencies against perpetrators. Additionally, certain elements within the security services and elected officials, who hold discriminatory attitudes and hostility toward Hazaras, have either shown indifference or, in some cases, complicity in the attacks (Minority Rights Group International, 2018; Human Rights Watch, 2014). Due to this dissatisfaction with state efforts, 55.56% of respondents reported involvement in community-led rights movements. Interestingly, females exhibit approximately 77% lower odds of participating in Hazara rights movements compared to males, likely due to their lesser exposure to activities outside the home, as discussed above. However, despite significant participation in community-based rights movements, only 40.17% of respondents perceive them as effective. Several factors may influence this perception, as noted in informal discussions and observation notes during the survey. These factors include their belief that their small population, limited financial resources, and inadequate political representation contribute to the ineffectiveness of community efforts for upliftment. Such feelings have deepened the sense of helplessness among them.

The findings of our study reveal that the serious safety challenges for the Shia-Hazara community living in Quetta have hindered their movement outside their areas for work or study. However, this situation is not merely due to their ethnicity and religious affiliation; other factors such as financial gains, internal conflicts, and limited political representation also play a role. Beyond life threats, ongoing discrimination against this community has affected their businesses and employment opportunities within the province, leading many to migrate either outside the province or abroad. Frustration with state security efforts has driven many Hazaras to join community-led movements, reflecting strong internal bonds and greater trust in local initiatives. This trust gap with law enforcement stems from the belief that the state's inaction against perpetrators makes it complicit in their marginalization.

Limitations

Despite offering valuable insights, this study has several limitations. First, the strict security measures and surveillance restricted researchers' movement and limited access to diverse participants, particularly women, the elderly, and individuals with disabilities. Second, building trust was also challenging due to the community's history of being targeted, leading to reluctance to share information and requiring time-consuming interviews that reduced the sample size. Third, limited funding constrained the sample, preventing breaks between surveys and contributing to participant and researcher fatigue, hindering researchers' ability to reach a broader spectrum of participants.

Conclusion

This study sheds light on the complex and multifaceted challenges the Shia-Hazara community faces in Quetta. While their religious and ethnic background undoubtedly exposes them to heightened security risks, the root causes extend beyond these factors, including financial motives, internal conflicts, and lack of political representation. The ongoing insecurity has a significant impact on their daily lives, hindering movement and employment opportunities and fostering a sense of marginalization. However, the research also reveals the community's resilience. The community-led movements highlight strong internal connectivity and trust in solutions developed from within. The perceived lack of state action and law enforcement agencies has eroded their trust in security arrangements, underscoring the need for demonstrably effective interventions.

Funding

Notes

[1] Alamdar Road is a major thoroughfare running through both areas. Other routes, including Quetta Bypass and local connecting roads, also link these areas. All routes connecting these two main Hazara localities are considered unsafe and life-threatening. However, the inhabitants have no choice but to commute on these dangerous roads for school, work, and to visit family, relatives, and friends.

[2] From 1958 to 1966, he served as Commander-in-Chief of the Pakistan Army (a position later renamed Chief of Army Staff) and, between 1985 and 1991, as Governor of Balochistan.

[3] One-third of attacks targeted transportation vehicles, one-third targeted workplaces, and the rest were other social places like highways, roads, streets, public and private premises. Some were attacked at local marketplaces, sports, recreation areas, places of worship, religious and cultural events, residential areas, and health care facilities (Alizada & Iltaf, 2023).

[4] For clarification, "FA" refers to completion of higher secondary education, "BA" to a Bachelor's degree, "MA" to a Master's degree, and "Matriculation" to secondary school completion.

References

Abbas, H. (2010). *Shiism and sectarian conflict in Pakistan: Identity politics, Iranian influence, and tit-for-tat violence*. Combatting Terrorism Center at West Point.

Ahmed, K. (2011). *Sectarian war: Pakistan's Sunni-Shia violence and its links to the Middle East* (1st ed.). Oxford University Press.

Ali, S. (2021). The specter of hate and intolerance: Sectarian-jihadi nexus and the persecution of Hazara Shia community in Pakistan. *Contemporary South Asia, 29*(2), 198–211. https://doi.org/10.1080/09584935.2021.1885629

Ali, S., & Baig, J. (2017). *Hazara tribe in Pakistan—Written evidence*. Tanzeem Nasle Nau Hazara Mughal. Retrieved May 10, 2024, from https://www.naslenau.org/hazara-tribe-in-pakistan

Alizada, B., & Iltaf, M. (2023). *We will make Pakistan their graveyard: Systematic attacks against Shia Hazaras of Quetta, Pakistan (1999–2022)*. Porsesh Policy Research Institute. Retrieved May 10, 2024, from https://www.porseshresearch.org/porseshv2/wp-content/uploads/2023/03/We-Will-Make-Pakistan-Their-Graveyard.pdf

Azad, M. (Ed.). (2014). *I am Hazara*. Tanzeem Nasle Nau Hazara Mughal.

Bakhsh, R., Khan, S., & Haider, S. I. (2020). Contesting sectarian identity in Pakistan: Narratives from the three cities. *Global Regional Review, 5*(1), 51–57. https://doi.org/10.31703/grr.2020(V-I).07

Creasy, J. R. (2009). *The religious identity of the Hazaras of Afghanistan and modern-day Pakistan* (Doctoral dissertation, University of Glasgow). Retrieved May 15, 2024, from http://theses.gla.ac.uk/id/eprint/1277

Dedalus, S. (2009). The bitter harvest: Sectarianism in Balochistan. *Middle East Report, 251*. Retrieved May 10, 2024, from https://merip.org/2009/06/the-bitter-harvest/

Devasher, T. (2018). Pakistan: The unabated killings of Hazaras. *Faultlines, 22*, 1–40. Retrieved May 10, 2024, from https://www.satp.org/Docs/Faultline/22.pdf

Fair, C. C. (2014). Who's killing Pakistan's Shia and why? *War on the Rocks, 20*. Retrieved May 10, 2024, from https://warontherocks.com/2014/05/whos-killing-pakistans-shia-and-why/

Human Rights Commission of Pakistan. (2019). *Balochistan: Neglected still—An HRCP fact-finding report*. Retrieved May 10, 2024, from https://hrcp-web.org/hrcpweb/balochistan-neglected-still/

Human Rights Watch. (2014). *We are the walking dead: Killings of Shia Hazaras in Balochistan, Pakistan*. Retrieved May 10, 2024, from https://www.hrw.org/report/2014/06/29/we-are-walking-dead/killings-shia-hazara-balochistan-pakistan

Ibrahimi, N. (2017). *The Hazaras and the Afghan state: Rebellion, exclusion and the struggle for recognition*. Oxford University Press.

Khan, L. A. (2021). The persecution of Hazaras. *Counterpunch*. Retrieved May 10, 2024, from https://www.counterpunch.org/2021/01/22/the-persecution-of-hazaras/

Khan, S., & Amin, N. U. (2019). Minority ethnic, race and sect relations in Pakistan: Hazara residing in Quetta. *Journal of Humanities & Social Sciences, 27*(2), 1–18. Retrieved May 10, 2024, from http://journals.uop.edu.pk/papers/Noor%20ul%20Amin.pdf

Majeed, G. (2021). Issues of Shia Hazara community of Quetta, Balochistan: An overview. *Journal of Political Studies, 28*, 77–98. Retrieved May 10, 2024, from http://www.pu.edu.pk/journals/jps/CurrentIssue.pdf

Majidyar, A. K. (2014). *The Shi'ites of Pakistan: A minority under siege*. American Enterprise Institute. http://www.jstor.org/stable/resrep03180

Minority Rights Group International. (2018). *Shi'a and Hazaras in Pakistan*. Retrieved May 20, 2024, from https://minorityrights.org/communities/shia-and-hazaras/

Monsutti, A. (2005). *War and migration: Social networks and economic strategies of the Hazaras of Afghanistan*. Routledge.

Mousavi, S. A. (2018). *The Hazaras of Afghanistan*. Routledge.

National Commission for Human Rights Pakistan. (2018). *Understanding the agonies of ethnic Hazaras*. Retrieved May 20, 2024, from https://www.nchr.gov.pk/wp-content/uploads/2023/09/Understanding-the-Agonies-of-Ethnic-Hazaras.pdf

Nawaz, R., & Hassan, N. U. (2015). Issues of Hazara community and sectarianism in Quetta (Pakistan). *IMPACT: Journal of Research in Humanities, Arts and Literature, 1*(1), 67–76. Retrieved May 20, 2024, from https://www.impactjournals.us/index.php/download/archives/1-8-1435044501-8.%20hum-Issues%20of%20Hazara%20Community%20and%20Sectarianism%20in%20Quetta%20_Pakistan_-RAB%20NAWAZ%20_1_.pdf

Olszewska, Z. (2013). Quetta's sectarian violence and the global Hazara awakening. *Middle East Report, 266*, 40–45.

Owtadolajam, M. (2006). *A sociological study of the Hazara tribe in Balochistan: An analysis of socio-cultural change*. Hazaragi Academy, Tanzeem Nasle Nau Hazara Mughal.

Poladi, H. (1989). *The Hazāras*. Mughal Publishing Company.

Qayyum, F. (2018). *Group violence and planning: State and grassroots processes, politics, & outcomes for the Hazara in Quetta* (Unpublished doctoral dissertation). University of Illinois at Urbana-Champaign. Retrieved May 20, 2024, from https://www.ideals.illinois.edu/handle/2142/101489

Rafiq, A. (2014). *Sunni Deobandi-Shia sectarian violence in Pakistan*. Middle East Institute. Retrieved May 20, 2024, from https://www.mei.edu/publications/sunni-deobandi-shia-sectarian-violence-pakistan

Siddiqi, M. U. A., & Mukhtar, M. (2015). Perceptions of violence and victimization among Hazaras in Pakistan. *The Journal of Political Science, 33*, 1–20. Retrieved May 20, 2024, from https://ps.gcu.edu.pk/wp-content/uploads/2015/02/Siddiqi-n-Mukhtar.pdf

Tanveer, M. Z. (2017). *The Shi'as of Hazara, Quetta—The challenges to security and formation of their integrated models of community-driven development* (Unpublished doctoral dissertation). Pakistan Institute of Development Economics-PIDE. Retrieved May 20, 2024, from https://file-thesis.pide.org.pk/pdf/mphil-development-studies-2014-mahum-tanveer--the-shias-of-hazara-quetta-the-challenges-to-security-and-formation-of-their-integrated-models-of-co.pdf

Tarar, A. U. (2018). Targeted killing of Hazaras. *Dawn*. Retrieved May 20, 2024, from https://www.dawn.com/news/1445093

Exploitative Leadership and Subjective Career Success: A Serial Mediation Model

Abdullah Tasleem Kamran, Omer Farooq Malik and Muhammad Arsalan Khan
COMSATS University, Islamabad, Pakistan

This research was aimed to explore the relationship between exploitative leadership and subjective career success, and to examine the serial mediating roles of constructive resistance and networking in this relationship. Leveraging Conservation of Resources (COR) theory, the research examined followers' coping strategies to safeguard resources in response to experiencing exploitative leadership. The study used the paper-and-pencil survey method to collect data from 305 employees in Pakistan's service sector. Results of partial least squares structural equation modelling (PLS-SEM) analysis indicated that exploitative leadership negatively affects subjective career success. Moreover, the results of mediation analysis employing the bootstrapping procedure confirmed the serial mediating roles of constructive resistance and networking. This study advances the leadership literature and career research by highlighting the roles of constructive resistance and networking as effective coping strategies to minimize the negative impact of exploitative leadership on subjective career success. These insights have implications for both practitioners and researchers. Organizations should promote ethical leadership, empower followers, and build resilience. Future research may examine contextual factors and multilevel leadership dynamics to deepen understanding of exploitative leadership across diverse settings .

Keywords: exploitative leadership, subjective career success, constructive resistance, networking, resource conservation.

Career success is crucial for individual well-being and organizational productivity. It is often assessed through employees' satisfaction with their career achievements (Penning et al., 2024). It encompasses both aspirations and personal growth, reflected in objective indicators (e.g., salary, promotions) and subjective evaluations (Hildred et al., 2023). With the increased emphasis on self-directed career models, such as protean and boundaryless careers, subjective career success has gained growing importance (Lochab & Nath, 2020).

Leadership mistreatment, particularly in high power-distance cultures, poses a significant threat to career success (Nawaz et al., 2020). Leaders often experience goal blockage when their objectives conflict with those of the organization or their followers (Madan et al., 2025). This conflict can lead to exploitative leadership—a prevalent form of workplace mistreatment—wherein leaders engage in self-serving behaviors that undermine followers' well-being and personal resources (Schmid et al., 2019). The power asymmetry in leader-follower relationships further exacerbates followers' vulnerability, leaving them with minimal autonomy to counteract adverse behaviors (Martinez et al., 2012; Tufail et al., 2019).

Although workplace mistreatment is often considered dyadic, the preventive role of followers remains underexplored (Vranjes & Lyubykh, 2021). Followers may adopt proactive strategies—such as constructive resistance and networking—to alleviate the effects of exploitative leadership and augment their subjective career success (Mehdipour et al., 2019). Constructive resistance, as a first line of defense, allows exploited followers to resist exploitation, while politically motivated networking provides critical support and career opportunities. These strategies may operate sequentially, with constructive resistance facilitating effective networking.

Notwithstanding the pervasiveness of exploitative leadership (Arun & Olsen, 2023), research on its impact on subjective career success and associated coping mechanisms remains scarce (Majeed et al., 2023). The deeper understanding of these follower-driven strategies is essential, as followers' personal agency to preserve subjective career success can foster a healthier workplace and enhance well-being.
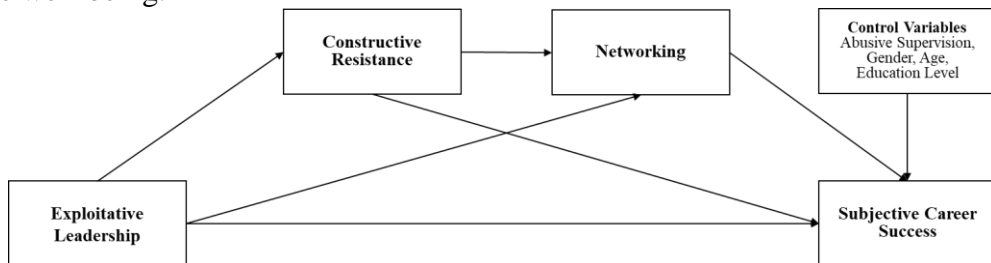
Figure 1. The serial mediation research model.

Theoretical development
Conservation of Resources (COR) Theory
Exploitative leadership depletes followers' resources, leading to stress, burnout, and psychological distress. Conservation of resource theory (COR: Hobfoll, 1989) expounds how followers endeavour to preserve and accumulate resources to maintain well-being (Mackey et al., 2021). Investing in resources is essential for both preservation and growth, particularly in dynamic career environments. However, the perceived value of resources varies depending upon individual experiences and contexts (Hobfoll et al., 2018). Evidence suggests that negative leadership has a less detrimental impact on followers who demonstrate firmness towards their leader in a productive manner aimed at improvement or are co-targeted rather than singled out (Verdorfer & Schmid, 2024).

Followers may alleviate resource loss through constructive resistance and networking, helping them preserve their perceptions of career success. Constructive resistance involves voicing concerns non-confrontationally, while networking fosters supportive relationships for career advancement (Carrer & Vinthagen, 2024; Ferris et al., 2007). Enhancing stress resilience involves modifying emotional reactions to stressors and understanding followers' characteristics that shape their appraisal, processing, and coping mechanisms in response to exploitative leadership (Bukhari et al., 2023; Pircher Verdorfer et al., 2023).

Exploitative Leadership and Subjective Career Success
The frequent reportage of "bad bosses" in media narratives reflects the "bad is stronger than good" phenomenon, which is highly relevant in leadership studies. Leaders often feel entitled to disproportionate rewards, exhibiting self-serving biases that prioritize personal gain over followers' well-being—a hallmark of exploitative leadership (Huang et al., 2023). Exploitative leadership is a premeditated, "cold-blooded" form of aggression, characterized by "genuine egoistic behaviors,

taking credit for subordinates' work, exerting pressure, undermining development and manipulating followers" (Schmid et al., 2019). Such leadership practices erode organizational commitment, diminish performance, and ultimately undermine followers' career success (Verdorfer & Schmid, 2024).

Supportive work environments promote career advancement by offering engaging tasks and developmental opportunities. Conversely, adverse conditions—such as limited promotion prospects, job insecurity, and unfair treatment—impede career growth (Rana & Cheok, 2025). Exploitation cause employees to question their career achievements, undermining their success perceptions (Vranjes & Lyubykh, 2021). While some may attribute leadership mistreatment to unintended causes, such presumptions alone are insufficient to break the resource loss spirals (Hobfoll et al., 2018). Subjective career success, that is closely associated with followers' subjective well-being, becomes particularly vulnerable under exploitative leadership as their personal and contextual resources wane. As employees struggle to retain the scarce resources necessary for career success, the ensuing stress exhausts their psychological and physical capacities, hindering their ability to navigate career challenges and obstructing career progress (Kauffeld & Spurk, 2022). From a COR perspective, exploitative leadership depletes followers' resources by limiting career opportunities, triggering emotional exhaustion, and distorting career perceptions, ultimately undermining their subjective career success.

Hypothesis 1: Exploitative leadership is negatively associated with subjective career success.

Mediating Role of Constructive Resistance

Contemporary perspectives on adverse leadership behaviors emphasize the role of followers in shaping complex leader-follower dynamics—countering negative leadership, rebalancing power, and fostering positive change (Mackey et al., 2021). Followers subjected to unfair treatment experience greater career dissatisfaction and psychological distress compared to their well-treated peers (Alajhar et al., 2024).

Leveraging the COR theory, exposure to exploitative leadership depletes followers' self-resources, prompting proactive coping strategies to mitigate further resource loss (Hobfoll et al., 2018). Followers respond to workplace exploitation through retaliation, non-hostile nonconformity, or resistance (Lyu et al., 2023). While retaliation or passive aggressive actions may be harmful to individuals and organizations, organizational resistance—particularly constructive resistance—affords a more adaptive response. Unlike dysfunctional resistance, which disrupts and undermines, constructive resistance embodies principled dissent, purposeful concern, and solution-oriented communication, allowing followers to challenge inappropriate leader behaviors while preserving relational stability (Tepper et al., 2001).

Leaders perceive constructive resistance more favourably as meaningful negotiation rather than undesirable communication potentially leading to dysfunctional conflict (Karabacak et al., 2023). Leadership behaviors typically influence follower outcomes through mediation mechanisms (Lyu et al., 2023). Given the risks associated with overt retaliation, constructive resistance serves as an active strategy enabling exploited followers to evade resource loss spirals and psychological distress without disrupting organizational workflows (May et al., 2014). Consequently, the resulting relational and career stability sustains followers' subjective career success.

Hypothesis 2: Constructive resistance mediates the relationship between exploitative leadership and subjective career success.

Mediating Role of Networking

Networking, as a facet of organizational politics, significantly influences follower outcomes. It involves cultivating relationships with individuals who can support one's professional journey. Effective networking enhances job performance and well-being by leveraging collaboration and resource management (Wanigasekara et al., 2022).

Politically skilled employees actively build and leverage network of influential colleagues and associates at work to facilitate tasks, achieve goals and access critical resources (Ferris et al., 2005). Such interactions not only enhance skills but also buffer the negative impact of exploitative leadership by offering social support and reducing stress (Wang & Luan, 2024). From a COR perspective, networking helps followers conserve cognitive resources, manage work-related stressors, and foster problem-solving, ultimately preserving subjective career success (Hobfoll et al., 2018; Kauffeld & Spurk, 2022).

Hypothesis 3: Networking mediates the relationship between exploitative leadership and subjective career success.

Sequential Mediating Roles of Constructive Resistance and Networking

The pursuit of career success under exploitative leadership hinges on followers' motivation, resilience, and sanctioned political behavior (Malik & Sillah, 2025). Career decisions and experiences are shaped by leader-follower dynamics, dispositional traits (e.g., personality), and contextual factors (e.g., time pressure) (Wang & Luan, 2024). Constructive resistance serves as the first line of defense against exploitative leadership, empowering followers to voice concerns while preserving autonomy. In turn, networking offers career-enhancing support. Constructive resistance safeguards intrinsic resources, while networking fosters peer support and leverages career opportunities. Thus, followers' constructive resistance and networking act as sequential mediators linking exploitative leadership and subjective career success.

These coping strategies align with the principles of COR theory, emphasizing resource preservation, stress mitigation, and reciprocal social support, thereby reinforcing subjective career success (Hobfoll et al., 2018). The challenges posed by exploitative leadership encourage positive coping strategies in workplace and reinforce interpersonal relationships through reciprocity (May et al., 2014). As constructive resistance promotes fairness, networking consolidates workplace resources facilitating subjective career success.

Hypothesis 4: Constructive resistance and networking sequentially mediate the relationship between exploitative leadership and subjective career success.

Method

Positivist paradigm underpins this research, employing quantitative and confirmatory approach (Alharahsheh & Pius, 2020; Habes et al., 2022) to validate hypotheses regarding leaders' exploitation and followers' utilization of constructive and networking strategies to preserve subjective career success.

Participants and procedure

A cross-sectional study was conducted using a self-reported survey in English—the principal language for higher education in Pakistan—to deduce the association between exploitative leadership and followers' subjective career success with constructive resistance and networking as mediators. The sample was drawn from four key service sector industries—healthcare, hospitality, financial services, and education—selected for their economic relevance and high levels of employee

interaction (Nasrullah et al., 2021). Participants were full-time employees with minimum two years of work experience and at least six months under their current supervisor. Convenience sampling was employed to recruit 305 volunteer participants due to restricted access to formal organizational data, given the sensitive nature of the topic.

Measures

Exploitative Leadership. It was measured using a 15-item scale introduced by Schmid et al., (2019). A sample item was "My immediate supervisor puts me under pressure to reach his or her goals." Scale anchored from 1 (not at all) to 5 (frequently, if not always). Composite reliability was 0.951.

Constructive Resistance. Followers' constructive resistance towards exploitative leadership was assessed through a 5-item scale established by Tepper et al., (2001). A sample item was "I ask my immediate supervisor for additional clarification and explanation." Scale anchored from 1 (never) to 5 (always). Composite reliability was 0.834.

Networking. It was measured using a 6-item scale from Ferris et al., (2005) as part of the political skill inventory. Sample item was "I spend a lot of time and effort at work networking with others". Scale ranged from 1 (strongly disagree) to 5 (strongly agree). Composite reliability was 0.832.

Subjective Career Success. It was assessed through a 10-item scale introduced by Pan and Zhou (2015). A sample item was "I have been continuously engaged in challenging work." Scale anchors extend from 1 (strongly disagree) to 5 (strongly agree). Composite reliability was 0.851.

Control variables. To account for potential influences on subjective career success, gender, age and education level were controlled (Ng & Feldman, 2014). Moreover, as abusive supervision is implicated having impact on employee satisfaction (Schmid et al., 2019), it had been controlled in the model, and is measured using a shortened 5-item scale adopted from Mitchell and Ambrose (2007). A sample item was "My immediate supervisor lies to me" Scale anchors encompass from 1 (strongly disagree) to 5 (strongly agree). Composite reliability was 0.885.

Common Method Variance. CMV was catered for through both procedural and statistical techniques. Ethical considerations and confidentiality were maintained to minimize evaluation apprehension and social desirability bias (Capili, 2021). A self-reported survey was administered in three waves with a four-week time lag. Followers reported exploitative leadership at Time 1, constructive resistance and networking at Time 2, and subjective career success at Time 3, to reduce CMV (Tehseen et al., 2017). Statistically, the full collinearity assessment approach (Kock, 2015) was employed using SmartPLS 4.1. Variance Inflation Factor (VIF) values ranged from 1.011 to 2.837. As all were below the threshold of 3.3, it indicated no significant threat of CMV.

Results

Descriptive Statistics and CFA. Data were analysed using PLS-SEM in SmartPLS 4.1 (Shagufta & Nazir, 2021). Data followed a normal distribution. Of the total 305 participants, 123 (40.3%) were female. Participants' age averaged at 31.67 years (SD=8.777), while mean tenures with organization and current supervisor were 7.48 years (SD=6.267) and 3.61 years (SD=3.344) respectively. Participants were well-educated; 38.1% had bachelor's degree, 45.3% held master's degree, while 16.6% had doctorate degree. *Table 1* displays means, standard deviations and inter-construct correlations. The pattern of correlations was found to be in the predicted direction; however, no

control variable was significantly associated with any of the study variables. Therefore, these "ineffective" control variables were removed from further analysis.

Table 1
Means, standard deviations and inter-construct correlations (Pearson's r).

Construct	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	1.400	0.491	-							
2. Age (Years)	31.67	8.777	0.018	-						
3. Education Level	1.800	0.710	0.003	0.053	-					
4. Exploitative Leadership	2.341	1.101	-0.117	-0.067	-0.022	**0.749**				
5. Constructive Resistance	3.010	0.961	-0.069	-0.084	-0.081	0.424**	**0.775**			
6. Networking	3.203	1.078	-0.008	-0.031	-0.030	0.328**	0.518**	**0.788**		
7. Subjective Career Success	3.737	0.842	0.034	0.051	-0.020	-0.225**	0.350**	0.629**	**0.751**	
8. Abusive Supervision	2.370	1.106	-0.071	-0.093	0.024	0.548**	0.430**	0.245**	-0.212**	**0.751**

AVE square root value on the diagonal (in bold).
** $p < 0.01$.

Confirmatory Factor Analysis (CFA) results showed that most of the factor loadings exceeded the recommended threshold of 0.70. However, two subjective career success items and one constructive resistance item with factor loadings below 0.70 were retained to preserve content validity. Each scale's Cronbach's alpha and composite reliability values were over the threshold of 0.70. AVE value for each construct was also higher than 0.50 (Hair Jr et al., 2021). Results of CFA are given in *Table 2*. All inter-construct correlation coefficients were lower than each AVE's square root (see *Table 1*) (Fornell & Larcker, 1981), and all heterotrait-monotrait (HTMT) ratios (see *Table 3*) were lower than the cut-off value of 0.85 (Hair Jr et al., 2021). The results confirm internal consistency reliability, convergent validity and discriminant validity.

Table 2
Results of confirmatory factor analysis.

Construct	Item	Factor Loading	AVE	Cronbach's Alpha	Composite Reliability
Exploitative Leadership	EL1	0.708	0.561	0.945	0.951
	EL2	0.716			
	EL3	0.708			
	EL4	0.739			
	EL5	0.770			
	EL6	0.702			
	EL7	0.792			
	EL8	0.728			
	EL9	0.789			
	EL10	0.807			
	EL11	0.752			
	EL12	0.798			
	EL13	0.752			
	EL14	0.789			
	EL15	0.759			
Constructive Resistance	CR1	0.709	0.600	0.748	0.834
	CR2	0.773			
	CR3	0.709			
	CR4	0.725			
	CR5	0.693			
Networking	NW1	0.766	0.621	0.796	0.832
	NW2	0.817			
	NW3	0.783			
	NW4	0.746			
	NW5	0.798			
	NW6	0.836			
Subjective Career Success	SCS1	0.640	0.564	0.813	0.851
	SCS2	0.749			

SCS3	0.711
SCS4	0.769
SCS5	0.756
SCS6	0.667
SCS7	0.706
SCS8	0.784
SCS9	0.703
SCS10	0.719

Table 3

HTMT criterion to establish discriminant validity.

Construct	1	2	3	4
1. Exploitative Leadership				
2. Constructive Resistance	0.522			
3. Networking	0.427	0.664		
4. Subjective Career Success	0.282	0.396	0.625	

Hypothesis Testing. Results reveal that exploitative leadership was significantly but negatively associated with subjective career success (β = -0.344 t = 8.333, p = 0.000), lending support to *H1*. Bootstrapping with 5,000 subsamples was employed to test significance of indirect effects. Results suggested that the relationship between exploitative leadership and subjective career success was mediated through constructive resistance (point estimate=0.029, 95% bias–corrected confidence interval: 0.004–0.060), and networking (point estimate = 0.059, 95% BC CI: 0.022–0.105). Since zero was not involved in the confidence intervals, it is established that indirect effects are significantly different from zero at p < 0.001, lending support to *H2* and *H3*. Similarly, results confirmed that exploitative leadership–subjective career success link is sequentially mediated through constructive resistance and networking (point estimate = 0.084, 95% BC CI: 0.057–0.121). Since indirect effects are significantly different from zero at p < 0.001, support is presumed for *H4*.

Table 4

Results of hypothesis testing

Hypothesis	Path coefficient	p-value	95% Bias-corrected confidence interval	Supported
H1: EL → SCS	-0.344	0.001	[-0.402; -0.279]	Yes
H2: EL → CR → SCS	0.029	0.000	[0.004; 0.060]	Yes
H3: EL → NW → SCS	0.059	0.000	[0.022; 0.105]	Yes
H4: EL → CR → NW → SCS	0.084	0.000	[0.057; 0.121]	Yes

EL = Exploitative Leadership; CR = Constructive Resistance; NW = Networking; SCS = Subjective Career Success.

The predictive relevance (R^2) values for endogenous constructs—constructive resistance (0.564), networking (0.426), and subjective career success (0.668)—indicate that while exploitative leadership and mediators significantly influence subjective career success, additional unmeasured factors might contribute to unexplained variance. Similarly, the effect size (f^2) value (EL→ SCS = 0.290) indicates medium effect of exploitative leadership on subjective career success. To evaluate out-of-sample predictive relevance, Stone-Geisser's Q^2 was computed using a blindfolding procedure (D=7). The Q^2 values for the endogenous constructs were 0.188 (constructive resistance), 0.125 (networking), and 0.144 (subjective career success)—all greater than zero, signifying that the model bears acceptable predictive relevance (Hair Jr et al., 2021).

Discussion

This study examines how followers navigate through negative effects of exploitative leadership on their subjective career success by adopting constructive resistance and networking strategies. Grounded in the COR theory, the findings suggest that exploitative leadership depletes followers' psychological resources, prompting followers to engage in socially sanctioned coping mechanisms. Unlike emotion-focused or avoidant approaches, which offer only temporary relief (May et al., 2014), constructive resistance and networking serve as resource-conserving mechanisms that enhance subjective career success. Consistent with previous research, followers facing destructive leadership prefer constructive tactics such as rational persuasion and sanctioned political behaviors, which are socially acceptable and mitigate stress (Malik & Sillah, 2025). When an individual reflects backward on the stress-provoking event (e.g., exploitative leadership), the experience will be primarily negative and unpleasant, whereas, when an individual reflects forward (i.e., focus on subjective career success), the experience will be significantly more positive and pleasant. The forward reflection triggers a positive outlook and a positive subjective sense, thereby leading to socially acceptable behaviors (Lerner & Tiedens, 2006). The mediation analysis confirmed that constructive resistance enables resource preservation, which are then invested in networking to replenish career-related resources, thereby augmenting subjective career success.

By identifying constructive and collaborative initiatives, this research emphasizes followers' personal agency in safeguarding career outcomes, rather than being passive subjects of exploitative leadership (Hussain et al., 2024). In hierarchical cultures, where direct confrontation is discouraged, subtle coping mechanisms become essential. These insights highlight the importance of career adaptability and political skills, particularly for employees vulnerable to exploitative leadership.

Theoretical Implications

This research advances exploitative leadership literature by addressing critical theoretical gaps and integrating its theoretical framework. While prior research has largely focused on attitudinal and behavioural outcomes, little is known about exploitative leadership's impact on followers' subjective career success (Hussain et al., 2024; Pircher Verdorfer et al., 2023). Addressing this gap, the present research indicates how constructive resistance and networking—rooted in organizational political skill—mediate the exploitative leadership–subjective career success relationship. The findings reveal that not all followers passively suffer under exploitative leadership. Instead, constructive and proactive political strategies enable followers to reframe negative leadership effects (May et al., 2014), challenging the notion that exploitative leadership is entirely detrimental (Hussain et al., 2024).

The sequential mediation model illustrates how employees engage in resource-protection and acquisition strategies to preserve intrinsic resources, underscoring COR theory's premise of dynamic resource management (Hobfoll et al., 2018) and emphasizing individual strategies that empower followers as active agents within a broader leadership-followership framework.

Practical Implications

The findings indicate the need for organizations to acknowledge the existence of exploitative leadership and implement preventive measures that promote ethical behavior and constructive resistance. The recruitment process should prioritize leaders with low selfishness and strong interpersonal skills. Leadership development programs should integrate training on ethical leadership, accountability mechanisms, power-balancing strategies, interdependence, collaborative decision making, and employee well-being initiatives. Since networking mediates exploitative

leadership–subjective career success link, organizations should facilitate networking and collaboration opportunities to help employees access resources and support.

Aligning workplace policies with regulatory frameworks (e.g., U.S. Department of Labor's Workplace Violence Program; Rosen, 2001) reinforces leadership accountability. Standardized resistance strategies, psychological support, and stress management programs can augment resilience. Moreover, transparent HR practices, fair compensation, and anti-exploitation policies foster trust and pro-organizational behavior. Empowering followers through community-based norms and resource-sharing enables constructive responses to exploitative leadership, rather than attributing exploitation solely to systemic dysfunction.

Limitations and Future Directions
Despite offering valuable insights into the deleterious effect of exploitative leadership on followers' subjective career success, this study bears certain limitations that advise future research to develop the understanding of contextual influences, and alternative explanatory mechanisms. The research is conducted among full-time employees in Pakistan's services sector—limiting its generalizability across cultures and industries. Although the research design established inter-construct relationships, future longitudinal or vignette-based experimental studies—examining leader-follower or follower-coworker dyads—could offer deeper insights.

While this research accounts for followers' characteristics in shaping responses to exploitative leadership, it overlooks situational constraints and dispositional factors such as career aspirations, access to resources, and proactive personality traits. Future research could explore how contextual factors and followers' affective states influence resource preservation strategies and perceived career barriers.

Given the multilevel nature of organizational leadership, investigating organizational climate, hierarchical structures, and team dynamics could offer a broader perspective on the effects of exploitative leadership. While constructive resistance and networking mediate exploitative leadership–subjective career success relationship, future research should examine alternative mechanisms (e.g., stress, moral disengagement) and moderators (e.g., coworker standing up behavior, resilience, justice climate).

Conclusion
Essentially, destructive leadership operates as a negative mirror of constructive leadership. Within this premise, this research contributes to leadership and followership literature by integrating perspectives on leaders' and followers' workplace behaviors and resource-centered approaches, underscoring the role of coping strategies in suppressing harm. Despite the pervasiveness of exploitative leadership and its adverse consequences (Arun & Olsen, 2023), the active role of followers remains underexplored.

By focusing on constructive resistance and networking within Pakistani service sector organizations, the findings indicate that followers' active engagement can partially offset the deleterious impact of exploitative leadership. The emerging research on exploitative leadership would offer a valuable opportunity to refine both leadership and followership theory and inform more effective organizational practices.

Ethical approval

All data were collected following the ethical principles for dealing with human subjects. There was no standard ethics or institutional committee in place at the researchers' institution when the study was conducted.

References

Abele, A. E., Hagmaier, T., & Spurk, D. (2016). Does Career Success Make You Happy? The Mediating Role of Multiple Subjective Success Evaluations. *Journal of Happiness Studies*, *17*(4), 1615–1633. https://doi.org/10.1007/s10902-015-9662-4

Alajhar, N. A., Bajaba, S., & Yaqub, M. Z. (2024). The Unseen Scars: How and When Exploitative Leadership Fuels Psychological Distress Through the Lens of Perceived Distributive Injustice and Victim Sensitivity. *Employee Responsibilities and Rights Journal*. https://doi.org/10.1007/s10672-024-09496-3

Alharahsheh, H. H., & Pius, A. (2020). A review of key paradigms: Positivism VS interpretivism. *Global Academic Journal of Humanities and Social Sciences*, *2*(3), 39–43.

Arun, S., & Olsen, W. (2023). Modern slavery and exploitative work regimes: An intersectional approach: Modern Slavery and Exploitative Work Regimes: policy implications of multiple and differential intersections. Development in Practice, 33(2), 133–144. https://doi.org/10.1080/09614524.2023.2173725

Bukhari, S. A., Muhammad Saeed Khan, & Syeda Zahida Bukhary. (2023). A Predictive Relationship between Academic Resilience and Stress of University Students. *FWU Journal of Social Sciences*, 146–157. https://doi.org/10.51709/19951272/Winter2023/11

Capili, B. (2021). Selecting the Study Participants. *The American Journal of Nursing*, *121*(1), 64.

Carrer, M., & Vinthagen, S. (2024). 'Everyday Constructive Resistance': Exploring Bottom-Up Transformative Change. *Journal of Resistance Studies*, *10*(1). https://resistance-journal.org/wp-content/uploads/2024/09/JRS-1-2024-Everyday-Constructive.-1.pdf

Ferris, G. R., Treadway, D. C., Kolodinsky, R. W., Hochwarter, W. A., Kacmar, C. J., Douglas, C., & Frink, D. D. (2005). Development and Validation of the Political Skill Inventory. *Journal of Management*, *31*(1), 126–152. https://doi.org/10.1177/0149206304271386

Ferris, G. R., Treadway, D. C., Perrewé, P. L., Brouer, R. L., Douglas, C., & Lux, S. (2007). Political skill in organizations. *Journal of Management*, *33*(3), 290–320.

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

Habes, M., Ali, S., & Paracha, S. A. (2022). *Statistical package for social sciences acceptance in quantitative research: From the technology acceptance model's perspective. Vol. 15 No. 4 (2021): Winter 2021*. https://ojs.sbbwu.edu.pk/fwu-journal/index.php/ojss/article/view/559

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., Ray, S., Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). Evaluation of reflective measurement models. *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*, 75–90.

Hildred, K., Piteira, M., Cervai, S., & Pinto, J. C. (2023). Objective and subjective career success: Individual, structural, and behavioral determinants on European hybrid workers. *Frontiers in Psychology*, *14*, 1161015. https://doi.org/10.3389/fpsyg.2023.1161015

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513.

Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of Resources in the Organizational Context: The Reality of Resources and Their Consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640

Huang, J., Li, Y., & Tang, C. (2023). Leader's desire for promotion, workplace anxiety and exploitative leadership: The moderating effect of Machiavellianism. *Career Development International*, *28*(6/7), 706–720.

Hussain, I., Hussain, S., Noor, W., & Khattak, E. D. G. (2024). Exploitative Leadership Research: A Comprehensive Overview. *Journal of Management Practices, Humanities and Social Sciences*, 8(4), 1–13.

Karabacak, H., Sığrı, Ü., & Varoğlu, A. (2023). Dysfunctional conflict: Antecedents and outcomes. In *Dark Sides of Organizational Life* (pp. 36–52). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003376972-3/dysfunctional-conflict-hakan-karabacak-%C3%BCnsal-s%C4%B1%C4%9Fr%C4%B1-ab%C3%BClkadir-varo%C4%9Flu

Kauffeld, S., & Spurk, D. (2022). Why Does Psychological Capital Foster Subjective and Objective Career Success? The Mediating Role of Career-Specific Resources. *Journal of Career Assessment*, 30(2), 285–308. https://doi.org/10.1177/10690727211040053

Kock, N. (2015). Common Method Bias in PLS-SEM: A Full Collinearity Assessment Approach. International Journal of e-Collaboration, 11(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Lerner, J. S., & Tiedens, L. Z. (2006). Portrait of the angry decision maker: How appraisal tendencies shape anger's influence on cognition. *Journal of Behavioral Decision Making*, 19(2), 115–137.

Lochab, A., & Nath, V. (2020). Proactive personality, goal orientation and meta-skills as predictors of protean and boundaryless career attitudes. *South Asian Journal of Business Studies*, 9(1), 130–143.

Lyu, Y., Wu, L.-Z., Ye, Y., Kwan, H. K., & Chen, Y. (2023). Rebellion Under Exploitation: How and When Exploitative Leadership Evokes Employees' Workplace Deviance. *Journal of Business Ethics*, 185(3), 483–498. https://doi.org/10.1007/s10551-022-05207-w

Mackey, J. D., Ellen III, B. P., McAllister, C. P., & Alexander, K. C. (2021). The dark side of leadership: A systematic literature review and meta-analysis of destructive leadership research. *Journal of Business Research*, 132, 705–718.

Madan, P., Srivastava, S., & Gupta, B. (2025). Pathways from supervisor incivility to workplace deviance: The mediating role of emotional exhaustion and supervisor-targeted aggression. *Journal of Organizational Effectiveness: People and Performance*. https://www.emerald.com/insight/content/doi/10.1108/JOEPP-07-2024-0302/full/html

Majeed, M., Fatima, T., & Irshad, M. (2023). A wolf in sheep's clothing: The perils of exploitative leadership. *European Journal of Social Psychology*, 53(6), 1216–1230. https://doi.org/10.1002/ejsp.2970

Malik, O. F., & Sillah, K. (2025). The bright and dark sides of organizational politics: A moderated mediation model of honesty-humility and anger. *Cogent Business & Management*, 12(1), 2440123.

Martinez, A. D., Kane, R. E., Ferris, G. R., & Brooks, C. D. (2012). Power in Leader–Follower Work Relationships. *Journal of Leadership & Organizational Studies*, 19(2), 142–151. https://doi.org/10.1177/1548051811433358

May, D., Wesche, J. S., Heinitz, K., & Kerschreiter, R. (2014). Coping With Destructive Leadership: Putting Forward an Integrated Theoretical Framework for the Interaction Process Between Leaders and Followers. *Zeitschrift Für Psychologie*, 222(4), 203–213. https://doi.org/10.1027/2151-2604/a000187

Mehdipour, R., Arshadi, N., & Neisi, A. (2019). Designing and testing a model of some antecedents of subjective career success. *International Journal of Psychology (IPA)*, 13(1), 78–106.

Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, 92(4), 1159.

Nasrullah, Amin, R. U., & Soomro, K. (2021). Decentralization of Education: The Affective Role of Fiscal Decentralization in Pakistani Education System(s). *FWU Journal of Social Sciences*, 15(01), Article 01. https://ojs.sbbwu.edu.pk/fwu-journal/index.php/ojss/article/view/92

Nawaz, A., Husssain, A., & Sohail, A. (2020). Impacts of power-distance on leadership-styles: A survey of administrators in Gomal University, DI Khan, Khyber Pakhtunkhwa, Pakistan. *Electronic Research Journal of Social Sciences and Humanities*, 2, 17–24.

Ng, T. W., & Feldman, D. C. (2014). Subjective career success: A meta-analytic review. *Journal of Vocational Behavior*, 85(2), 169–179.

Pan, J., & Zhou, W. (2015). How do employees construe their career success: An improved measure of subjective career success. *International Journal of Selection and Assessment*, 23(1), 45–58.

Penning, T., Forde, J., & Broussard, S. (2024). Perceptions of formal career achievements in public relations by students, professionals, and employers: Certificate, accreditation, and College of Fellows. *Public Relations Review*, *50*(3), 102458.

Pircher Verdorfer, A., Belschak, F., & Bobbio, A. (2023). Felt or Thought: Distinct Mechanisms Underlying Exploitative Leadership and Abusive Supervision. *Journal of Business Ethics*. https://doi.org/10.1007/s10551-023-05543-5

Rana, S. U. A., & Cheok, A. D. (2025). The Barriers to the Career Progression of Women Employees in Malaysian University. In *The Economics of Talent Management and Human Capital* (pp. 279–304). IGI Global. https://www.igi-global.com/chapter/the-barriers-to-the-career-progression-of-women-employees-in-malaysian-university/361288

Rosen, J. (2001). A labor perspective of workplace violence prevention: Identifying research needs. *American Journal of Preventive Medicine*, *20*(2), 161–168.

Schmid, E. A., Pircher Verdorfer, A., & Peus, C. (2019). Shedding light on leaders' self-interest: Theory and measurement of exploitative leadership. Journal of Management, 45(4), 1401–1433.

Shagufta, S., & Nazir, S. (2021). Self-Esteem and Psychopathic Traits among Undergraduate Students: A Structural Equation Modelling Approach: Not Applied. *FWU Journal of Social Sciences*, *15*(2), Article 2. https://ojs.sbbwu.edu.pk/fwu-journal/index.php/ojss/article/view/138

Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences*, *4*(2), 142–168.

Tepper, B. J., Duffy, M. K., & Shaw, J. D. (2001). Personality moderators of the relationship between abusive supervision and subordinates' resistance. *Journal of Applied Psychology*, *86*(5), 974.

Tufail, T., Sultan, Fahad, & Anum. (2019). *Examining the effect of Challenge-Hindrance stressors on Work Attitude and Behavior.* / *EBSCOhost.* https://openurl.ebsco.com/EPDB%3Agcd%3A2%3A12275746/detailv2?id=ebsco%3Agcd%3A137041504&sid=ebsco%3Aplink%3Acrawler&utm_source=chatgpt.com&link_origin=chatgpt.com

Verdorfer, A. P., & Schmid, E. (2024). At the cost of others: The concept of exploitative leadership. In *Research Handbook on Destructive Leadership* (pp. 115–131). Edward Elgar Publishing. https://www.elgaronline.com/edcollchap/book/9781035315925/book-part-9781035315925-12.xml

Vranjes, I., & Lyubykh, Z. (2021). Workplace mistreatment: A review and agenda for research. *Oxford Research Encyclopedia of Business and Management.* https://oxfordre.com/business/display/10.1093/acrefore/9780190224851.001.0001/acrefore-9780190224851-e-119

Wang, S., & Luan, K. (2024). How do employees build and maintain relationships with leaders? Development and validation of the workplace upward networking scale. *Journal of Vocational Behavior*, *150*, 103985.

Wanigasekara, S. K., Ali, M., & French, E. (2022). The link between networking behaviours and work outcomes: The role of political skills. *Journal of Organizational Effectiveness: People and Performance*, *9*(2), 253–280.

Drivers and Dynamics of Illegal Migration from Pakistan to Europe Post-2020

Zubair Hussain
University of Bari Aldo Moro, Italy

Muhammad Siraj ul Huda Khan
Prince Mohammad Bin Fahd University, Saudi Arabia

Sapna Mumtaz
Lahore Institute for Research & Analysis (LIRA), The University of Lahore, Pakistan

Tauqeer Hussain Shah
National University of Sciences and Technology (NUST), Islamabad, Pakistan

This research delved into the complex phenomenon of illegal migration from Pakistan to Europe, aiming to uncover the underlying factors that drive individuals to embark on perilous journeys in search of a brighter future. Quantitative research gathered data from 500 illegal and potential migrants, enriched with insights from NGOs, government bodies, and community leaders. The findings reveal that economic instability, political turmoil, and social challenges are the primary catalysts for illegal migration. High unemployment, rampant inflation, and limited resources create a dire living situation for many, compelling them to seek opportunities abroad. Notably, young men aged 20-35 make up the majority of illegal migrants, driven by the pursuit of better employment prospects and improved living conditions. The study concludes with targeted policy recommendations, urging policymakers to focus on job creation, poverty alleviation, economic reforms, and political stability. The research suggests that by addressing these root causes, Pakistan can mitigate the pressures of illegal migration and foster safer, legal migration pathways for its citizens .
Keywords: migration, youth migration, Illegal migration, return Migration, Covid-19 impact, socioeconomic factors, policy inventions,

Prior to 2020, migration from Pakistan to Europe was primarily driven by economic instability and political factors. However, the COVID-19 pandemic has significantly altered these patterns, with travel restrictions and economic downturns further exacerbating the push factors for migration. The post-2020 period has seen a notable shift, as the global pandemic intensified existing challenges, and many individuals resorted to irregular migration routes in search of better opportunities. Migration has remained a forbidden activity internationally and Pakistan has also been involved in this activity especially towards European countries. It has been widely known that migration is awakened by pull and push factors that include economic, political, and sometimes environment forces and more of these forces have manifested themselves in the current epoch of the decade (Saleem et al., 2022). These pressures have intensified further after the COVID-19 pandemic started affecting the world, with more people seeking to cross the borders and

---

Correspondence concerning this article should be addressed to **Zubair Hussain,** PhD Scholar, The Department of Education, Psychology, and Communication Sciences. University of Bari Aldo Moro, Italy. z.hussain1@phd.uniba.it

interrupting legal means of migration. This paper seeks to establish the root cause of this rise and in particular the post 2020 period because migration conditions and drivers changed significantly (Hussain et al., 2024). It is essential to understand these causes for formulating the acts that may help in eradicating the illegitimate migration and for enhancing the migration administration between Pakistan and Europe. The factors of non-regular migration are more massive global concerns like; political upheavals, lack of economic growth, environmental changes, and a myriad of other issues that confront the travelers during their migration process (Fatima et al., 2024). Irregular migration has prevailed since people have been compelled, due to economic and political challenges, to take a risk and seek a better living through crossing to another country (Matlin et al., 2021). In essence, after the COVID-19 pandemic, mainly; when virtually all the aspects of Pakistan coupled with vectors such as; economic, political, and social challenges have given rise to a drastic tendency in which immigrants from Pakistan are seeking better opportunities in Europe, the subject under consideration has received international and national concern. This paper aims to find out the cause of this, the process and phase of migration and how it can be prevented in the future (Hussain et al., 2025).

In the past decades, migration illegality became one of the biggest problems that the people of the world are facing; millions of people with no choice but to move and become illegals people (Sirkeci & Cohen, 2020). One of such countries with the highest rate of illegal outflow is Pakistan where social and political conditions push people into dangerous trails in their attempts to get into Europe. With the geopolitical and economic conditions transformed, the migration of illegals from Pakistan towards Europe has altered since the year 2020 due to COVID-19, violence, stagnation of political instabilities, and further deteriorated economic crises (Jan et al., 2024). This part will discuss the nature of the social setting of the illegal migration from Pakistan here and add the rationale and origins for such things as to make it part of story after 2020 (Farooq & Arif, 2023).

Illegal Migration from Pakistan
Migration has always been a norm for people of Pakistan. The people of Pakistan have migrated to other countries mainly to the Middle East and to some extent to Europe to look forward to a better future. These triggers have in the past included: economic unpredictable status, job insecurity and politically instable environment (Ramzan et al., 2021). Based on the World Health Organization report in 2022 the millions of people are suffering from poverty, lack of proper health care and no access to adequate education, one of the main reasons that entice them to think of migrating (Fatima et al., 2024). It has been assessed that at least 80% of youth in Pakistan does not have any job, which increases frustration levels and as a result they want to go to Europe because they think that living standard is better there, more job opportunities and political conditions are much better than in Pakistan. Migration of Pakistanis into Europe after 2020 and predominantly, it's an Illegal one are largely due to distinct crises such as; economic down turn, Covid 19, and Climate change. These factors have served to enhance migration, and this research aims at finding out other economic factors and the social-political context that informs migration processes (Riaz et al., 2024). This paper will therefore seek to explain why people go for the risky move and arguing that besides economic push factors, political factors and climatic related disasters are other factors that push people into becoming illegal immigrants. For the past several decades, the concept of immigration in Pakistan has been quite clichéd with Pakistan as the source country leading to a number of different destinations such as the Middle East and Europe (Yousef, 2013). Due to variables like joblessness, destitution, and political insecurity, many have decided to move for a more pleasant life outside their nation (Feixas Vihé, 2009). A recent report (World Health Organization, 2022) has reflected an increase in the number of Pakistanis applying for asylum in

Europe, which indicates a disturbing trend and requires immediate action from policymakers and other concerned authorities.

The migration landscape saw changes after the COVID-19 pandemic began in 2020. In response to these restrictions, the normal channels for migration were disrupted, and some were forced to migrate along illegal routes in search of safety and normality (Desmond, 2023). The economic recession triggered by the pandemic exacerbated existing vulnerabilities and reinforced push factors for irregular migration. The rising illegal migration from Pakistan in the face of the country's socioeconomic needs has already led to scrutiny of the reasons and opportunities provided from 2023 onwards to make this article the subject of interest (Ali et al., 2022).

Table 1
Percentage of Pakistan Immigrants who were found to have entered Europe illegally, 2013 – 2022

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Belgium	341	361	361	390	390	221	191	100	90	90
Germany	3081	2980	11720	8931	3610	2810	2910	2231	1910	2740
Ireland	140	100	310	630	1120	565	310	71	110	110
Greece	4150	3121	27260	134660	9280	10145	10330	7110	6310	6041
Spain	2080	1935	1555	1185	815	770	1030	891	815	40
France	1600	2370	4210	2815	4000	3010	3815	2421	2810	2310
Italy	520	330	610	615	525	715	1100	740	2530	4490
Cyprus	391	221	200	181	160	490	970	410	901	2160
Austria	2310	880	3145	4010	2810	900	690	491	1350	7255
Poland	71	70	100	80	100	110	61	50	40	110
Portugal	110	115	241	261	160	95	81	41	50	40
Romania	61	11	40	120	150	40	40	81	125	NA
Slovakia	15	5	31	21	10	15	10	15	81	50
Sweden	125	341	5	30	5	10	15	15	5	5
Hungary	3760	421	22691	1891	4400	1035	310	231	1510	7900
United Kingdom	8240	9790	8210	6115	1141	2891	1865	NA	NA	NA
Others	621	771	1470	2115	860	1320	3271	5280	4461	7061
Total	27,640	24,290	82215	46910	33,880	25190	27055	20255	23150	40,410

The above table shows that information on approximate numbers of disturbed migration remains one of the most hidden aspects of global migration statistics. However, as already stated, Europe has made a marked improvement in the collection and provision of information on the said irregular migrants, most of whom are from Pakistan. Although the number has reduced, there are some variations throughout 2013 to 2022 in terms of irregular Pakistani migrants in Europe. The best statistic was reached in 2015, at about 82,000 people, and the lowest, a little over 20 thousand, in 2020 due to the impact of COVID-19. After an agreement, there was an increase in the numbers with 40,450 irregular Pakistani migrants in Europe by 2022. Currently, irregular Pakistani migrants are dispersed across the European countries patchily. Among all the countries in 2022, Hungary was the most affected, with 7,900 irregular Pakistanis being hosted there, followed by Austria with 7,255, and then Greece, which hosted 6,045. Sweden and Slovakia, among the top EU member states of residence for irregular Pakistani migrants, claimed less than a hundred irregular migrants from Pakistan. These variations show how migration and enforcement of the system differ from one country to another in the continent (Frontex, 2022).

Factors Driving Illegal Migration

The economy has been rife with hyperinflation, high unemployment, and stagnant wages. According to the World Health Organization (2021), a considerable proportion of the population lives under the poverty line, and many households are economically vulnerable. Economic incentives are one of the primary reasons for the illegal exodus of people, particularly youth, to foreign countries (Rasool et al., 2021). During current political instability, illegal migration is regarded as an escape by several Pakistanis. Politics has been marred by corruption, governance-related issues, and instability over the decades. People migrate because of extremism and sectarian bloodshed that leads to insecurity (Muhammed, 2023). Political instability is a significant reason for out-migration from Pakistan to Europe, as per surveys of potential migrants. Family and friends who have moved often lead the way. According to Hamel (2009), social ties render illegal website migration less daunting through better access to information, tools, and information and protection networks.

Climate change is a serious matter that impacts Pakistani migratory routes more than ever. The country is constantly threatened by natural disasters like floods, droughts, and earthquakes, which endanger people and food security (Hussain et al., 2023). Climate change is putting pressure on rural areas, leading to internal displacements. For others, illegal migration is seen as a last resort against environmental degradation and a pathway to sustainable livelihood resources. The complexity of illegal migration means that policy measures must be carefully designed to reduce its drivers (Bacon, 2008). Truly preventing illegal migration and addressing its causes would require innovative and broader migration policies to be productively in place, which governments at home—both in Pakistan and Europe—should focus on. Job creation, democratic reforms, and support for climate-resilient livelihoods in vulnerable communities can reduce the conditions that lead to illegal migration.

Illegal migration from Pakistan towards Europe is not only a process but a phenomenon (Majaw, 2020). Multiple factors, such as economic, political, social, and environmental, push and pull. However, a thorough policy approach alongside international cooperation is needed to address the underlying motives. This insight allows relevant stakeholders to build a better future for migrants looking for a better life without sacrificing human rights and dignity (Kerwin, 2020).

Figure 1

Annual Inflow of Pakistan Nationals by Border Type, Cross-Border Migration, and Refugee Statistics; 2009 – 2023
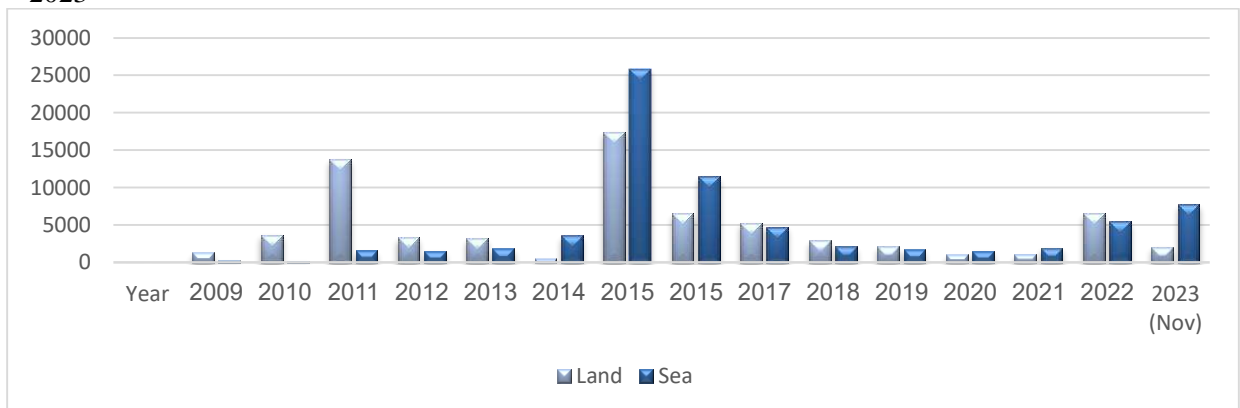
The above figure shows that the number of Pakistani individuals detected irregularly transiting from 2009 to 2023 shifted predominantly to the sea, mainly in 2015, amid the EU

migration crisis. COVID-19 reduced the number in 2020, but flows started to grow in the post-pandemic period. Sea migration prevailed in 2023, 7750 against 2052 by land (Frontex 2022).

There is an urgent issue, and we need more research, especially quantitative research, which provides empirical evidence to help with policy. Future research targeting the nexus of different drivers of illegal migration, migrant experiences during their journey, and the effectiveness of current policies to reduce illegal migration would be fruitful areas of inquiry. The data and assessment elucidated in this introduction lay out a basis for understanding what drives this illegal migration from Pakistan to Europe and what this means for policymakers.

Theoretical Framework

This study employs the push-pull theory of migration to elucidate the dynamics of illegal migration from Pakistan to Europe. Push factors—such as escalating unemployment, inflation, political turmoil, and environmental degradation—create adverse conditions compelling individuals to leave. Conversely, pull factors include perceived opportunities for better livelihoods, education, and safety in Europe. Importantly, this framework is adapted here to highlight how these forces specifically manifest illegal migration routes and decisions, recognizing that legal barriers and restrictions often channel migrants into clandestine pathways.

Research Objectives:

This study aims to:
1. Identify significant determinants of illegal migration from Pakistan to Europe following the Seasonal Migration patterns post-2020.
2. Examine the demographic composition of the illegal migrant population.
3. Investigate the specific routes and processes involved in illegal migration from Pakistan to Europe post-2020, focusing on clandestine pathways and methods used by migrants.

Research Question:

The principal research question guiding this study is:
- What are the significant causes behind the marked increase in illegal migration from Pakistan to Europe following the seasonal migration period of 2020, and what policy measures can effectively mitigate this phenomenon?

Significance of the Study

Understanding what drives illegal migration is the key to initiating effective policies and interventions that may stop this complex problem. The reasons for illegal migration are varied: socioeconomic conditions, political instability, environmental challenges, and social dynamics all contribute. Considering these motivations against the backdrop of the Pakistani context allows us to zoom in on a set of unique challenges and demographic patterns present in the country. By investigating the motivations behind illegal migration from Pakistan to Europe, this study expands on the broader literature on migration while filling one of the few remaining gaps about recent trends and dynamics in illegal practices. Although migration from Pakistan has historically been focused upon in past literature, there has been little attention paid of late to the implications that events like the COVID-19 pandemic held on the citizenry of Pakistan as the global migration landscape changed and citizens went through life-altering experiences in their home countries. While illegal migration from Pakistan to Europe has witnessed a dramatic upturn in recent years, posing the question of why people would take such an extreme risk to leave Pakistan, it is essential to classify the multidimensional motives at play when individuals decide to leave their country. Political realities Economic upheaval, usually signified by high unemployment and inflation, is one

of the main motives. Most of these aspiring migrants are young, and their motivation is to have better job opportunities, education, and living standards, which are hard to come by in Pakistan these days.

In addition, Pakistan's political environment, which includes corruption, mismanagement, and intermittent violence, creates a feeling of uncertainty. The resulting disorder will motivate others, particularly from political peripheries or asylums, to use unauthorized migration as an outlet. These motivations and environmental challenges pertaining to climate and disasters create a nexus that needs complex policy solutions since one answer will not meet all (Saleem et al., 2022).

Favoring nuance is essential — it helps push the academic conversation forward and may be relevant for policymakers. This underlines the importance of addressing the root causes of irregular migration and punitive measures at the border. Policymakers should cooperate with community leaders, civil society, and intergovernmental organizations to implement safe and legal migration pathways that reduce volatility by addressing push factors driving people from their homes out of desperation. This will address the root causes of irregular migration and create a more human rights-based discourse on migration.

Literature Review
Background of Migration Patterns in Pakistan

Pakistan has had several waves of migration, voluntary and forced, with different motivations, since its independence in 1947. These changes at the global level, economic policies, and conditions in the origin countries have all led to a transformation in the motives of migration from a permanent move characterizing labor migration of yore to a temporary one (Saleem et al., 2022). These serve as the yardstick measure for addressing the migration challenge and becoming even more significant in the current situation. With much more intensity, Pakistan also has been witnessing a rising trend of irregular migration in the past few years to most Europeans lands. Migration from Pakistan to Europe has witnessed a lot of changes over the recent years (Hussain et al., 2025). In the past, the motive of the migration was basically pulled by the demand of human labor in the gulf countries. But after the 1990s, migration to Europe reported raise, people migrate there for quality life, study purpose, and asylum due to political crisis in Pakistan. However, irregular migration after 2020 is a complete deviation of these patterns, and it is crucial to understand why this section has raised much concern in the current society. These challenges include push factors such as economic crisis induced by the pandemic and political instability of the country due to the revolving-door governments. This paper also brings out the fact that, migration is no longer only an economic concern but has developed into a social or political concern (Hussain et al., 2024).

Therefore, over the last few years and up to 2021, and thousands of people are attempting to reach Europe through risky routes while the number of irregular migration from Pakistan has been reported to have risen, as noted by Shah et al., (2020). First of all, irregular migration can be described as migration outside the country of origin, a transit country, and the destination country legally (Shah, 2020). Some aspires that can be attributed to them are poverty, unemployment, civil education, as well as the search for better living standards. The studies of the wave of migration that is present at the moment are considering that it is closely connected to the issues of global injustice in the socioeconomic sphere, political conflicts, climate change and social factors (Mogiani, Qaisrani & Reis, 2024).

Socioeconomic Factors

Continuation of poverty and unemployment is the last major factor of migration from Pakistan. Memon (2023) noted that the level of poverty in Pakistan as estimated by the poverty line is 23% of the whole populace. A labor market relying on agriculture and informal employment needs to create more jobs for the country's fast-growing population. The youth, who form the majority of this segment, have been the worst hit and feel highly disillusioned about their future. Various studies have pointed out that the desire for better living standards and educational opportunities for themselves and their families attracts people to migrate for economic reasons (Nazeer, Tabassum, & Nasir, 2022).

In addition, such inequalities within a country compound the issue. Rural areas experience greater economic pains than urban centers, causing inward migration and more significant incentives to seek a ticket to the outside world. As has been documented in the past, families have resorted to labour migration strategies to cope with the plight of economic disadvantage, and this has not changed as families seek to earn better wages in foreign labour markets (Bartram, 2005).

Political Instability

Another factor adding to the migration story in Pakistan is political instability. It is the feeling that in a country that has seen several decades of political turmoil characterized by military regimes, governmental corruption, and civil unrest, so pointed out by Kurlantzick (2013), political instability gives birth to the phenomenon where the citizens believe undermined when not granted the rights and freedoms. Politics can shape the way people think about safety and security, and for people who are persecuted or discriminated against, emigration may seem the only feasible way out. In addition, the political narrative frequently connects to sectarian violence, ethnic tension, and governance issues, all of which create an atmosphere full of ambiguity and fear (Alkaabi, 2024).

This provides the bedrock of instability, directly affecting the country's people-centered development. High unemployment, along with poor education and healthcare facilities, causes deep-rooted unhappiness in parts of the population (Jandl, 2004). As a result, this discontent is frequently reflected as a strong desire to migrate, especially to the West, which is perceived as a region that provides more benefits and a better living space (Donato & Massey, 2016).

Method

According to the study's objectives, data was gathered from a sample of 500 migration and immigrant respondent populace of the Pakistani diaspora in Europe and intending Pakistanis to migrate and live in Europe. The survey sought to determine various aspects of migration, such as the factors of migration pushes and pulls, socioeconomic status, demographics, and migration histories. Closed-ended and scaled questions were used in the structured questionnaire to eliminate discrepancies in the responses received.

While the study employed purposive, convenience, and snowball sampling via NGOs and migrant networks to recruit participants, this approach may limit the generalizability of findings. The sample may overrepresent migrants connected to formal organizations and underrepresent more isolated or marginalized individuals. Self-reported data are subject to social desirability and recall biases, particularly given the sensitive nature of illegal migration intentions. Future studies should consider probability sampling and longitudinal designs to more comprehensively capture migration dynamics.

Ethical Considerations

Given the sensitivity surrounding illegal migration, strict ethical protocols were followed. Participants provided informed consent and were assured confidentiality and anonymity. Data collection methods prioritized participant safety, avoiding any questions that might expose respondents to legal or social risks. All data were anonymized and securely stored, accessible only to the research team for analysis purposes.

Sampling and Data Collection

The targeted participants were purposively recruited through convenience and snowball sampling, with the help of local NGOs and networks of Pakistani migrant managers in Europe. These organizations played a vital role in establishing the suitable respondents who should be included. Following approval from the relevant ethical committee, oral and written consent was sought from the participants before the surveys were administered. The surveys were administered online when respondents were available and reachable online; otherwise, face-to-face surveys were conducted.

Data Analysis

The results of the surveys were analyzed via the Statistical Package for the Social Sciences (SPSS). To summarize the demographic data and migration-related factors, means score and frequency were given for different variables in the study sample. Further statistical analysis included:

• **Pearson's Correlation Analysis:** Although tables and graphs can show the total characteristics of key variables, such as socioeconomic status and migration intentions, they cannot reveal associations between all key variables.

• **Regression Analysis**: To distinguish predominant motives for migration and to single out socioeconomic characteristics, political situation, and other factors.

Results and Discussion

Figure 1
Demographic Characteristics of Respondents
**Age Distribution**
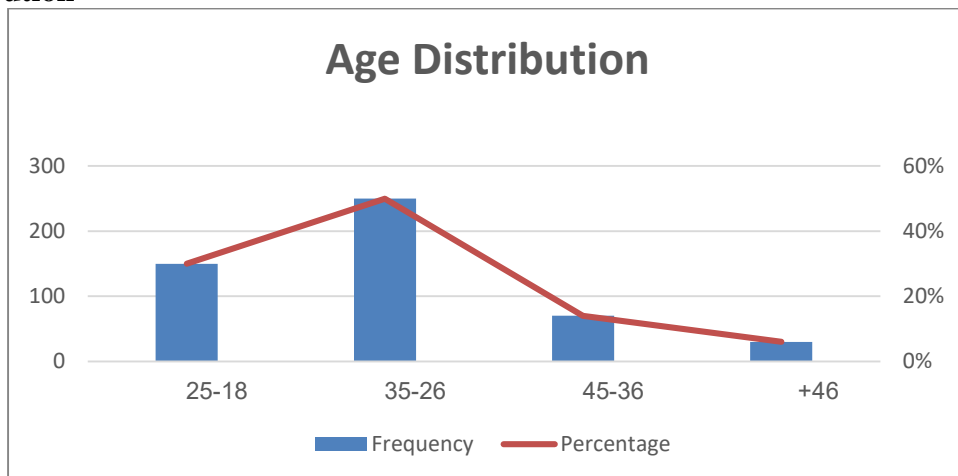
The strong presence of respondents aged between 18 and 40 reflects one of the primary trends of illegal migration from Pakistan to Europe that commenced after 2020. The data shows that most people are 26-35, which counts as 50%, which is 250 respondents of the total population. The demographic profile shows that young adults are more likely to engage in migration activities, often

driven by the quest for better employment, education, and living standards, at least for some time outside the country. The same age group is also more flexible and open-minded to all the unseen promises of migration that come with ambitions of better financial security and self-improvement. On the other hand, 18-25-year-olds comprise 30% (150 respondents) of the survey respondents, representing another critical group of the migrant population. These people are usually scholars or young workers willing to find prospects in Europe. Their underlying reasons could be escaping the local socioeconomic challenges or a strong inclination towards an academic and vocational opportunity that is hard to find in their home country.

Age cohorts 36-45 and 46+ are smaller segments of the total sample at 14 (70 respondents) and 6 (30 respondents) percent, respectively. The lower representation is associated with a lower propensity of older adults to migrate clandestinely, mainly because they have often already established their family and social lives and/or do not wish to take the risks involved in clandestine migration. In general, the age breakdown points towards a clear tendency for young people to want to leave their country, so policies should be directed toward the reasons and desires of that age group.

Gender Distribution
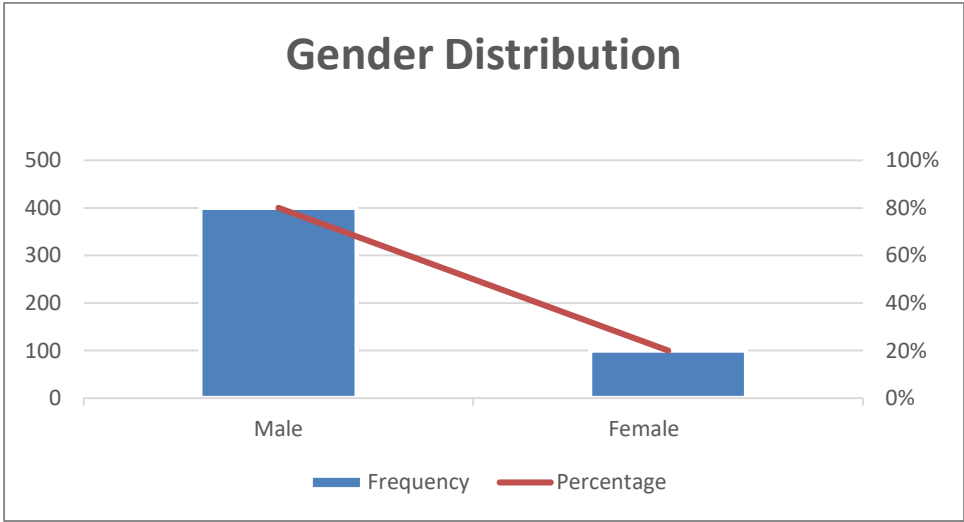
The gender breakdown of the respondents illuminates the demographic shifts in respect of illegal migration from Pakistan to Europe post-2020. The data shows a significant gender divide, with males making up 80% (400 respondents) of the sample and females only 20% (100 respondents). This monumental disparity reveals some of the most vital driving forces of migrators from Pakistan. The high number of male respondents may also be due to deep-rooted social norms and gender roles in the region, where men are expected to be the primary caretakers of their families and the biggest breadwinners. This implies that many young Pakistani men must migrate to prove they can provide their families with good opportunities. Higher wages and improved standards of living abroad pull men to migrate more strongly, as such opportunities may be lacking within Pakistan.

The gender disparity, with males constituting 80% of respondents and females 20%, reflects deeply entrenched cultural norms and societal restrictions on female mobility in Pakistan. Survey responses and prior studies indicate that women often face greater barriers due to safety concerns, social expectations, and limited economic opportunities, which reduce their likelihood to engage in

illegal migration. For instance, respondents highlighted family opposition and fear of exploitation as significant deterrents for female migration. However, the gradual increase in female participation suggests changing attitudes, possibly linked to rising education levels and economic needs among women. These findings align with existing literature documenting how patriarchal structures shape migration decisions in South Asia (e.g., Memon, 2023).

Push and Pull Factors of Migration

This paper identifies the push factors that emanate from Pakistan and pull factors that influence the individuals to travel in the search of better opportunities. This shows that economic hardship is the major push factor that triggered the migration of Rwandese refugees to Uganda and other countries. For most Pakistani youth, such risk includes leaving the country in an unlawful manner because the desire of being financially secure is more important. Self-created factors, including corruption and poor governance, are also influential since people in advanced countries seek countries with good governance systems (Hussain et al., 2025). The pull factors are the better wages offered to continue in European countries as a way of providing a better standard of living for the people. The increasing number of migrants who have successfully settled in Europe also acts as a social network encouraging others to follow suit despite the risks of an illegal journey. Family and community networks are crucial here, as these groups often facilitate migration by providing financial and logistical support. Survey data pointed to economic drivers as the main impetus for illegal migration. Seventy percent of respondents quoted economic hardship as their chief motive for moving. This highlights the political instability concerns, which 60% of respondents referred to many others pointed out that they cannot come to live in Pakistan due to the lack of safety and governance. The situation was even worse in rural parts of the country, which have come under severe pressure from climate crises, as 35% of the respondents report environmental challenges.

Statistical Analysis
Correlation Analysis

Figure 1ase Correlational analysis of economic hardship, political instability, and illegal migration intentions:
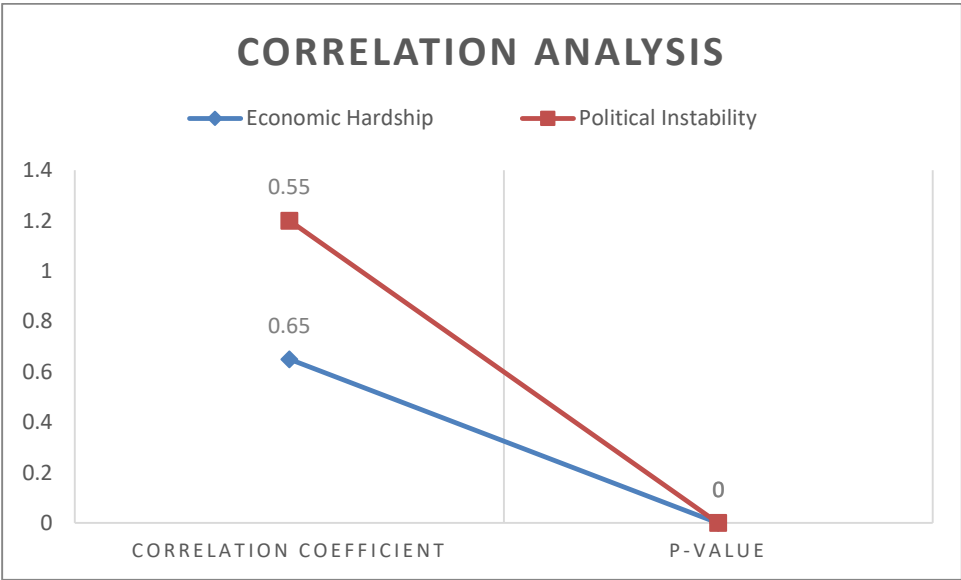
Correlation Analysis

Figure 1 Correlation analysis is $p < 0.05$ $p < 0.01$. The correlation coefficient for economic hardship is 0.65, which implies a positive linear correlation between illegal migration intentions and

economic hardship Φ. This result suggests that at the peak of the economic crisis—signalled by high unemployment rates, inflation, and decreased access to resources—individuals are more willing to think about illegal migration as an alternative way out and higher opportunities abroad. The p-value of <0.001 adds credence that this correlation is statistically significant, demonstrating that economic challenges in the country should be a greater focus as polled by citizens. Political instability has a moderate correlation coefficient of 0.55, indicating a possible positive association with illegal migration aspirations. With increasing political instability, governance problems, and civil discord comes the search for peaceful, better living conditions in a foreign land. Once again, the p-value of <0.001 highlights the statistical significance of this relationship, suggesting that nefarious political climates provide drivers for migration as people seek stability in their lives.

The correlational results highlight the importance of both the economic and political contexts in migration and suggest that policymakers must first enshrine successful social reform followed by stable regimes to reduce illegal migration.

Regression Analysis

Then, a regression analysis was performed to study the predictors of illegal migration intentions in more depth. The analysis found strong predictive power of both economic distress and political unrest on illegal migration intention, where the model accounted for 72% of the variance ($R^2 = 0.72$). Such a high R-squared indicates a high degree of explanatory power (meaning that many relevant variables are included. So, we can interpret these variables as being, to some extent, essential in explaining the motivating factors of migration. Lastly, the regression analysis results are consistent with the correlation analysis results, suggesting that bad economic conditions and high political instability are key drivers for individuals to choose an irregular migration pathway. Such a model can provide outlines for targeted interventions since tackling economic challenges like job creation and improving living conditions with stabilizing political systems can lessen the drivers toward irregular migration.

Thus, the statistical analyses support the notion that economic hardship and political instability are strong drivers of illegal migration from Pakistan to Europe. The findings of these analyses underscore the need for comprehensive approaches that tackle the drivers of migration, allowing for solutions that contribute to reducing the number of people embarking on irregular migration journeys.

Factors	Regression Coefficient (β)	Variance Explained by the Model (R^2)	Implications
Economic Distress	Strong Predictor	0.72	A key driver of illegal migration intentions indicates the need for job creation and better living conditions.
Political Unrest	Strong Predictor	0.72	A key driver of illegal migration intentions indicates the need for political stability and governance reforms.

Findings
Interpretation of Findings

The findings of this study align with similar research, such as Memon (2023), which identifies economic deprivation as a key driver for irregular migration. However, while Memon's study focuses primarily on poverty-driven migration in rural areas, this research highlights the role of urban youth and their increasing migration aspirations in the wake of COVID-19 and political instability This study concludes that economic and political factors are the most critical drivers of illegal migration from Pakistan to Europe after 2020. The precise relationship between economic hardships stated by varying levels of unemployment, inflation, and economic opportunities—matches the literature that has shown that extreme conditions compel people to emigrate in search

of better places. Political instability, defined by governance challenges and civil strife, also factors into the migration equation; however, in broader sample economies, it is associated with a significant increase in net emigration. These findings underscore an apparent necessity for Pakistan to resolve economic and political challenges to curb illegal migration. The need is more acute as people want to protect themselves and their families, while Pakistan, as a country, faces social and economic fallout.

Cultural constraints and gender roles heavily influence female migration patterns. Many women remain within the domestic sphere due to societal expectations, limited access to resources, and concerns over security risks during irregular migration journeys. Our survey data, supplemented by interviews with NGO representatives, revealed that female migrants often rely on family networks for support but face higher risks of trafficking and exploitation. These realities necessitate gender-sensitive migration policies that address protection, empowerment, and inclusion of women in legal migration pathways.

One significant finding is the underrepresentation of female migrants in the data, which can be attributed to a variety of factors, including cultural norms that limit women's mobility and safety concerns along irregular migration routes. In many rural areas, women are often expected to remain within the domestic sphere, which significantly reduces their opportunities to migrate, particularly through illegal channels.

The study validates many fears about their future livelihoods being stable considering such acute challenges. In addition, these analytical perspectives can be essential for the stakeholders (policymakers and international organizations to comprehend what drives migration. This invites a reconsideration of existing tactics that neglect the interconnectedness of economics and politics. Bringing attention to the interconnectedness of these factors enables tailored initiatives focusing on the underlying drivers of migration rather than a symptom of it.

Policy Implications

In light of the findings, several key policy implications arise:

- **Job Creation:** The government must prioritize job creation, particularly in high-growth sectors such as technology, renewable energy, and vocational training programs, to help reduce the economic push factors. This can be achieved by attracting foreign investments and fostering a conducive environment for entrepreneurship.
- **Governance Reform:** This paper affirms that political instability is one of the leading factors leading to the occurrence of immigration. To counter this, the government should improve political accountability, reduce corrupt practices and strengthen institutions of democracy in the country. If the political system were to improve its performance of good governance, people's confidence in the political process will be enhanced hence reducing the chances of emigration in the political system.
- **Environmental Adaptation:** Due to the intensification of global warming, the government of Pakistan needs to address challenges of migration by investing on resilient structures and providing safety measures to rural areas which are vulnerable to natural disasters. These are the amplification of adequate disaster preparedness, protection of the environment and support of sustainable agriculture, and the enhancement of the quality of life of at-risk groups.

These recommendations indicate that there is need for a package effort in the fight against the drivers of the illegality in migration. Proposed approaches should steered away from mere policing approaches and seek the development of legal opportunities in Pakistan, ease in legal migration channels deemed safer than the risky ones which such individuals adopts. Last but not the least, addressing the environmental issues must also be considered because Pakistan is already experiencing the impacts of Climate Change factor to some extent at present. Sustainable Living Communities that are disaster-ready and environmentally friendly ensure that people can cope and do not need to leave their homes to look for a better tomorrow. This tomorrow should be available to everyone who can thrive in their land without the challenges and hurdles facing their progress. Together, these policy recommendations could provide a more stable economic and social backdrop that reduces the push factors for irregular migration and supports a more resilient society.

Limitations

However, neither can be considered the final word in a fascinating and complex study area. One of the main areas for improvement is its self-reported data, which is limited to self-reported data and susceptible to biases. Social desirability or fear of backlash may lead respondents to exaggerate or minimize intentions and motivations. Such omission creates a bias in the findings, for factors that inhibit someone from wanting to go through with illegal migration lie at the family, kin, and societal levels and are unlikely to be fully revealed by the respondents themselves. Further, there are potential sampling biases since participants were recruited from networks and communities that may only partially indicate the rest of the population experiencing migration pressures. This means that some demographic profiles may be more represented, which affects results. In other words, individuals from relative power and privilege may have little motivation to compromise, whereas others who live in oppressive circumstances might. Research should use more complex sampling techniques, longitudinal studies to assess change, and a broader range of respondents to generalize findings. This will help us correctly perceive the multidimensional complexity of illegal migration and assess mental health effects and cultural impacts, as other variables are also at play.

Conclusion

In conclusion, this study highlights the complex drivers of illegal migration from Pakistan to Europe post-2020, emphasizing economic hardship and political instability as key push factors. The demographic analysis underscores that young males are the predominant group undertaking risky irregular journeys, while cultural and societal barriers limit female participation. Addressing illegal migration requires multifaceted policies that promote job creation, political reform, and climate resilience within Pakistan, alongside expanded legal migration channels to reduce the reliance on dangerous and clandestine routes. Future research should deepen understanding of migrant experiences on illegal pathways to inform more effective, rights-based interventions. By addressing the suggestions on theoretical framework, ethical considerations, gender dynamics, and comparative analysis with similar studies, the research will better contribute to the academic discourse on migration and offer practical policy recommendations for addressing this pressing global issue. It can be stated that the problem of immigration from Pakistan is a social, economic and political issue related to the putrefied picture of the contemporary society of Pakistan where it continues to struggle for economic development and political stability along with numerous environmental issues. The demand for a better life, especially among the youth, results from high unemployment, inflation, and underemployment, making many people search for a better life through a barely legal means: migration. To overcome this problem efficiently, the government of Pakistan must invest its efforts in enhancing domestic employment opportunities and introduce

effective vocational training programs so that the attraction of the cross-border unauthorized migrants could be substituted effectively. Political instability, which influences corruption and poor governance, also worsens the situation.

People and foreign investors are hesitant to invest because they do not have confidence in the political systems that exist in the country. To consolidate the political system, an increase of its openness, responsibility to the population, and receptivity to citizens' demands are required. This not only brings stability but also brings hope that there is a legal way of migrating that will be easier to follow than going for the illegitimate one. However, climate change makes the economic and political predicaments affecting Pakistanis worse. Since agriculture is the leading sub-sector in the economy, unpredictable weather patterns, food insecurity and scarcity of resources exert more pressure on communities to make migration the only option for their survival. These issues call for a combination of approaches to migration that will embrace environmental sustainability and coping mechanisms responding to migration.

Pakistan can address the needs of vulnerable people for sustainable development and disaster management, as well as reduce pressures that lead to extraordinary migration. In conclusion, it is important to suggest that the global approach that would encourage the perspective of migration and introduce the changes in economic and political situation and also emphasize the perspectives of environmental developments would help reduce the practice of illegal migration.

References

Ali, I., Anwar, M. F., & Hussain, Z. (2022). Mapping Terrorism and Policy: Reshaping US Foreign Policy towards War on Terror 2001-2010. *Pakistan Languages and Humanities Review*, *6*(4), 89-101.

Alkaabi, N. M. (2024). *Socio-political aspects in framing narratives of conflict* (Doctoral dissertation, University of Leicester).

Bacon, D. (2008). *Illegal people: How globalization creates migration and criminalizes immigrants*. Beacon Press.

Bartram, D. (2005). International labor migration. *Foreign Workers and Public Policy*.

Desmond, A. (2023). From migration crisis to migrants' rights crisis: The centrality of sovereignty in the EU approach to the protection of migrants' rights. *Leiden Journal of International Law*, *36*(2), 313-334.

Donato, K. M., & Massey, D. S. (2016). Twenty-first-century globalization and illegal migration. *The ANNALS of the American Academy of Political and Social Science*, *666*(1), 7-26.

Farooq, S., & Arif, G. M. (2023). The facts of return migration in the wake of COVID-19: a policy framework for reintegration of Pakistani workers. *Journal of Ethnic and Migration Studies*, *49*(20), 5190-5218.

Fatima, N., Afzaal, H. M., & Zubair Hussain, D. M. K. M. S. (2024). LANGUAGE AND EMOTION: A STUDY OF EMOTIONAL EXPRESSION IN MULTILINGUALS. *Journal of Applied Linguistics and TESOL (JALT)*, *7*(4), 932-946.

Feixas Vihé, M. (2009). *Migration Movements between Pakistan and South Western Europe: Pakistani migratory networks in Catalonia*. Universitat Autònoma de Barcelona.

Frontex (2022). Risk Analysis for 2022/2023. Retrieved from https://www.frontex.europa.eu/mediacentre/news/news-release/frontex-releases-its-risk-analysis-for-2022-2023-w4AWSD

Hamel, J. Y. (2009). Information and communication technologies and migration.

Hussain, M. A., Shuai, Z., Moawwez, M. A., Umar, T., Iqbal, M. R., Kamran, M., & Muneer, M. (2023). A review of spatial variations of multiple natural hazards and risk management strategies in Pakistan. *Water*, *15*(3), 407.

Hussain, Z., Naz, N., Zulfiqar, N., Tahir, M. I., & Yousaf, M. (2025). The role of sustainable migration in Pakistan's socioeconomic development: A comprehensive analysis of patterns, impacts and policy frameworks. *Journal of Media Horizons, 6(1), 122-138.*

Hussain, Z., Zulfiqar, N., & Cazzato, L. (2024). Rebuilding Lives: Reintegration of Returnee Migrants in Sahiwal, Pakistan. *Journal of Asian Development* Studies, *13*(4), 1-15.

Hussain, Z., Zulfiqar, Z., & Assi, A. J. (2024). Quantitative Analysis of Causative Factors of Crime: A Case Study of District Sahiwal (Pakistan). *Journal of Asian Development Studies*, *13*(3), 192-201.

Jan, S. A. K., Ali, A., Khan, A., Ullah, N., Hussain, Z., & Lodhi, K. (2024). Examining the Sociolinguistics Factors Influencing Language Shift and Language Maintenance among Immigrant Communities in English-Speaking Countries. *Remittances Review*, *9*(2), 2354-2370.

Jandl, M. (2004). The estimation of illegal migration in Europe. *Studi Emigrazione*, 141-156.

Kerwin, D. (2020). International migration and work: charting an ethical approach to the future. *Journal on Migration and Human Security*, *8*(2), 111-133.

Kurlantzick, J. (2013). *Democracy in retreat: The revolt of the middle class and the worldwide decline of representative government*. Yale University Press.

Majaw, B. (2020). *Climate Change in South Asia: Politics, Policies and the SAARC*. Routledge India.

Matlin, S. A., Karadag, O., Brando, C. R., Góis, P., Karabey, S., Khan, M. M. H., ... & Saso, L. (2021). COVID-19: marking the gaps in migrant and refugee health in some massive migration areas. *International journal of environmental research and public health*, *18*(23), 12639.

Meer, N., & Villegas, L. (2020). The impact of COVID-19 on global migration. *Governance of the Local Integration of Migrants and Europe's Refugees (GLIMER) Working Paper. Available online: www. glimer. eu/wp-content/uploads/2020/06/Global-Migration-Policies-and-COVID-19. pdf (accessed on 11 December 2020)*.

Memon, M. H. (2023). Poverty, gap and severity estimates for disaster prone rural areas of Pakistan. *Social Indicators Research*, *166*(3), 645-663.

Mogiani, M., Qaisrani, A., & Reis, J. (2024). Navigating Uncertainty: Challenges, Aspirations, and Perspectives of Potential Afghan Migrants in Pakistan.

Muhammed, G. Y. (2023). MIGRATION AND TRANS-BORDER CRIMES IN THE SAHEL REGION. *YAMTARA-WALA JOURNAL OF ARTS, MANAGEMENT AND SOCIAL SCIENCES (YaJAMSS)*, *3*(1).

Nazeer, M., Tabassum, U., & Nasir, H. (2022). The Role of Locational Factors in Influencing Migration towards Urban Areas Case Study of Pakistan. *Competitive Social Science Research Journal*, *3*(1), 582-605.

Ramzan, M., Yasin, A., Ijaz, S., Butt, G. S., Hussain, Z., Buksh, I., & Obaid, H. M. (2021). Insurgencies In Baluchistan by the Civil Militants. *Webology (ISSN: 1735-188X)*, *18*(6).

Rasool, S. A., Shahzad, M., & Khan, M. A (2021). FWU Journal of Social Sciences, Winter 2021, Vol. 15, No. 4, 47-68.

Riaz, N., Hussain, Z., Ahmed, J., & Lodhi, K. (2024). THE ROLE OF EMOTIONAL INTELLIGENCE IN EFFECTIVE MANAGEMENT DECISION-MAKING. *Contemporary Journal of Social Science Review*, *2*(04), 13-22.

Saleem, K., Ali, I., & Hussain, Z. (2022). STRATEGIC AND SECURITY CHALLENGES TO PAKISTAN 2001-2020. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *19*(4), 555-569.

Shah, N. M., Amjad, R., Hameed, M., & Shahzad, A. (2020). Pakistan migration report 2020. *Lahore School of Economics*.

Shah, T. H. (2020). *The role of agents in organization of irregular migration from District Gujrat, Pakistan to Europe* (Doctoral dissertation, lmu).

Sirkeci, I., & Cohen, J. H. (Eds.). (2020). *COVID-19 and migration: Understanding the pandemic and human mobility* (Vol. 23). Transnational Press London.

World Health Organization. (2021). *Global monitoring report on financial protection in health 2021*. World Health Organization.

World Health Organization. (2022). *Capturing the evidence on access to essential antibiotics in refugee and migrant populations*. World Health Organization.

Yousef, K. (2013). The vicious circle of irregular migration from Pakistan to Greece and back to Pakistan. *IRMA research project, background report on Pakistan, ELIAMEP, Athens (Available in English and Greek from: http://irma. eliamep. gr/publications/).*

The External Debt and Economic Growth Conundrum: Evidence from 81 Countries

Shehzada Ghulam Abbas
Center for Economic Research and Graduate Education - Economics Institute, Turkey

Nuran Halise Belet
Ankara Haci Bayram Veli University, Turkey

Considering the rising external debt across countries, empirical research over the past twenty years of the twenty-first century has focused on the relationship between debt and growth. This study investigates the linear and nonlinear impact of external debt on economic growth for 81 highly indebted countries divided into three distinct groups based on the percentage of external debt (i.e., 50th, 75th, and 75th+ percentiles) during the last decade for the period of 2008-2023. The panel data random effects model was employed to test the relationship. Data from WDI is used for the estimation of the models. The results show a highly significant and negative linear as well as nonlinear relationship across all three groups and the overall sample. The study also found that the impact of external debt gets stronger with an increase in the percentage from 50 to 75. The study concludes that external debt is a significant negative determinant of economic growth for an overall sample of 81 countries, as well as a distinct group of countries. The study recommends revenue mobilization and efficient debt management for the sample group of countries .
Keywords: external debt, nonlinear relationship, GDP growth, panel data

The rising level of external debt and government debt has become a major problem for most of the economies around the world. External financing has primarily been a primary source of stabilization and investment in developing economies. However, recent trends show that developed economies also accumulate external debt due to high stabilizing costs arising from shocks such as the global financial crisis of 2008, or the European sovereign debt crisis of 2008 (Mohsin, Ullah, Iqbal, Iqbal, & Taghizadeh-Hesary, 2021; Law, Ng, Kutan, & Law, 2021). As a result, the higher debt accumulation impedes economic growth in both developing and developed economies. A pressing concern in developed economies is the issue of debt, which raises significant implications for less developed nations in terms of fiscal sustainability. Numerous developing countries heavily depend on advanced economies for external funding, comprising loans, grants, and foreign direct investment. Advanced economies facing growing public debt and potential fiscal troubles may have a considerable impact on the availability and affordability of external funding for developing countries. Developed nations facing economic difficulties like rising inflation, interest rate increases, or financial turmoil can result in stricter global credit terms, thereby elevating the expense of borrowing for emerging economies (Khan, Qadeer, & Ghafoor, 2017). This, consequently, could weaken the capacity of developing nations to fund essential infrastructure, development initiatives, and social welfare schemes.

In this context, the government's central role in developing countries becomes increasingly vital. Ensuring long-term economic stability requires governments to prioritize fiscal sustainability, effectively manage debt levels, and reduce reliance on foreign borrowing. Implementing prudent fiscal policies, increasing domestic revenue collection, and optimizing public expenditure can help governments mitigate their exposure to external financial disturbances. Fostering economic resilience through diversification and attracting long-term foreign investment can help mitigate external debt challenges, which affect the economies of developed countries (Law, Ng, Kutan, & Law, 2021; Ali, Khalid, & Subhan, 2014). The primary reasons for borrowing or external financing in the literature are, firstly, to fill the investment gap, i.e., the difference between the investment and domestic savings to finance the investment projects in the economy, and secondly, to fill the current account deficit. However, over a longer period, the increased borrowing overburdens the economy, resulting in the diversion of resources to service the debt. This leads to a decrease in the resources to finance the development spending in the economy, thus impacting economic growth adversely (Abdullahi, Aliero, & Abdullahi, 2013; Senadza, Fiagbe, & Quartey, 2017).

From a financial standpoint, using external debt effectively can result in profitable outcomes and help stimulate the economy. Borrowed funds that are efficiently directed towards sectors like infrastructure development, education, healthcare, and technology can boost economic activity, increase productivity, and yield lasting advantages (Ajmair & Hussain, 2020). A key consideration in this scenario is keeping the cost of borrowing below the returns generated by investments funded through debt. Under these circumstances, the earnings from these investments can both compensate for the expense of debt repayment and produce additional profits that strengthen economic expansion (Akram, 2011; Mahmoud, 2015). This outcome hinges on prudent debt management and the efficient allocation of available resources. Inefficient use of borrowed funds for non-income-generating activities can result in wasted resources, heightened debt levels, and ultimately impede economic development, highlighting the importance of prudent fiscal and investment decision-making.

Despite a substantial amount of research investigating the link between external debt and economic expansion, results remain unclear. Research indicates that the debt burden and the displacement of investment (Krugman, 1988; Reinhart & Rogoff, 2010) may have a detrimental effect, whereas other studies claim that judicious use of external loans can foster economic growth (Pattillo, Poirson, & Ricci, 2004). Previous studies frequently center on either developed or developing nations individually, overlook a comprehensive cross-country examination, or neglect the complexities of the debt-growth dynamic. Many studies base their findings on outdated data and fail to consider the influence of institutional factors in this context. This study closes these gaps by using a panel dataset of 81 countries, incorporating current economic data, and applying advanced econometric methods to capture potential nonlinearities and heterogeneities across various income groups. This approach offers a more detailed comprehension of the relationship between external debt and economic growth, and it helps guide policy choices on responsible debt management strategies.

Thus, considering previous research and current studies, the research questions of this study are as follows:

- What is the relationship between external debt and economic growth across 81 sample countries?

- How do different percentages of external debt to GDP (i.e., 50, 75, and above 75) impact economic growth across the group of sample countries?

Unlike previous studies, this study explores the relationship both the linear and non-linear association between economic growth and external debt by categorizing indebted countries into three major categories according to the percentage of external debt to the GDP i.e., i) countries having external debt percentage to GDP less than or equal to 50%, ii) countries having debt greater than 50% and less than 75%, iii) and countries having debt greater than 75%. A sample of a total of 81 countries is included in the study, and data ranging from 2008 to 2023 is used to analyze the relationship. The study offers a unique exploration of the complex relationship between debt and GDP by investigating the impact of external debt on GDP growth at different percentage levels. Moreover, the use of robust panel data modeling increases the reliability and efficiency of the study findings.

This study comprises six sections, with the first providing an introduction and the second section offering a theoretical background and literature review. The third section focuses on data and methodology, while the fourth explains the variables used in the study. The fifth section presents the discussion and results, and the sixth and final section concludes with policy recommendations.

Theoretical Background and Literature
For more than 5 decades, the relationship between debt and economic growth has been a major area of interest in economics, drawing considerable scrutiny from academics since the early 1990s. A plethora of studies have investigated the intricate link between debt and economic growth, and this connection is multifaceted and influenced by specific conditions. A huge burden of debt can hinder investment and development by decreasing government finances, resulting in increased debt repayment, in turn decreasing spending on key public services like education, healthcare, and infrastructure development, which are key factors for growth. Governments trying to balance the debt and growth nexus is a major topic that needs to be extensively discussed.

Concerning the New-Keynesian view on debt overhang and the role of institutions, Krugman (1988) noted in the late 1980s that debt overhang arises when a nation's expected income's present value falls short of its total debt. Furthermore, Keynesian models emphasize the significance of government in facilitating economic growth, proposing that if there is a shortfall between savings and investments, public debt can bridge this gap. On the contrary, the limited government intervention notion by Classical economists argues to keep the economy free and alert the government about the repercussions of excessive debt accumulation over time. Additionally, they highlighted crowding-out effects as a reason to be wary of high levels of external indebtedness (Abduvaliev & Bustillo, 2024).

Many studies associate external debt as a positive determinant of economic growth. Earlier studies, such as Cline (1995), associated debt with a positive impact on economic growth, only if the cost of borrowing is less than the marginal productivity of the debt. It argues that if the marginal cost of debt is higher than the marginal productivity of debt, it impacts economic growth adversely. Similarly, Amoateng & Amoako-Adu (1996) explored the causation between growth and debt for 35 African countries from 1960 to 1990 and found a positive unidirectional causal relationship running from debt to economic growth. The study indicates that the short-run positive

relationship can be beneficial for the African countries; however, excessive debt levels may impact economic growth adversely over the long run.

Lau, Alba, and Liew (2022) indicate that rapid economic growth in developing and emerging economies results in a substantial increase in investment demand, driven by efforts to improve infrastructure, boost industrial capacity, and fulfill the growing aspirations of their populations. Countries facing a significant increase in investment needs frequently find themselves short of domestic resources, prompting them to obtain external funding from international financial bodies, foreign governments, and private loan providers. Borrowing is a critical source of finance that is pivotal to fund large-scale development projects to promote economic growth and enhance living conditions. The short-run gains from the influx of external financing cannot be neglected, as it provides governments and private businesses with the necessary finance to make investments, such as transportation systems, energy networks, and communication networks, which are crucial for facilitating economic activities. External financing supports technological progress, increases efficiency, and generates job openings, thereby producing a short-term surge in GDP growth and economic advancement. The study also cautioned that external borrowing can have long-term economic implications. The country's debt burden escalates as external debt grows, resulting in increased financial commitments that can put pressure on the government's budget and force the diversion of funds away from essential areas like education, healthcare, and social services. In addition to other issues, excessive external debt risks expose the economy to vulnerabilities, such as exchange rate fluctuations, varying interest rates, and global economic disturbances. Borrowing can worsen the debt problem, especially when it's not matched by rising economic output and higher income.

Pattillo and Antonio (2011) in their study explored the relationship between foreign debt and growth in 93 developing countries, emphasizing the varying impacts on economic growth at different levels of debt. The study concluded that in countries with a larger amount of indebtedness, doubling the debt accumulation impacts the GDP growth negatively, decreasing it by half a percentage point roughly. This implies that a huge accumulation of debt hinders economic growth and impacts the economy adversely both in the short run and the long run. The study argues that although debt acts as a significant alternative to financing the government, higher debt levels result in higher repayments, which in turn decrease the funds to invest in the fundamental sectors such as industry, infrastructure, and services. This lower investment in these sectors eventually impedes economic growth. The study also found that the negative effects of debt begin when the debt levels jump to around 35 to 40 percent of GDP; thus, based on the results study recommends prudent debt management policies, and policies directed at optimal use of borrowed funds.

Chen and Quang (2014) argue that as the debt burden increases, the government tends to increase taxes on the private sector. This leads to an adverse impact on private investment in the economy, thus resulting in a crowding-out effect. As a result, the economy is impacted adversely. Égert (2015) found that the negative relationship between debt and economic growth tends to begin already at lower debt levels, approximately 20 to 60 percent. Thus, a threshold value is estimated for the OECD countries, that is, the debt percentage should be kept below 20% for debt not to be a negative determinant. Makun (2021) argues that developing nations are highly dependent on external financing, such as remittances, foreign investment, financial aid, and external borrowing, due to lower revenue from government and domestic sources. A total

diversion of these resources towards growth-led policies might be beneficial for long-term economic growth; however, such diversion can lead to the deterioration of other sectors, such as environmental policies.

Ismael, Mahmod, and Khorsheed (2024) delve into the complex interplay between external debt and economic expansion in emerging economies, employing a quantitative research approach. Data was collected in three chosen developing countries via an online survey, resulting in 189 responses from important stakeholders. The study employed various methods such as t-tests, Chi-square tests, VIF, partial least squares regression (PLS), and principal component analysis (PCS) to assess the relationship. The study found that a lower amount of debt borrowed from external sources influences economic growth positively, however, a higher amount can be detrimental to economic growth. Furthermore, the study emphasizes the readiness of governments with high debt for an external shock. It argues that governments with high debt are susceptible to external shocks, which might lead to an adverse impact on the economy. Therefore, governments need to be cautious and ready for any contingent event. Based on the findings, the study recommends efficient debt management, with a policy readiness for any external shocks.

Doorasamy et al. (2024) used the VECM model along with Granger causality to test the relationship between debt and economic growth in South Africa and Nigeria. The study uses data from 1981 to 2022 to investigate the relationship. The study found a positive impact of debt on economic growth for South Africa in the short run, and no significant impact on economic growth for Nigeria. However, over the longer term, the study found a negative and significant impact on economic growth in South Africa. This implies that in the short run, the external debt might lead to short-term gains; however, over time, the accumulation of larger amounts of external debt impedes economic growth. The study also found a causal relationship between external debt and economic growth in the case of South Africa. In the case of Nigeria, the study concluded no significant relationship, underscoring that other factors such as exchange rates and FDI may have a substantial impact on economic growth. The study recommends decreasing the debt accumulation in the case of South Africa and shifting to domestic alternatives such as domestic borrowing and taxation. Moreover, the study also recommends that both countries should focus on development projects and industrial expansion to mitigate the impact of external debt and increase economic growth.

Ponceno and Indumati (2023) found a significant and negative correlation between foreign debt and economic growth in the case of India. This implies that an increase in foreign debt leads to a decrease in overall economic growth, emphasizing the negative repercussions of debt accumulation in the case of India. The study employed a cointegration test, and VECM model, and Granger causality to measure the correlation between economic growth and independent variables. The study found that, along with external debt, FDI and domestic savings are also negatively associated with economic growth in India. The study argues that if the capital inflow from external sources in the form of FDI and debt is not used efficiently, and not directed to the development projects, it eventually impacts the economy negatively both in the short run and long run. In addition, the study found a positive impact of gross capital formation on economic growth, indicating the positive spillovers of higher economic activity and capital accumulation in the economy. The report recommends that policymakers to focus on investing in the industrial sector and development projects to increase economic growth in the case of India.

The recent literature on the external debt and growth nexus by Mumba and Li (2020), Qureshi and Liaqat (2020), Tarawalie and Jalloh (2021), and Epaphra and Mesiet (2021) showed a positive relationship between external debt and economic growth in their studies across different countries and regions. On the contrary, Guei (2019), Azolibe (2022), Asafo, Matuka, and Dominic (2019), and Hoti, Shkurti, and Rehman (2022) found a negative association of external factors with economic growth.

Despite extensive analysis in current literature of the connection between debt and growth, there is still considerable disagreement regarding the effects of debt on economic expansion. The debate is divided, with some researchers believing there is a negative effect, others a positive one, and a few thinking it has no significant impact. This study re-examines the relationship between debt and economic growth, adopting a novel approach that categorizes nations into distinct groups based on their external debt percentages. This study not only illustrates the influence of different debt levels on economic growth but also offers valuable insights into the optimal level.

Method

Todaro and Stephen (2009) discussed the two-gap model in their book. The study is based on the two-gap theory proposed by them. The theory puts domestic savings at the center of economic growth in the economy. It argues that insufficient savings in the economy lead to insufficient capital for investment, which in turn leads economies to rely on the following financing.

The national income identity for the open economy is given as :

$$Y = C + I + G + NX \quad (1)$$

Where Y is the GDP, C is consumption, I is investment, G is government spending, and NX represents the net exports which can be written as exports minus imports i.e., X-M.

From the equation, the investment identity can be written as:

$$I - S = M - X \quad (2)$$

Equation two represents that in the case of inadequate savings, there is a gap between investment and saving, which then is financed by external sources equal to M-X, which is also known as the current account deficit. Thus, to cover the investment gap and current account deficit, countries borrow from external sources.

Following (Le & Phan, 2022), we employed the panel data random effects model to explore the correlation between dependent and independent variables. We estimated both the linear and non-linear impact of external debt on economic growth for each group of countries.

The general model for the panel random effects model is given below:

$$y_{i,t} = \beta_0 + X'_{i,t}\beta + \mu_i + \varepsilon_{i,t} \quad (3)$$

Where $y_{i,t}$ is the dependent variable for country i at time t, β_0 is the overall intercept, $X'_{i,t}$ is the vector of the independent variable for country i at time t, β coefficient vector of independent variables, μ_i the Individual-specific random effect, $\varepsilon_{i,t}$ idiosyncratic error term for country i at time t.

To ensure consistency and efficiency in estimation, we assume that the individual-specific random effects μ_i are independent and identically distributed (i.i.d.) across individuals, normally distributed $\mu_i \sim (0, \sigma_\mu^2)$, not correlated with independent variables, $\text{Cov}(\mu_i, X_{i,t}) = 0$.

The idiosyncratic error $\varepsilon_{i,t}$ is independently and identically distributed (i.i.d) $\varepsilon_{i,t} \sim (0, \sigma_\varepsilon^2)$, and not serially correlated $E(\varepsilon_{i,t}\,\varepsilon_{j,s}) = 0$ where $i \neq j$ and $t \neq s$.

The decision to use a random effects model was motivated by both theoretical and statistical factors. Our sample encompasses 81 countries, which exhibit considerable variation in terms of institutional, geographical, and structural features. A random effects model is more suitable for accounting for cross-sectional variation due to the likelihood that many of these country-specific impacts are variable rather than consistent and are not related to the control variables. We employed the Breusch and Pagan Lagrangian multiplier test for random effects to choose between the random effects and fixed effects model, and the results show that the panel random effects model is most suitable for the given sample data.

The model for linear and nonlinear estimations can be specified as follows:
$$GDPPC_{it} = \propto_i + \beta_1 FDI_{it} + \beta_2 LNED_{it} + \beta_3 INF_{it} + \beta_4 GE_{it} + \beta_5 LNExp_{it} + \beta_6 LNOex_{it} + \varepsilon_{it}$$
(4)
$$GDPPC_{it} = \propto_i + \beta_1 FDI_{it} + \beta_2 (LNED_{it})^2 + \beta_3 INF_{it} + \beta_4 GE_{it} + \beta_5 LNExp_{it} + \beta_6 LNOex_{it} + \varepsilon_{it}$$
(5)

Where GDPPC represents the GDP per capita, FDI is foreign direct investment, LNED is the natural log of external debt, INF is inflation, GE is government expenditures as a percentage of GDP, LNExp is the natural log of Exports, LNOex natural log of the official exchange rate, ε is the unobserved error, α is the group-specific constant, β_{1-6} coefficients of the variables, and i, t represents country and time.

The control variables of the model include natural log total exports, FDI as a percentage of GDP, natural log of government expenditure, inflation, natural log of official exchange rate, and the log of external debt stocks is the main variable of interest. The details on the variables are provided below.

Equation 4 shows the linear estimation model, and Equation 5 shows the nonlinear estimation model, where the square of LNED captures the nonlinear effects of external debt on economic growth for each group of countries.

To ensure the robustness of the methodology. We chose a data sample from 2008 to 2023 (16 years). This implies that there is no need for testing cross-sectional dependence and serial correlation, which are problems in macro panels with long time series (20-30 years) (Torres-Reyna, 2007). As for heteroscedasticity in the case of the random effects model, the panel data modelling uses the GLS (generalized least squares method) method of estimation, thus it internalizes the heteroscedasticity in estimation (Bai, Choi, & Liao, 2021).

Description of Variables
Based on the existing literature following variables are used as dependent and independent variables of the study.

GDPPC (Growth of Per Capita GDP in Percentage): GDPPC represents the annual growth rate of a country's per capita GDP, which is a common measure of economic growth and prosperity. It reflects the increase in the value of goods and services produced per person in an economy. Economic growth, measured by GDPPC, is influenced by various factors such as investment, human capital, technological progress, and fiscal policies (Barro, 1991). Higher GDPPC growth is often associated with improvements in living standards and overall economic development.

FDI (Net Foreign Direct Investment as Percentage of GDP): FDI measures the investment made by foreign entities in a country's economy, often directed towards industries such as manufacturing, services, and infrastructure. FDI is considered a key driver of economic growth as it brings capital, technology, and expertise to the host country, potentially boosting productivity and creating jobs (Borensztein, Gregorio, & Lee, 1998). Higher FDI inflows are generally associated with stronger GDP growth, as it enhances the domestic economy's capacity to innovate and expand.

ED (External Debt stocks): ED represents the amount of external debt a country holds relative to its GDP. While external debt can provide much-needed capital for investment in infrastructure and development, excessive debt can constrain growth due to the burden of servicing the debt (Eichengreen & Hausmann, 1999). High external debt is often linked to lower GDPPC growth, especially when debt servicing consumes significant portions of government expenditure and reduces fiscal flexibility (Pattillo & Antonio, 2011).

INF (Consumer Price Index Annual Percentage): INF measures the annual percentage change in the consumer price index, indicating inflation levels within an economy. Inflation affects the purchasing power of consumers and can distort investment decisions. A moderate inflation rate is often associated with healthy economic growth, but high inflation typically undermines growth by creating uncertainty and reducing investment (Fischer, 1993). Controlling inflation is crucial for maintaining stable economic growth and a rising GDPPC.

GE (Government Expenditure as Percentage of GDP): GE represents the government's total spending on goods, services, and welfare programs as a percentage of GDP. Government expenditure can stimulate economic growth by funding public services, infrastructure, and social programs, which enhance human capital and productivity (Barro, 1991; Arawatari, Hori, & Mino, 2023). However, excessive government spending, especially if inefficient or overly financed by debt, can crowd out private investment and potentially hinder GDPPC growth.

Ex (Total Exports): Ex represents the value of a country's exports. Trade openness and export growth have been found to promote economic growth by expanding market opportunities, improving productivity, and facilitating technology transfer (Rodrik, 1998). A higher export-to-GDP ratio typically signals a competitive economy, contributing positively to GDPPC growth, as increased exports stimulate domestic industries and lead to higher income levels (Kulu, 2023).

Oex (Official Exchange Rate in Current Dollar Terms): Oex measures the value of a country's currency relative to the US dollar. The exchange rate influences international trade, investment flows, and inflation. A stable or favorable exchange rate can stimulate exports, attract foreign investment, and support economic growth (Edwards, 1989). A depreciation of the local currency might increase export competitiveness but could also lead to inflationary pressures, impacting overall GDPPC growth negatively (Jayathilaka, et al., 2023).

Table 1 below shows the description of the variables used in this study. The data is obtained from the World Development Indicators for 2008 to 2023. The variables of the studies are chosen following the previous studies by (Asafo, Matuka, & Dominic, 2019; Qureshi & Liaqat, 2020; bduvaliev & Bustillo, 2024)

Table 1

Description of variables

Variable	Description	Source
GDPPC	Growth of Per Capita GDP in Percentage	WDI
FDI	Net Foreign Direct Investment as a percentage of GDP	WDI
ED	External Debt Stocks (current dollar terms)	WDI
INF	Consumer Price Index Annual Percentage	WDI
GE	Government Expenditure as a Percentage of GDP	WDI
Ex	Total Exports (current dollar terms)	WDI
Oex	Official Exchange rate (current dollar terms)	WDI

Results and Discussion

Before estimation, we must ensure the stationarity of all the variables of the study. Table 2 shows the groupwise panel unit root Levin-Lin-Chu (Levin, Lin, & Chu, 2002) test results. The variables of the study are all stationary at the level, with the order of integration I equal to zero as represented by I(0), as shown in the table.

Table 2

Panel Unit Roots

Variable	Overall		50th Percentage		75th Percentage		75+ Percentage	
Statistics	P-value	O.I	P-value	O.I	P-value	O.I	P-value	O.I
GDPPC	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0000***	*I(0)*
FDI	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0012***	*I(0)*	0.0000***	*I(0)*
LNED	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0000***	*I(0)*
INF	0.0988*	*I(0)*	0.0124	*I(0)*	0.0566*	*I(0)*	0.0000***	*I(0)*
GE	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0684*	*I(0)*	0.0079***	*I(0)*
LNExp	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0001***	*I(0)*	0.0036***	*I(0)*
LNOEx	0.0000***	*I(0)*	0.0000***	*I(0)*	0.0541*	*I(0)*	0.0056***	*I(0)*

For our data, the Breusch and Pagan Lagrangian multiplier test for random effects shows that the panel random effects model is suitable for estimation across all the percentage-wise groups. Therefore, we proceed with the panel random effects estimation.

Tables 3 and 4 show the estimation for the linear and nonlinear panel data estimations for each group of countries.

Table 3

Estimation Results (Panel Random Effects Model)

Dep Var: GDPPC	(1) Overall	(2) 50th Percentage	(3) 75th Percentage	(4) 75+ Percentage
FDI	0.0938***	0.0930	-0.00675	0.148***
	(3.40)	(1.47)	(-0.14)	(3.58)
LNED	-0.937***	-0.894*	-2.258***	-1.808**
	(-4.18)	(-2.43)	(-3.40)	(-2.73)
Inf	-0.0139	-0.0195	0.00522	-0.107*
	(-1.80)	(-0.64)	(0.52)	(-2.11)
GE	-0.185***	-0.218***	-0.173**	-0.187*

	(-6.14)	(-4.84)	(-3.25)	(-2.32)
LNExp	2.128***	1.465***	3.279***	3.528***
	(6.71)	(3.43)	(5.17)	(3.29)
LNOEx	-0.0916	-0.129	-0.0852	0.220
	(-1.24)	(-1.19)	(-0.63)	(1.20)
_cons	1.014	3.418	2.320	-0.527
	(0.78)	(1.64)	(0.68)	(-0.12)
N	1200	630	285	270

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4

Non-Linear Estimates

Dep Var: GDPPC	(1) Overall	(2) 50th Percentage	(3) 75th Percentage	(4) 75+ Percentage
FDI	0.0938***	0.0930	-0.00675	0.148***
	(3.40)	(1.47)	(-0.14)	(3.58)
LNED2	-0.469***	-0.447*	-1.129***	-0.904**
	(-4.18)	(-2.43)	(-3.40)	(-2.73)
Inf	-0.0139	-0.0195	0.00522	-0.107*
	(-1.80)	(-0.64)	(0.52)	(-2.11)
GE	-0.185***	-0.218***	-0.173**	-0.187*
	(-6.14)	(-4.84)	(-3.25)	(-2.32)
LNExp	2.128***	1.465***	3.279***	3.528***
	(6.71)	(3.43)	(5.17)	(3.29)
LNOEx	-0.0916	-0.129	-0.0852	0.220
	(-1.24)	(-1.19)	(-0.63)	(1.20)
_cons	1.014	3.418	2.320	-0.527
	(0.78)	(1.64)	(0.68)	(-0.12)
N	1200	630	285	270

The findings from the linear model show that external debt has a significant negative impact on GDP growth across all the groups of countries, which is in line with the previous studies. The results of the overall estimation for the sample of 81 countries also show a negative and significant impact of external debt on the economy of the sample.

Unlike previous studies, our results show that as the percentage of external debt increases, i.e., from the 50th percentile to the 75th percentile, the impact of external debt also increases, as evidenced by the increased coefficient of external debt as the percentile increases from 50 to 75. This shows that the impact of debt is negative but weak when it is below the 50th percentile; however, when it exceeds the 50th percentile, the negative impact becomes stronger. For the 75th and above percentile, the impact of also highly significant and negative. This implies that external debt is a significant negative determinant of economic growth across all groups of countries.

Other variables, such as FDI, have a positive impact on economic growth across all the groups but are only significant for the overall sample and the 75th + percentile group. Inflation is insignificant for all the groups except the 75th + percentile, showing that as the debt increases, inflation also starts to impact GDP growth adversely. Government expenditure is highly significant across all the groups with a negative coefficient, showing that the increase in government spending impacts GDP growth adversely. This can be attributed to the crowding-out effects of the government spending. When government spending increases, it crowds out private investment, thus impacting the economy adversely. The net exports impact the GDP growth

significantly and positively across all the groups. This confirms the Export-Led-Growth hypothesis (ELG) (Petchko, 2018). The ELG hypothesis postulates that expanding exports is one of the key factors in promoting long-term growth (Kumar, Nargis, & Begam, 2020). The exchange rate has no significant impact on GDP growth across all the groups. Our results are consistent with (Mumba & Li, 2020; Qureshi & Liaqat, 2020; Cline, 1995; Alnaa & Matey, 2023)

Similar to the linear analysis, the results of the nonlinear analysis show that external debt has a substantial and adverse effect on GDP growth for every group of countries examined. This implies that there is a nonlinear dynamic as well as a linear relationship between external debt and economic growth. In particular, the negative correlation between external debt and economic growth gets stronger as the percentage of external debt rises, highlighting the negative effects of growing external debt levels. These findings demonstrate the negative impact of accruing external debt and show that the drag on economic performance is worsened by larger debt loads. This nonlinearity may be caused by several factors that together impair the prospects for economic growth, including higher debt servicing costs, less fiscal flexibility, and elevated investor concerns about a nation's solvency (Cahyadin & Ratwianingsih, 2020; Lin & Sosin, 2001).

Conclusion

This study offers significant findings on the connection between external debt and economic expansion in 81 countries, grouped according to their external debt-to-GDP ratios. Across all groups, a significant and persistent negative impact of external debt on economic growth was evident, according to findings based on both linear and nonlinear panel data random effects models used over 15 years spanning from 2008 to 2023. The linear model implies a proportional negative correlation between external debt and growth, showing that even modest levels of external debt can impede economic expansion. Careful management of debt accumulation is necessary to prevent negative impacts on a nation's overall production.

A nonlinear model indicates that beyond specific levels of external debt, its negative effects become more pronounced, implying that debt overhang effects occur. At moderate levels of debt, external borrowing can still support economic growth by funding productive investments, but once debt exceeds a certain threshold, its negative impacts become more noticeable. Excessive debt is thought to result in increased interest payments, diminished fiscal flexibility, and a decrease in private-sector optimism, ultimately hindering economic expansion. The existence of nonlinear effects underscores the necessity of determining optimal debt levels to prevent economic stagnation.

In addition to external debt, the study examines other factors that influence economic growth. Research evidence backs up the export-led growth theory, indicating that a substantial increase in exports can greatly enhance GDP expansion rates. Economic performance continues to rely heavily on trade, underscoring the necessity for policies that increase export competitiveness. Foreign direct investment also has a significant impact on promoting economic growth, highlighting the need for a business environment that is attractive to investors. The study also reveals that government spending has a detrimental effect on economic growth, indicating potential crowding-out effects, in which an overextended public sector could displace private investment or contribute to fiscal inefficiencies.

Based on the findings of the study, governments should prioritize implementing structural reforms that increase the efficiency of public spending and foster an environment that is conducive to exports and foreign direct investment to achieve a balanced and sustainable path for economic growth, even though external debt is an important factor to monitor. Additionally, this study suggests that governments investigate domestic financing options like revenue mobilization, expanding tax revenue bases, and domestic borrowing.

References

Abdullahi, Y. Z., Aliero, H. M., & Abdullahi, M. (2013). Analysis of the Relationship between External Debt and Economic Growth in Nigeria. *Interdisciplinary Review of Economics and Management, 3*(1), 1-11. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/32205980/Zakari_Aliero_and_Maria-libre.PDF?1391552450=&response-content-disposition=inline%3B+filename%3DAnalysis_of_the_Relationship_between_Ext.pdf&Expires=1731657142&Signature=Gls~UR64XA4BHSIO8OVd9JCnyEVMBesyShDgaQ

Abduvaliev, M., & Bustillo, R. (2024). External debt burden and economic growth: evidence from Central Asia. *Post-Communist Economies, 36*(7), 761-777. doi:https://doi.org/10.1080/14631377.2024.2376969

Ajmair, M., & Hussain, K. (2020). Determinants of Sectoral Growth in Pakistan: A Kalman Filter Based Time Varying Parametric Approach. *FWU Journal of Social Sciences, 14*(3), 27-40. Retrieved from https://sbbwu.edu.pk/journal/Fall%202020%20Vol.14%20No.3/3.%20Determinants%20of%20Sectoral%20Growth%20in%20Pakistan-1.pdf

Akram, N. (2011). Impact of Public Debt on the Economic Growth of Pakistan. *The Pakistan Development Review, 50*(4), 599-615. Retrieved from https://www.jstor.org/stable/23617723

Ali, A., Khalid, S., & Subhan, F. (2014). Financial Liberalization, Institutional Development and Payout Policy Changes: The Case of Pakistani Economic Reforms of 1990s. *FWU Journal of Social Sciences, 8*(1), 67-77. Retrieved from https://sbbwu.edu.pk/journal/FWU_Journal_Summer2014,Vol.8,No.1/10_Financial_Liberalization__Institutional_Development.pdf

Alnaa, S. E., & Matey, J. (2023). Dynamic Relationship Between External Debt and Unemployment in Sub-Saharan Africa. *Theoretical and Applied Economics, 1*(634), 137-152.

Amoateng, K., & Amoako-Adu, B. (1996). Economic growth, export and external debt causality: the case of African countries. *Applied Economics, 28*(1), 21-27. doi:https://doi.org/10.1080/00036849600000003

Arawatari, R., Hori, T., & Mino, K. (2023). Government expenditure and economic growth: A heterogeneous-agents approach. *Journal of Macroeconomics, 75*, 103486. doi:https://doi.org/10.1016/j.jmacro.2022.103486

Asafo, S. S., Matuka, A., & Dominic, N. (2019). External debt and economic growth: Two-step system GMM evidence for sub-Saharan Africa Countries. *International Journal of Business, Economics and Management, 6*(1), 39-48. doi:10.18488/journal.62.2019.61.39.48

Azolibe, C. B. (2022). External Debt accumulation and foreign direct investment inflows in Sub-Saharan Africa: Analysing the interaction effects of selected macroeconomic factors. *The

Review of Black Political Economy, 49(3), 327–352. doi:https://doi.org/10.1177/003464462210948

Bai, J., Choi, S. H., & Liao, Y. (2021). Feasible generalized least squares for panel data with cross-sectional and serial correlations. *Empirical Economics, 60*(1), 309-326. doi:10.1007/s00181-020-01977-2

Barro, R. J. (1991). Economic Growth in a Cross Section of Countries. *The Quarterly Journal of Economics, 2*, 407–443. doi:https://doi.org/10.2307/2937943

Borensztein, E., Gregorio, J. D., & Lee, J.-W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics, 45*(1), 115-135. doi:https://doi.org/10.1016/S0022-1996(97)00033-0

Cahyadin, M., & Ratwianingsih, L. (2020). External Debt, Exchange Rate, and Unemployment in Selected ASEAN Countries. *Jurnal Ekonomi & Studi Pembangunan, 21*(1). doi:10.18196/jesp.21.1.5029

Chen, J., & Quang, T. (2014). The impact of international financial integration on economic growth: New evidence on threshold effects. *Economic Modelling, 42*, 475-489. doi:https://doi.org/10.1016/j.econmod.2014.06.011

Cline, W. R. (1995). *International Debt Reexamined* (Vol. 46). Washington, DC: Peterson Institute for International Economics.

Doorasamy, M., Adejayan, A. O., & Nyahuna, T. (2024). Does External Debt Cause Growth? A Comparative Study Of Nigerian And South African Economies. *Journal of Business and Management Review, 5*(9), 782-801. doi:10.47153/jbmr.v5i9.1103

Edwards, S. (1989). *Real Exchange Rates, Devaluation, and Adjustment: Exchange Rate Policy in Developing Countries.* Cambridge: MIT Press.

Égert, B. (2015). Public debt, economic growth and nonlinear effects: Myth or reality? *Journal of Macroeconomics, 43*, 226-238. doi:https://doi.org/10.1016/j.jmacro.2014.11.006

Eichengreen, B., & Hausmann, R. (1999). Exchange Rates and Financial Fragility. *Working Paper 7418*. Retrieved from https://www.nber.org/papers/w7418

Epaphra, M., & Mesiet, W. (2021). The external debt burden and economic growth in Africa: a panel data analysis. *Theoretical and Applied Economics, XXVIII*(2(627)), 175-206. Retrieved from https://ideas.repec.org/a/agr/journl/v2(627)y2021i2(627)p175-206.html

Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of Monetary Economics, 32*(3), 485-512. doi:https://doi.org/10.1016/0304-3932(93)90027-D

Guei, K. M. (2019). External Debt and Growth in Emerging Economies. *International Economic Journal, 33*(2), 236-25. doi:https://doi.org/10.1080/10168737.2019.1590727

Hoti, A., Shkurti, A., & Rehman, S. (2022). Impact of External Debt on Economic Growth in Western Balkan Countries. *Academic Journal of Interdisciplinary Studies, 11*(2), 192. doi:https://doi.org/10.36941/ajis-2022-0045

Ismael, N. B., Mahmod, S. H., & Khorsheed, H. (2024). External Debt and Economic Growth: Empirical Evidence from Developing Countries. *International journal of engineering, business and management, 8*(3), 1-9. doi:10.22161/ijebm.8.3.1

Jayathilaka, R., Rathnayake, R., Jayathilake, B., Dharmasena, T., Bodinayake, D., & Kathriarachchi, D. (2023). Exploring the growth direction: the impact of exchange rate and purchasing managers index on economic growth in Sri Lanka. *Quality and Quantity, 57*, 2687–2703. doi:https://doi.org/10.1007/s11135-022-01490-x

Khan, K. I., Qadeer, F., & Ghafoor, M. M. (2017). Debt Specialization within Profitability Sub-Groups: A New Perspective of Debt Structure Choices. *FWU Journal of Social Sciences,*

11(2), 92-108. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?Abstract_id=3110899

Krugman, P. (1988). Financing vs. forgiving a debt overhang. *Journal of Development Economics, 29*(3), 253-268. doi:https://doi.org/10.1016/0304-3878(88)90044-2

Kulu, E. (2023). Relationship Between Export and Economic Growth: Evidence from West African Countries. *The Indian Economic Journal, 72*(2), 287-302. doi:https://doi.org/10.1177/00194662231212756

Kumar, M., Nargis, & Begam, A. (2020). Export-Led Growth Hypothesis: Empirical Evidence from Selected South Asian Countries. *Asian Journal of Economic Modelling, 8*(1), 1–15. doi:https://doi.org/10.18488/journal.8.2020.81.1.15

Lau, E., Alba, J. M., & Liew, K.-H. (2022). Debt and economic growth in Asian developing countries. *Economic Analysis and Policy, 76*, 599-612. doi:https://doi.org/10.1016/j.eap.2022.09.011

Law, S. H., Ng, C. H., Kutan, A. M., & Law, Z. K. (2021). Public debt and economic growth in developing countries: Nonlinearity and threshold analysis. *Economic Modelling, 98*, 26-40. doi:https://doi.org/10.1016/j.econmod.2021.02.004

Le, T. H., & Phan, L. T. (2022). Examining the Non-Linear Impact of External Debt on Economic Convergence. *Journal of Economic Integration, 37*(3), 377-422. doi:https://www.jstor.org/stable/27158032

Levin, A., Lin, C.-F., & Chu, C.-S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of Econometrics, 108*(1), 1-24.

Lin, S., & Sosin, K. (2001). Foreign debt and economic growth. *The Economics of Transition, 9*(3), 635-655.

Mahmoud, i. M. (2015). The Role of External Debt on Economic Growth: Evidence from Mauritania. *International Journal of Economics & Management Sciences, 04*(04), 1-6. doi:DOI: 10.4172/2162-6359.1000240

Makun, K. (2021). External debt and economic growth in Pacific island countries: A linear and nonlinear analysis of Fiji Islands. *The Journal of Economic Asymmetries, 23*, e00197. doi:https://doi.org/10.1016/j.jeca.2021.e00197

Mohsin, M., Ullah, H., Iqbal, N., Iqbal, W., & Taghizadeh-Hesary, F. (2021). How external debt led to economic growth in South Asia: A policy perspective analysis from quantile regression. *Economic Analysis and Policy, 72*, 423-437. doi:https://doi.org/10.1016/j.eap.2021.09.012

Mumba, C. S., & Li, J. H. (2020). The impact of external debt on economic growth: Evidence from Southern Africa. *Journal of Finance and Economics, 8*(3), 135-141.

P Todaro, M., & Stephen, C. S. (2009). *Economic development.* London: Pearson education.

Pattillo, C., & Antonio, R. L. (2011). External Debt and Growth. *Review of economics and institutions, 2*(3), 30. Retrieved from https://rei.unipg.it/rei/article/view/45

Pattillo, C., Poirson, H., & Ricci, L. (2004). What Are the Channels Through Which External Debt Affects Growth? *IMF Working Paper WP/04/15*. Retrieved from https://www.imf.org/external/pubs/ft/wp/2004/wp0415.pdf

Petchko, K. (2018). *How to Write About Economics and Public Policy.* Elsevier. doi:https://doi.org/10.1016/C2016-0-04062-7

Ponceno, A. V., & Indumati, S. (2023). Impact of External Debt on Economic Growth in India: An Econometric Analysis. *International Journal For Multidisciplinary Research*. doi:10.36948/ijfmr.2023.v05i06.8720

Qureshi, I., & Liaqat, Z. (2020). The long-term consequences of external debt: Revisiting the evidence and inspecting the mechanism using panel VARs. *Journal of Macroeconomics, 63*, 103184. doi:https://doi.org/10.1016/j.jmacro.2019.103184

Reinhart, C. M., & Rogoff, K. S. (2010). Growth in a Time of Debt. *American Economic Review, 100*(2), 573–78. doi:10.1257/aer.100.2.573

Rodrik, D. (1998). Trade Policy and Economic Performance in Sub-Saharan Africa. *Working Paper 6562*. Retrieved from https://www.nber.org/papers/w6562

Senadza, B., Fiagbe, K., & Quartey, P. (2017). The Effect of External Debt on Economic Growth in Sub-Saharan Africa. *International Journal of Business and Economic Sciences Applied Research (IJBESAR), 11*(1), 61-69. Retrieved from https://ssrn.com/abstract=3155129

Tarawalie, A. B., & Jalloh, T. (2021). External debt and economic growth nexus in the Ecowas: A threshold analysis. *International Journal of Business and Economics Research, 10*(5), 178-186. doi:10.11648/j.ijber.20211005.13

Torres-Reyna, O. (2007, December). Panel Data Analysis Fixed and Random Effects using Stata. Retrieved from https://tertilt.vwl.uni-mannheim.de/bachelor/Panel101.pdf

Analyzing Anomalies for Financial Fraud Detection: A Case Study of Selected Insurance Companies Listed in Borsa Istanbul

Muhammad Nouman Latif, Muhittin Kaplan and Asad Ul Islam Khan
Ibn Haldun University, Istanbul, Turkiye

This study aims to identify anomalies in the financial data of six leading insurance companies listed on Borsa Istanbul, Türkiye. Traditional anomaly detection methods like GARCH, ARIMA and moving averages have inherent limitations, including the requirement of stationarity, strict distributional assumptions and risks of model mis-specification. To address these issues, we employ four alternative risk measures, i.e., Down-to-Up Volatility (DUV), Negative Conditional Skewness (NCS), Relative Frequency (RF) and the Garman-Klass (GK) on daily stock price data, thereby avoiding stationarity and distribution-related constraints. Our findings reveal significant differences in anomaly detection across these measures. While DUV and RF, which are based on second-moment calculations, capture variations in volatility, the GK approach (computed daily) and the NCS, which considers third-moment characteristics, provide complementary insight. To enhance robustness, we apply both Z-score normalization and Mahalanobis distance for joint anomaly detection. The Z-score method treats all risk measures equally and is suitable for normally distributed data but overlooks potential correlations. In contrast, Mahalanobis distance accounts for multivariate anomalies and interdependencies between risk measures, offering a more holistic approach. Our results indicate that Mahalanobis distance outperforms Z-Score normalization in detecting anomalies in five out of six insurance companies, except in the case of RAYSG. This study underscores the importance of alternative risk measures and multivariate anomaly detection techniques in financial fraud analysis, offering valuable insights for risk management and regulatory practices in emerging financial markets .
Keywords: anomaly detection, financial fraud, risk measures, emerging insurance market.
JEL Classification: C58; C63; G22; G32

Financial fraud remains a persistent challenge for global economies, affecting not only financial markets but also eroding investor confidence and harming corporate integrity. Therefore, it is necessary to promote and develop a resilient financial system that facilitates the allocation of capital, risk management and financial intermediation. This objective is supported by a diverse range of financial institutions and markets that enable these fundamental activities and ensure the efficient flow of funds among investors, borrowers and savers. These financial systems include market-based, bank-based, digital, and decentralized frameworks. Each plays a crucial role in maintaining financial stability and promoting economic growth. Among the four financial systems mentioned above, the market-based system is the most dominant (Svitlana & Kostiantyn, 2023). Within this system, stock markets, bonds market and foreign exchange rate markets serve as critical components. Among these, stock markets play a particularly crucial role due to their inherently volatile nature (Khan et al., 2024). This extreme volatility often results in data that is not only highly fluctuating but also skewed and influenced by behavioral biases. Understanding these characteristics is essential for making informed investment decisions, ensuring market stability and enhancing fraud detection mechanisms.

Correspondence concerning this article should be addressed to Muhammad Nouman Latif, PhD Candidate, Department of Economics, School of Business, Ibn Haldun University, Istanbul, Turkiye (Email id: muhammad.latif@stu.ihu.edu.tr

Before fraud detection, we have to know its kinds in stock market i.e., pump and dump, false market conditions, accounting fraud and insider trading. First, the infamous pump and dump schemes typify market manipulation, wherein a group of traders hypes up a stock to inflate its price before selling it off, leaving other investors to face subsequent price drops (La Morgia et al., 2023; Lee et al., 2024). The second type of manipulation includes creating false market conditions through practices such as wash trading or spoofing, where traders place orders with the intent to deceive others about stock demand (Comerton-Forde & Putniņš, 2014). Third, insider trading occurs when those with privileged information about a company's future performance or strategic plans exploit this information for personal gain by trading the company's stock before the information becomes public. Although insider trading laws exist, sophisticated detection mechanisms are essential to effectively identify and deter such actions (Alqurayn et al., 2024; Seyhun, 1986). Lastly, accounting fraud occurs when individuals alter a company's financial records, often by falsifying information about earnings or asset growth.

These fraudulent practices have serious consequences, often leading to significant stock mispricing and harming uninformed investors. For instance, the Enron and WorldCom cases underscore the risks of unregulated accounting manipulations and the need for strict fraud detection procedures (Dechow et al., 2010). Therefore, detecting financial fraud is critical to maintaining the integrity of financial markets. Fraudulent activities weaken investor confidence and mislead market dynamics, which can result in financial loss for both investors and the companies. If left undetected, these activities can harm stakeholders and also destabilize the financial system (Wells, 2017). Financial anomalies consist of unexpected volatility surges, which can occur due to human error, fraudulent activities, behavioral changes or faults within the system (Hodge & Austin, 2004). Consequently, it is important to develop mechanisms for identifying financial fraud to ensure transparency and fairness in the market. Potential fraudulent activities can be observed through anomalies or unusual patterns in financial data (Chandola et al., 2009; Hawkins, 1980; Faizan et al., 2018). One widely used approach to detect financial fraud is involves anomaly detection methods. These methods aim to identify irregular patterns in financial data that may signify fraudulent activity. Anomaly detection has been used in various domains including finance to uncover suspicious transactions, manipulative trading or misreported financial information (Fahlevie et al., 2022; La Morgia et al., 2023).

The use of traditional statistical or model-based anomaly detection methods find limited mentions in the literature due to their limitations. A key limitation lies in their assumptions about the nature of data, such as normality or stationarity, which are often violated in financial datasets (Salas-Molina et al., 2017). These models, like ARCH and GARCH, designed to capture volatility patterns, usually struggle when applied to high frequency data (Chai et al., 2023; Teker et al., 2024). Moreover, general weakness of these methods includes their inability to detect false positives and limited efficiency when handling large datasets (Chai et al., 2023). To address these challenges, our study proposes leveraging measures of risk as an innovative approach to detect anomalies and, by extension, potential fraud within the context of select insurance companies listed in Borsa-Istanbul. These measures of risk offer several advantages over traditional methods, as they are distribution free, contain no model assumption (linear/non-linear) and find volatility directly from data, thereby avoiding problems related to induce volatility.

This study applies four different risk measures to detect anomalies, each with a distinct approach and philosophy. First, Down-to-Up Volatility (DUV) which measures the variation in positive and negative returns in a month, is a measure of risk, representing the disparity between upward and downward price movements and has previously been useful in capturing abnormal price action that could be construed as fraudulent activities (Brockman et al., 2017). The second approach, also widely used is the GK measure of risk (captures the intra-day volatility), used to estimate total risk exposure in the portfolio or market or within a particular sector by specifying the extreme market conditions and potential anomaly, thereby aiding in fraud identification (Haykir & Yagli, 2022a). Both these techniques are based on risk or volatility and approximate second moment of the distribution. Besides, third moment analyses the excess kurtosis in the assets returns prices. It offers a better identification of market anomalies because it considers the marginal nature of the return distribution (Zhang et al., 2022). The third useful indicator is the Negative

Conditional Return Skewness (NCS) – the skewness of returns conditioned on negative returns. This measure aims at the very low end which sometimes results from mergers or other questionable activities in the year of crises (Xu et al., 2022). The fourth measure is the Relative Frequency (RF) of crash days in a month. The third and fourth measures are used as crash risk measures in the literature (PIOTROSKI et al., 2015) and are approximations of the third moment of distribution. After estimating these four risk measures, this study seeks to provide a more comprehensive analysis by combining their effects using two techniques, the Z-score normalization (Jain et al., 2005) and the Mahalanobis distance (Flores-Guerrero et al., 2021) to find joint anomaly detection, then the results will be more robust and reliable.

Review of literature

Financial fraud is a criminal act that involves the provision of misleading information on the company's balance sheets or other financial statements or carrying out of unauthorized financial transaction for achieving a certain goal (Hashim et al., 2020). Such activities may include what could be regarded as manipulation of records in enterprises such as accounting fraud, embezzlement and other forms of financial deception (Senvar & Hamal, 2022). The need for identification of such activities is therefore paramount to upholding market integrity and preventing financiers and competitors from being defrauded. If fraud remains undetected, organizations often face increased financial losses, legal liabilities and damage to their reputation, ultimately causing the public to lose confidence in financial markets (Wells, 2017). Besides, it also reduces specific risks and prevents the recurrence of fraud, and further ensures compliance with financial regulations (Ameyaw et al., 2024). Consequently, both statistics and machine learning are now considered crucial in spotting fraudulent behavioral patterns and containing their impact (Pareek et al., 2022).

Fraud detection in the financial systems altogether has an element of dependency on anomalies because fraud works within a system in a way that it deviates from the usual patterns of data, transactions, or other behaviors. Discrepancies in trade volume, price, and financial statement disparity are suggestive of manipulative fraud such as market manipulation and insider trading, or financial statement fraud (Brennan & McGRATH, 2007; Brockman et al., 2017). Identifying these anomalies has proven essential in minimizing risks and maintaining specific standards (Zhang et al., 2022). For instance, insider trading causes price changes that differ from historical trends and should thus be flagged as Anomalies (Rozeff & Zaman, 1998). Likewise, fraudulent reporting of financial statements may affect some essential values, including earnings or revenue, which can be identified through anomaly detection (Lokanan et al., 2019).

Several scholars have argued that anomalies may indicate more complex fraud schemes that take advantage of weaknesses in financial markets or systems to obtain their desired outcomes, with the exception of manipulating financial data, as in the case of pump-and-dump schemes or even Ponzi schemes (Rozeff & Zaman, 1998). Anomaly detection means a possibility of identifying hidden fraud patterns depending on statistical and machine learning patterns; it helps prevent fraud before they progress (Groll et al., 2024). It is possible to mitigate fraud through a proactive approach, which benefits both financial institutions and regulators by providing real-time detection and preventive measures', increasing market efficiency and stability (Brockman et al., 2017). In other words, anomaly detection remains an essential component of contemporary fraudulent detection models as they can identify financial crimes that may otherwise go unnoticed (Lokanan et al., 2019).

Techniques that measure irregular actions within the different attributes of volatility, risk measures as well as the properties inherent with their distribution have become more prevalent because they are effective in the identification of an abnormal condition within the financial market. A growing consensus in the literature suggests that anomaly detection serves as a proxy for financial fraud detection. However, the methods of identifying anomalies vary across studies, ranging from those based on AI and machine learning to traditional statistical methods. Based on this consensus in the literature, the present study also adopts anomaly detection as an indicator of financial fraud. Specifically, it applies four different methods of risk measures, rooted in traditional statistics for anomaly detection.

These measures of risk are distinct from general anomaly detection approaches, as they detect anomalies from the data directly. This allows them to avoid model specification problems and not rely on a few selected financial assets or a linear correlation coefficient. Furthermore, they are capable of capturing second moment, third moment as well as the daily risks in the stock exchange dataset. So our measures of risk models like Down-to-Up volatility, Relative Frequency or NCS focus on movements of the market abnormalities or great risks (Chen et al., 2001; PIOTROSKI et al., 2015).

Method

In this section, we briefly described the data series, estimation techniques of four anomaly detection methods and comparison approaches.

Data

The study will utilize daily transactional data from Türkiye's stock exchange, encompassing stock opening and closing prices, high and low prices (for GK analysis of price fluctuations), and returns (as measures of relative dispersion for volatility and skewness). Analyzing data from banks, insurance firms, leasing companies, and holding and investment companies is critical due to the distinct nature of financial fraud risks faced by each sector. Considering the distinct nature of volatility of all these companies, the current study focuses only on insurance companies. Insurance companies often contend with fraudulent or exaggerated claims and policy scams, which can involve complex schemes that challenge anomaly detection systems designed to monitor irregular claim patterns (Palacio, 2019).

For the study, daily data from January 2010 to October 2024 of six leading insurance companies, AGESA Hayat Ve Emeklilik A.Ş., AK Sigorta A.Ş.(AKGRT), Anadolu Hayat Emeklilik A.Ş. (ANHYT), Anadolu Anonim Türk Sigorta Şirketi (ANSGR), RAY sigorta A.Ş. (RAYSG), Türkiye Sigorta A.Ş.(TURSG) listed in Borsa Istanbul (BIST-100) have been used. The Y-axis represents share price in Turkish Lira while the X-axis shows dates.
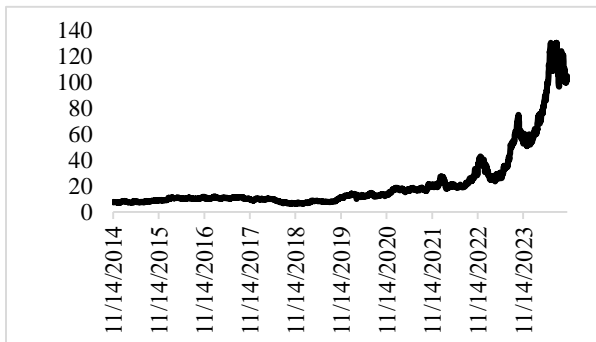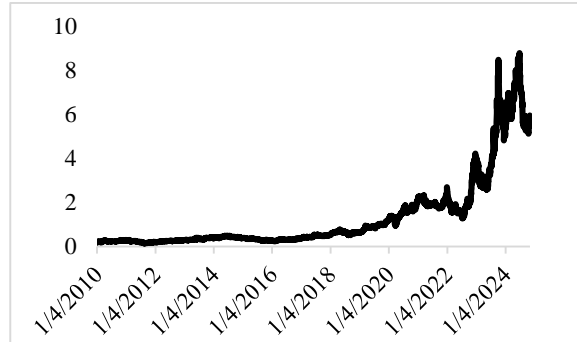

Figure 1: AGESA Share Price
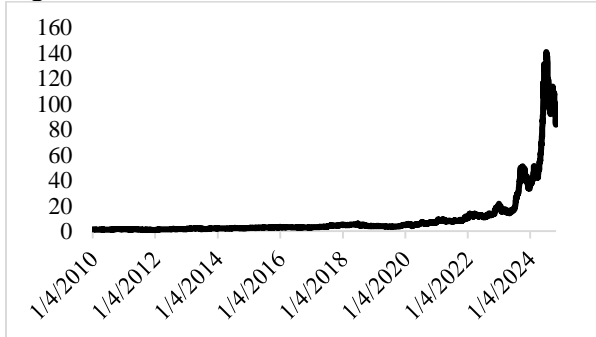

Figure 2: AKGRT Share Price
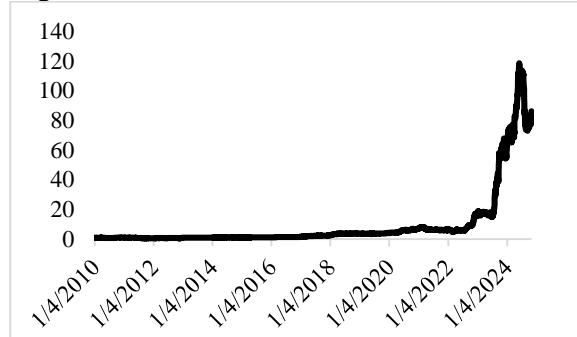

Figure 3: ANHYT Share Price
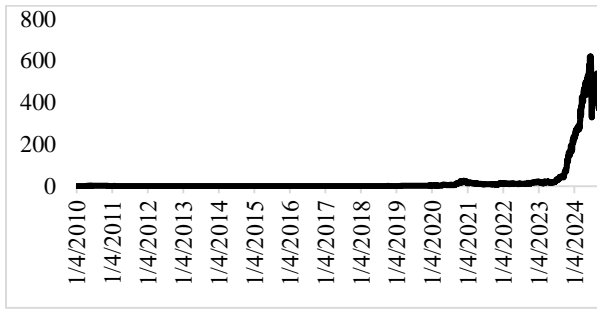

Figure 4: ANSGR Share Price
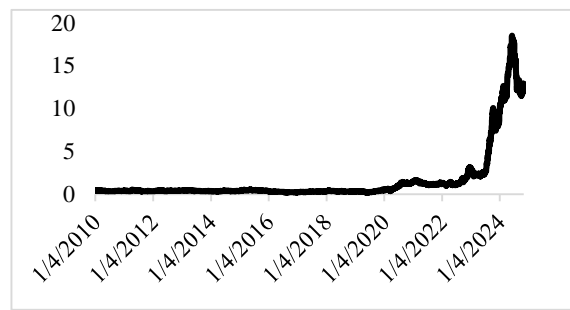
Figure 5: RAYSG Share Price

Figure 6: TURSG Share Price

Figures 1 to 6 display the historical data of the six selected insurance companies. These graphs show the prices and complete pattern of the selected insurance companies listed in BIST-100 over the years from 2010 to 2024. The share prices are escalating from 2010 to start of 2023 for companies (ANHYT, ANSGR, RAYSG and TURSG) and then increased drastically. Whereas for AKGRT and AGESA, the fluctuation started from 2021 showing an increasing pattern. Therefore, the behavior of these selected companies is not the same, which makes them a good study case to analyze.

Techniques for Anomaly detection:

In this study, we develop a methodology that will help identify anomalies in stock market data. For this purpose, we used four different risk measures directly derived from the data, and which vary in nature. The Down-to-Up Volatility (DUV) and Relative Frequency (RF) are measured as second-moment, capturing variations in market movements. In contrast, the Garman-Klass (GK) approach for risk is derived from daily data, providing results on daily basis. However, the NCS is calculated as third moment and capture the lower price fluctuations, provides insight into downside risk within financial market. After calculating the volatility measures, we used 95% confidence interval ($\cup \pm 2\delta$) to detect the anomalies from each measure. As our four volatility measures are different in nature, so they capture anomalies in different time span. In order to have robust and comprehensive results we find joint anomaly, where we used two different methods i) Z-Score Normalization and ii) Mahalanobis Distance. After calculating these two again, we have one variable each and to find the anomaly we again use 95% confidence interval ($\cup \pm 2\delta$). These measures are explained as follows:

Techniques for volatility measures

Four different volatility measures i.e., Negative conditional return skewness, Down to up volatility, GK approach for risk and Relative frequency are used and they measured by the following formulas:

a. **Negative Conditional Return Skewness (NCS):** This captures the risk of negative changes in the prices and can inform market dips after artificially inflated prices (Chang et al., 2013).

$$NCKEW_{it} = -\left[n(n-1)^{\frac{3}{2}} \sum W_{it}^3\right] / \left[(n-1)(n-2)(W_{it}^2)^{3/2}\right]$$

Of course, when n is the number of trading days for firm i in quarter t. This also reveals that higher NCSKEW means higher crash risk (Chen et al., 2001).

b. **Down-to-Up Volatility (DUV):** It is indicated that this metric is logical in showing us the degree of proportional change in prices and thus, the level of asymmetry that exists during manipulation (Chen et al., 2001).

$$DUVOL_{it} = \ln \frac{\{(n_u - 1) \sum_{down} W_{jt}^2\}}{(n_d - 1) \sum_{up} W_{jt}^2}$$

Where n_u is the number of up days and n_d is the number of down days for form I within quarter t. A high DUVOL suggests the highest fraud risk.

c. **GK Approach for Risk (GK):** A daily return variability-based risk estimator which provides view into heightened risk levels associated with fraud (Garman & Klass, 1980; Haykir & Yagli, 2022b).

$$EXV_t = \sqrt{\frac{1}{2}(eh_t - el_t)^2 - (2log2 - 1)ec_t^2}$$

$$eh_t = \log(high_t) - \log(open_t)$$
$$el_t = \log(low_t) - \log(open_t)$$
$$ec_t^2 = \log(close_t) - \log(open_t)$$

d. **Probability or Relative Frequency (RF):** These measures make use of the fact that the return distributions in the case of manipulated data differ from those of normal stocks (PIOTROSKI et al., 2015).

1.1.1. Techniques for Joint Anomaly Detection:

After estimating the individual risk measures to capture anomalies in the insurance sector using the BIST-100 historical dataset, the next step involved conducting joint anomaly detection through two different techniques. When we have four different results from different anomaly detection techniques (Risk Measures), then we need to have combined anomalies so it gives us easy and better understand for outliers / anomalies that we have to focus. We calculated Z-score normalization and Mahalanobis distance and then calculated the Anomalies by using 95% confidence interval ($\cup \pm 2\delta$) and the values outside this will be considered as outliers/anomalies.

a. **Z-Score Normalization:** when we have more than one variable and want to find their joint effect and they have different measure. Then, we can calculate Z score by this formula for each variable:

$$\frac{(X - Min\ X)}{Max\ x - MinX}$$

Here x is the values of variable and from the same variable we can calculate minimum (Min X) and maximum values (Max X) (Jain et al., 2005).

b. **Mahalanobis Distance:** This technique is also used to find joint relationship / effect of different variables, calculated for the same purpose. The Mahalanobis distance calculations can be find out as follows:

$$D^2 = (\frac{(Xi - U)}{\delta})^T \varepsilon^{-1} \frac{(Xi - U)}{\delta}$$

Here Xi is the value of each variable, U is the mean and δ is the variance. Then we have to take the transpose of this vector and multiply with the covariance matrix and matrix $\frac{(Xi-U)}{\delta}$ to find the Mahalanobis distance (Flores-Guerrero et al., 2021).

Results and Discussion

This section is divided into three subsections, i.e. descriptive statistics, anomaly detection estimation and joint anomaly detection.

Descriptive statistics

Table 1 presents the basic descriptive statistics. The average price value highlights the differences in share prices among the selected companies, while the standard deviation reflects the dispersion of the data. The coefficient of variation (CV) offers a measure of relative dispersion across all series. The data indicate that only two of the selected companies exhibit a lower relative dispersion compared to the CV of the overall market, whereas four companies demonstrate more volatile series than the broader market.

Table 1

Descriptive Statistics of Six Listed Insurance Companies Share Price

Company	Observations	Mean	Std. Dev.	CV	Min	Max
AGESA	2499	22.212	24.961	1.124	6.32	130.5
AKGRT	3722	1.312	1.73	1.319	0.145	8.8
ANHYT	3722	9.991	20.172	2.019	0.96	140.8
ANSGR	3722	9.351	20.757	2.22	0.553	118.3
RAYSG	3722	30.305	98.784	3.26	0.41	622
TURSG	3722	1.551	3.224	2.079	0.188	18.538

Anomaly detection estimation

As described in the previous section, all four risk measure methods were applied on the data set and calculate the values for these measures and then use 95% confidence interval ($\cup \pm 2\delta$) approach to detect the anomalies in RF, GK risk, Down to Up volatility and NCS for the selected insurance companies. Due to their different nature, they detect anomalies sometimes at different time in the data-set.

Within Figures 7, 8, 9 and 10 regarding AGESA, the first company, the DUV method estimated six anomalies, NCS detected seven, RF method detected three and GK approach detected one anomaly. Notably, the month of June 2015 is a common anomaly across DUV, NCS and RF.
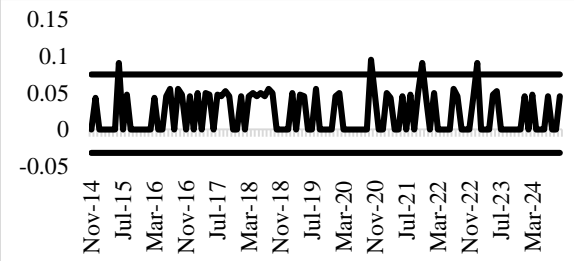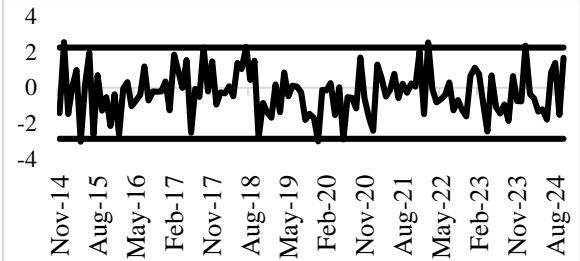

Figure 7: Anomalies in AGESA by using RF

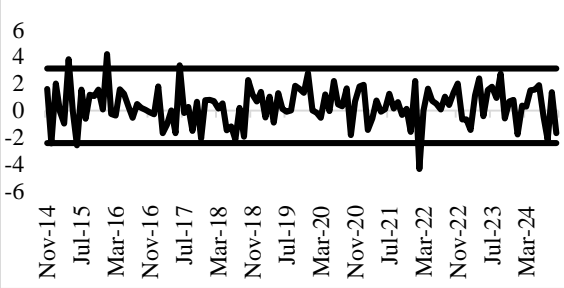Figure 8: Anomalies in AGESA by using NCS
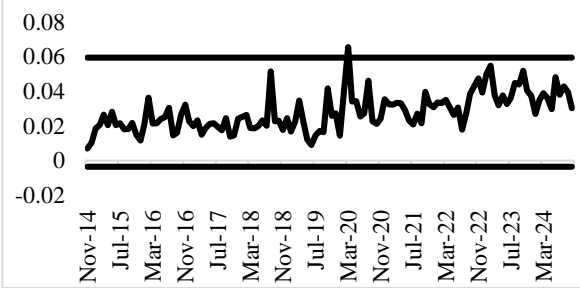

Figure 9: Anomalies in AGESA by using DUV

Figure 10: Anomalies in AGESA by using GK

Similarly, for AKGRT company, the DUV method estimated 11 anomalies, NCS detected 10, RF method detected 10 and GK approach detected 11 anomalies, as presented in the figures below (Figures 11-14).
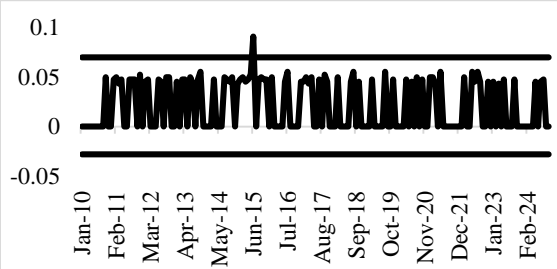

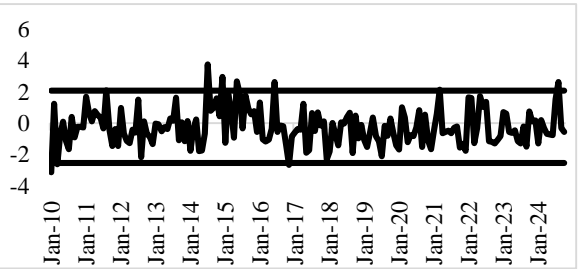Figure 11: Anomalies in AKGRT by using RF

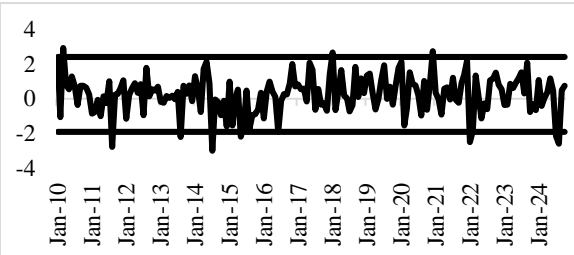Figure 12: Anomalies in AKGRT by using NCS

Figure 13: Anomalies in AKGRT by using DUV
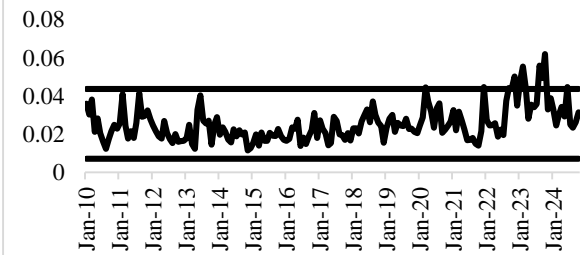
Figure 14: Anomalies in AKGRT by using GK

Furthermore, for ANHYT company, the DUV method estimated 10 anomalies, NCS detected eight, RF method detected seven and GK approach detected nine anomalies, as presented in the figures below (Figures 15-18).

Figure 15: Anomalies in ANHYT by using RF
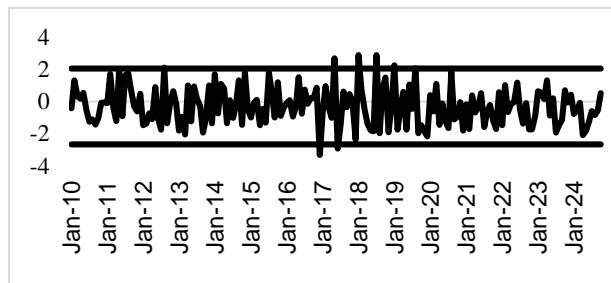
Figure 16: Anomalies in ANHYT by using NCS
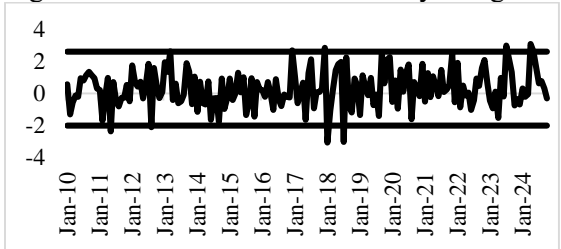
Figure 17: Anomalies in ANHYT by using DUV
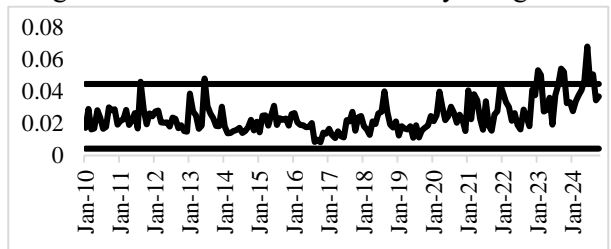
Figure 18: Anomalies in ANHYT by using GK

On similar lines, for ANSGR company, the DUV method estimated 10 anomalies, NCS detected eight, RF method detected six and GK approach detected eight anomalies, as presented in the figures below (Figures 19-22).

Figure 19: Anomalies in ANSGR by using RF
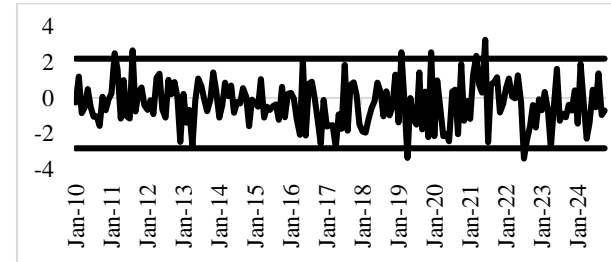
Figure 20: Anomalies in ANSGR by using NCS
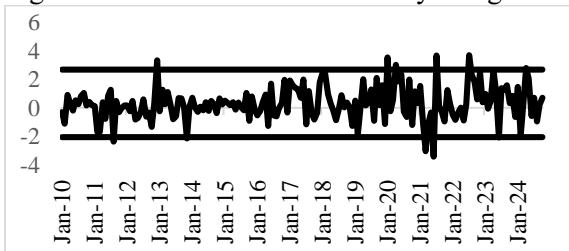
Figure 21: Anomalies in ANSGR by using DUV
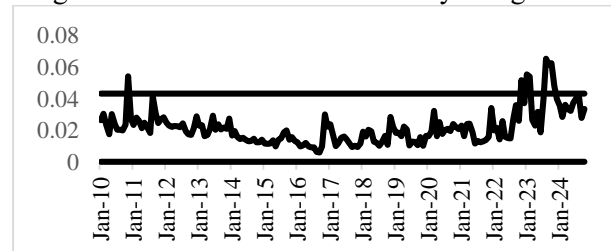
Figure 22: Anomalies in ANSGR by using GK

For RAYSG company, the DUV method estimated nine anomalies, NCS detected 9, Relative Frequency method detected seven and GK approach detected 13 anomalies, as presented in the figures below (Figures 23-26).
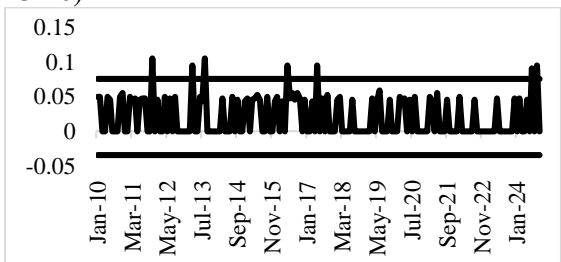
Figure 23: Anomalies in RAYSG by using RF
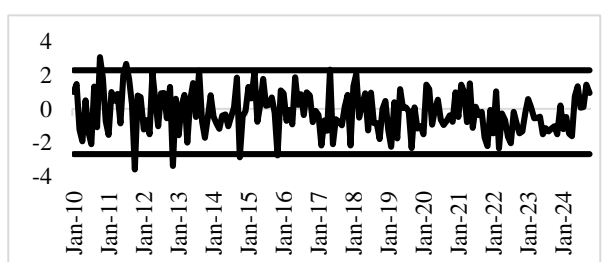
Figure 24: Anomalies in RAYSG by using NCS
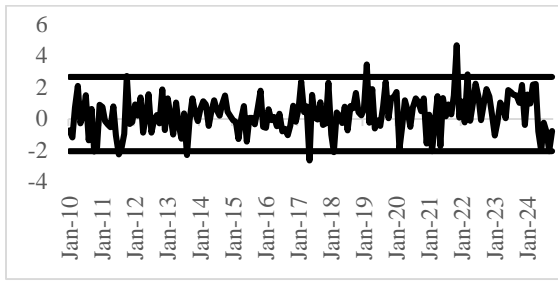
Figure 25: Anomalies in RAYSG by using DUV
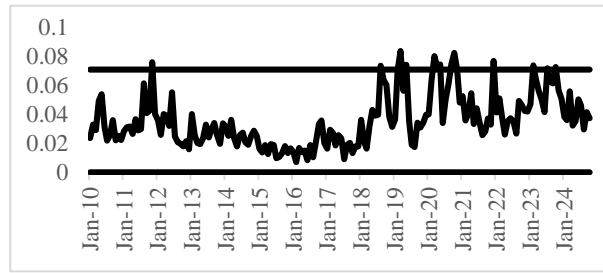
Figure 26: Anomalies in RAYSG by using GK

Lastly, for TURSG company, the DUV method estimated seven anomalies, NCS detected seven, RF method detected five and GK approach detected 11 anomalies, as presented in the figures below (Figures 27-30).
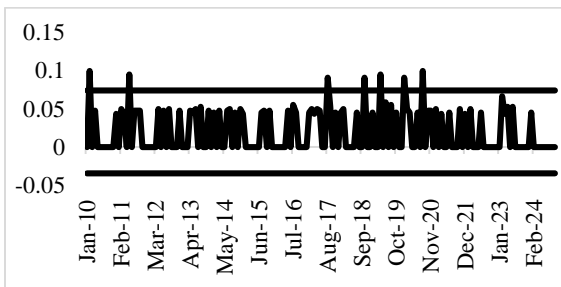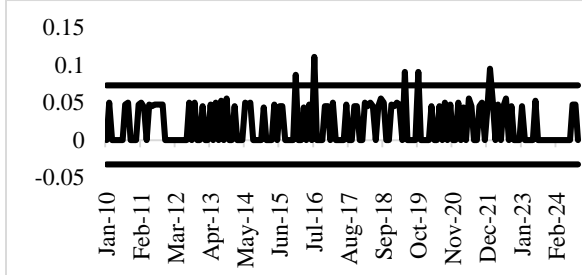

Figure 27: Anomalies in TURSG by using RF
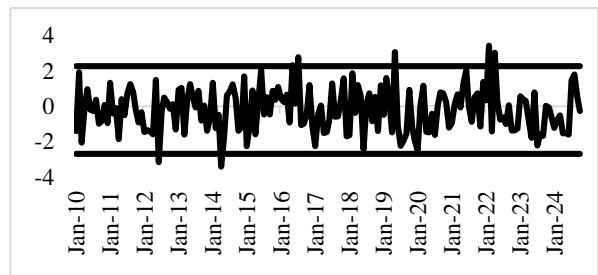
Figure 28: Anomalies in TURSG by using NCS
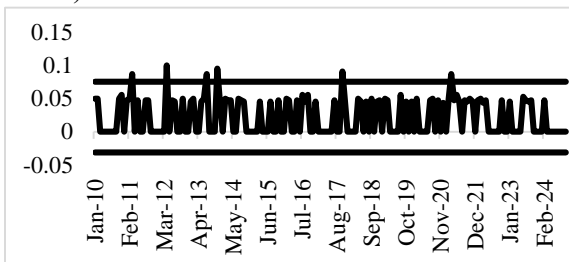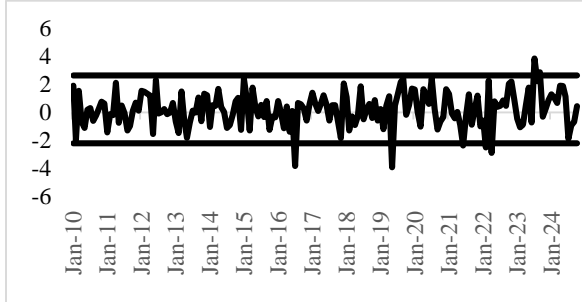

Figure 29: Anomalies in TURSG by using DUV
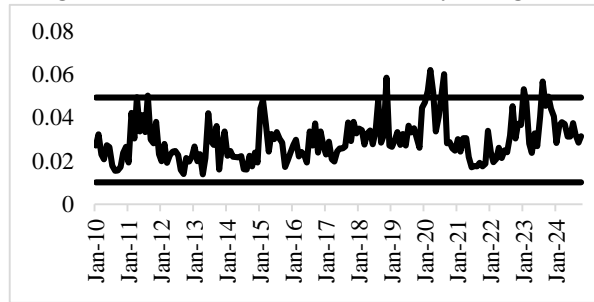
Figure 30: Anomalies in TURSG by using GK

The analysis revealed inconsistencies among the four methods, with variations not only in the number of anomalies identified within a given period but also in their timing and direction. These discrepancies are further illustrated in Table 2 below, which shows no correlation between GK and RF or GK and NCS, and only a weak correlation between GK and DUV. In contrast, DUV demonstrates a significant but negative correlation with RF and NCS, while NCS and RF exhibit a positive correlation.

Table 2
Correlation Among the Anomaly Detection Methods

Variables	(1)	(2)	(3)	(4)
(1) RF	1.000			
(2) NCS	0.574	1.000		
(3) DUV	-0.541	-0.913	1.000	
(4) GK	-0.075	-0.069	0.117	1.000

The highlighted results underscore the necessity of a comprehensive joint anomaly detection from these risk measure, which is presented in the following subsection.

Joint Anomaly Detection Methods
In order to have a joint Anomaly detection, we used two different techniques, Z-Score Normalization and Mahalanobis Distance. After calculating Z-score for each risk measure, we took the average and then calculated the anomalies by using 95% confidence interval ($\cup \pm 2\delta$). The values outside

were to be considered as anomalies. For Mahalanobis Distance, we considered four risk measures (DUV, NCS, RF and GK) as vectors and used the distance formula $(\frac{(X-U)}{\delta})^T \varepsilon^{-1} \frac{(X-U)}{\delta}$, which is second moment and then calculated the anomalies by using 95% confidence interval ($\cup \pm 2\delta$).
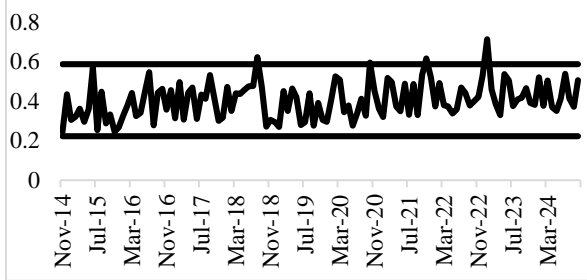
Figure 31: Joint anomaly detection in AGESA by Using Z Score Normalization
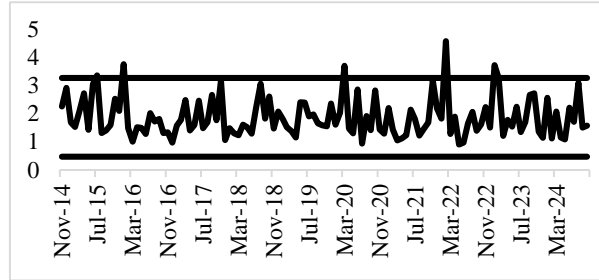
Figure 32: Joint anomaly detection in AGESA by Using Mahalanobis Distance

When we apply joint anomaly detection methods to find anomalies (Figure 31 and 32), we 4 anomalies in AGESA insurance company by Z score normalization whereas 5 anomalies by using Mahalanobis distance. When investigated further, there was only one common anomaly between Z-score and Mahalanobis distance.
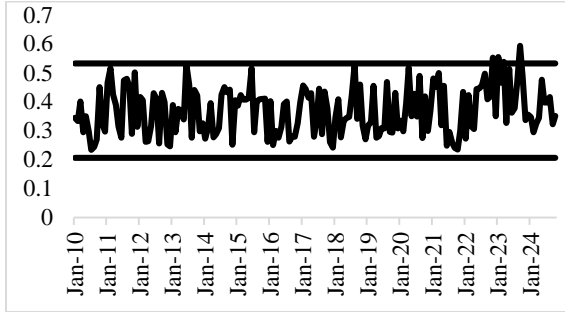
Figure 33: Joint anomaly detection in AKGRT by Using Z Score Normalization
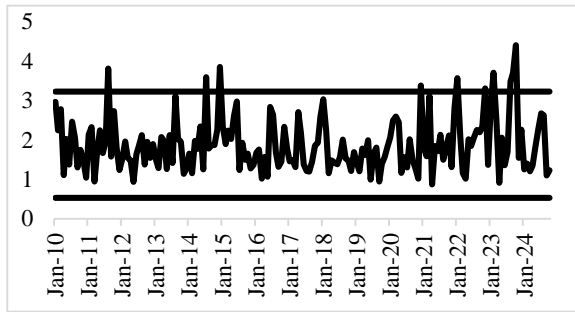
Figure 34: Joint anomaly detection in AKGRT by Using Mahalanobis Distance

Similarly, the number of anomalies in AKGRT insurance company were four when using the Z-Score normalization method and 10 when using Mahalanobis distance. Two anomalies were the same when using different joint anomaly measure. Mahalanobis distance provided better results here as well.
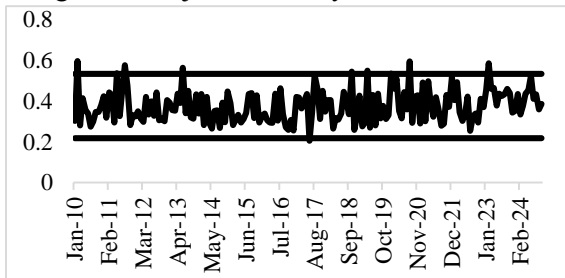
Figure 35: Joint anomaly detection in ANHYT by Using Z Score Normalization
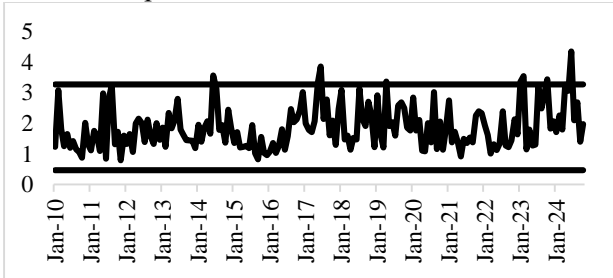
Figure 36: Joint anomaly detection in ANHYT by Using Mahalanobis Distance

In Figure 35 and 36, Mahalanobis distance showed eight anomalies whereas Z-score normalization showed 10, with three anomalies being common between the two. Even number of anomalies were lesser when using Mahalanobis distance but the original data reveals that these 08 are real anomalies as compared to 10 by Z score.
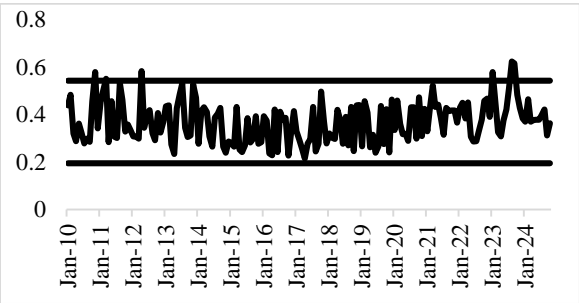
Figure 37: Joint anomaly detection in ANSGR by Using Z Score Normalization
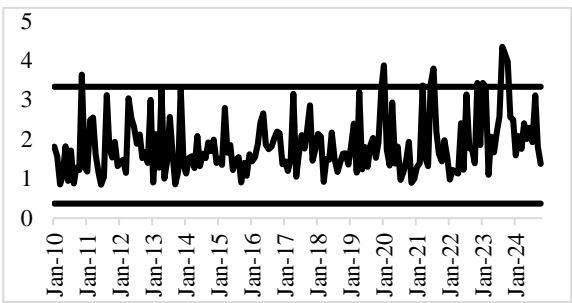
Figure 38: Joint anomaly detection in ANSGR by Using Mahalanobis Distance

In Figures 37 and 38, Z score normalization identified six anomalies in ANSGR insurance company whereas Mahalanobis Distance detect 10. Out of the total, four anomalies are the same (detected by both methods). Again, when we referred to the data, Mahalanobis distance outperformed Z-score normalization.
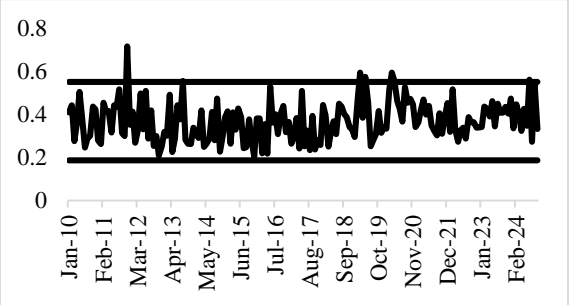
Figure 39: Joint anomaly detection in RAYSG by Using Z Score Normalization
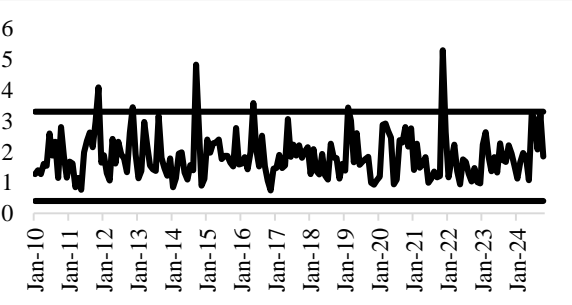
Figure 40: Joint anomaly detection in RAYSG by Using Mahalanobis Distance

For RAYSG, Z Score Normalization detected seven anomalies and Mahalanobis detected six while one anomaly is jointly detected. In term of RAYSG insurance, all 12 anomalies are important but Mahalanobis distance gave the best one.
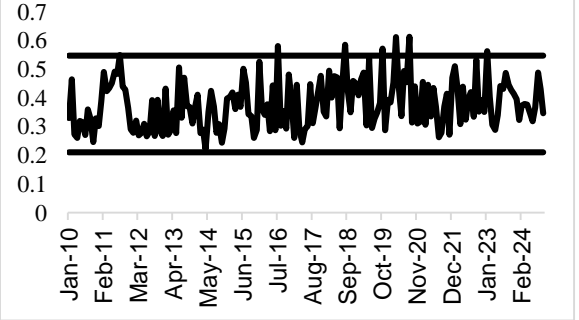
Figure 41: Joint anomaly detection in TURSG by Using Z Score Normalization
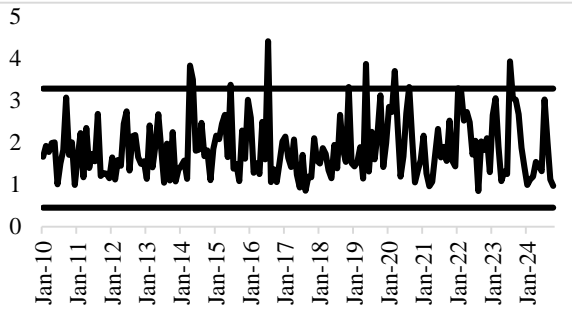
Figure 42: Joint anomaly detection in TURSG by Using Mahalanobis Distance

From figure 41 and 42, total 15 anomalies were detected from the historical data of the TURSG insurance company. 10 anomalies were detected through Mahalanobis Distance, seven through Z-score normalization and two from both the methods.

Therefore, our study advances anomaly detection literature by comparing four risk measures in insurance sector of Türkiye. Unlike traditional approaches, the proposed use of Mahalanobis distance offers greater robustness and efficiency. This method enhances detection accuracy while reducing complexity, providing investors with clearer signals and enabling stock exchange regulators to flag irregularities more effectively, thereby promoting market transparency and fairness.

Conclusion

Our study aimed to detect anomalies in the six insurance companies listed in Borsa-Istanbul using four different measures of risk. These measures of risk demonstrated better performance compared to the traditional model-based anomaly detection methods such as ARCH, GARCH, ARIMA for financial fraud detection in stock exchange historical data. The measures of risk use the historical data directly for anomaly detection instead of making them stationary and they do not need the data to follow the any distribution, so we can avoid the misspecification problem. Furthermore, they mitigated issues related to induced volatility, often introduced by the mean equation of traditional anomaly detection methods. By using these measures of risk, we detected the anomalies and found that our risk measures vary according to the dataset. DUV proved to be more effective for AKGRT, AGESA and ANSGR whereas the GK approach provide better results for ANHYT, RAYSG and TURSG, due to higher daily in their stock prices. The AKGRT dataset, displayed consistently strong detection outcomes across all four risk measures.

We developed a joint anomaly detection method, which is multi-dimensional and robust by using Z-Score Normalization and Mahalanobis Distance approach. Z-Score Normalization treated each measure equally while also ignoring the overlapping effect among the anomaly detection measures. On the other hand, Mahalanobis distance method not only join them but also considered correlations among anomaly detection methods. The results showed that Mahalanobis distance performed well for joint anomaly detection, as it provided more anomalies as compared to Z-Score Normalization and have some same anomalies. However, for RAYSG, the Z-score Normalization performed better as compared to Mahalanobis distance. The existence of the anomalies in the data reflects the presence of the Efficient Market Hypothesis. In essence, the data appears to depart from the predictions of the Efficient Market Hypothesis, implying that market price may not fully reflect all available information.

Based on our conclusions, we suggest that while undergoing anomaly detection in high frequency dataset, it is better to use these measures of risk rather than GARCH, ARIMA and ARMA models. Moreover, to have more comprehensive and robust results, one may use Mahalanobis distance and Z-score normalization based on these four measures of risk. In future, the fraud detection through anomalies using these four risk measures and then on the basis of these four, the two robust measures can be used in cryptocurrency market as this market is highly volatile and prone to financial frauds.

The empirical findings highlight the presence of abnormal return patterns and potential fraud within the insurance sector. Therefore, investors are advised to incorporate risk measure for anomaly detection to enhance portfolio risk management, particularly during periods of high volatility. On the other side, stock exchange regulators should strengthen surveillance mechanisms to identify and mitigate irregular trading behaviors promptly by employing risk measures.

References

Alqurayn, A., Kulendran ,Nada, & and Ihalanayake, R. (2024). An event study of potential insider trading in the Saudi stock market. *Cogent Economics & Finance*, *12*(1), 2367368. https://doi.org/10.1080/23322039.2024.2367368

Ameyaw, M. N., Idemudia, C., & Iyelolu, T. V. (2024). Financial compliance as a pillar of corporate integrity: A thorough analysis of fraud prevention. *Finance & Accounting Research Journal*, *6*(7), 1157–1177.

Brennan, N. M., & McGRATH, M. (2007). Financial Statement Fraud: Some Lessons from US and European Case Studies. *Australian Accounting Review*, *17*(42), 49–61. https://doi.org/10.1111/j.1835-2561.2007.tb00443.x

Brockman, P., Li, X., & Price, S. M. (2017). Conference Call Tone and Stock Returns: Evidence from the Stock Exchange of Hong Kong. *Asia-Pacific Journal of Financial Studies*, *46(5)*, 667–685.

Chai, F., Li, Y., Zhang, X., & Chen, Z. (2023). Daily Semiparametric GARCH Model Estimation Using Intraday High-Frequency Data. *Symmetry*, *15*(4), 908. https://doi.org/10.3390/sym15040908

Chandola, V., Banerjee, A., & Kumar, V. (2009). Anomaly detection: A survey. *ACM Comput. Surv.*, *41*(3), 15:1-15:58. https://doi.org/10.1145/1541880.1541882

Chang, B. Y., Christoffersen, P., & Jacobs, K. (2013). Market skewness risk and the cross section of stock returns. *Journal of Financial Economics*, *107*(1), 46–68. https://doi.org/10.1016/j.jfineco.2012.07.002

Chen, J., Hong, H., & Stein, J. C. (2001). Forecasting crashes: Trading volume, past returns, and conditional skewness in stock prices. *Journal of Financial Economics*, *61*(3), 345–381. https://doi.org/10.1016/S0304-405X(01)00066-6

Comerton-Forde, C., & Putniņš, T. J. (2014). Stock Price Manipulation: Prevalence and Determinants*. *Review of Finance*, *18*(1), 23–66. https://doi.org/10.1093/rof/rfs040

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2), 344–401. https://doi.org/10.1016/j.jacceco.2010.09.001

Fahlevie, R. A., Oktasari, E., Nurmawati, B., Setiawan, P. A. H., & Dimalouw, J. A. (2022). PUMP AND DUMP CRIMINAL OVERVIEW ACCORDING TO CAPITAL MARKET LAW NO. 8 YEAR 1995. *Awang Long Law Review*, *5*(1), Article 1. https://doi.org/10.56301/awl.v5i1.547

Faizan, A., Saeed, M. A., & Kausar, S. (2018). Past and Future of Derivative/Future Market: Substantiation of Calendar Anomalies. *FWU Journal of Social Sciences*, *12*(1), 31–41.

Flores-Guerrero, J. L., Grzegorczyk, M. A., Connelly, M. A., Garcia, E., Navis, G., Dullaart, R. P. F., & Bakker, S. J. L. (2021). Mahalanobis distance, a novel statistical proxy of homeostasis loss is longitudinally associated with risk of type 2 diabetes. *eBioMedicine*, *71*. https://doi.org/10.1016/j.ebiom.2021.103550

Garman, M. B., & Klass, M. J. (1980). On the Estimation of Security Price Volatilities from Historical Data. *The Journal of Business*, *53*(1), 67–78.

Groll, A., Khanna, A., & Zeldin, L. (2024). *A Machine Learning-based Anomaly Detection Framework in Life Insurance Contracts* (No. arXiv:2411.17495). arXiv. https://doi.org/10.48550/arXiv.2411.17495

Hashim, H. A., Salleh, Z., Shuhaimi, I., & Ismail, N. A. N. (2020). The risk of financial fraud: A management perspective. *Journal of Financial Crime*, *27*(4), 1143–1159. https://doi.org/10.1108/JFC-04-2020-0062

Hawkins, D. M. (1980). *Identification of Outliers*. Springer Netherlands. https://doi.org/10.1007/978-94-015-3994-4

Haykir, O., & Yagli, I. (2022a). Speculative bubbles and herding in cryptocurrencies. *Financial Innovation*, *8*(1), 78. https://doi.org/10.1186/s40854-022-00383-0

Haykir, O., & Yagli, I. (2022b). Speculative bubbles and herding in cryptocurrencies. *Financial Innovation*, *8*(1), 78. https://doi.org/10.1186/s40854-022-00383-0

Hodge, V., & Austin, J. (2004). A Survey of Outlier Detection Methodologies. *Artificial Intelligence Review*, *22*(2), 85–126. https://doi.org/10.1023/B:AIRE.0000045502.10941.a9

Jain, A., Nandakumar, K., & Ross, A. (2005). Score normalization in multimodal biometric systems. *Pattern Recognition*, *38*(12), 2270–2285. https://doi.org/10.1016/j.patcog.2005.01.012

Khan, S., Mahmood, F., & Younas, S. (2024). Impact of Fınancıal Knowledge and Investor's Personalıty Traıts on Investment Intentıon: Role of Attıtude and Fınancıal Self Efficacy. *FWU Journal of Social Sciences*, *18*(1). http://121.52.146.40/fwu-journal/index.php/ojss/article/download/3033/23#page=124

La Morgia, M., Mei, A., Sassi, F., & Stefa, J. (2023). The Doge of Wall Street: Analysis and Detection of Pump and Dump Cryptocurrency Manipulations. *ACM Trans. Internet Technol.*, *23*(1), 11:1-11:28. https://doi.org/10.1145/3561300

Lee, E. J., Lee ,Yu Kyung, & and Kim, R. (2024). Profitability and herding of trade-based pump-and-dump manipulation. *Applied Economics*, *56*(20), 2375–2385. https://doi.org/10.1080/00036846.2023.2182405

Lokanan, M., Tran, V., & Vuong, N. H. (2019). Detecting anomalies in financial statements using machine learning algorithm: The case of Vietnamese listed firms. *Asian Journal of Accounting Research*, *4*(2), 181–201. https://doi.org/10.1108/AJAR-09-2018-0032

Palacio, S. M. (2019). Abnormal Pattern Prediction: Detecting Fraudulent Insurance Property Claims with Semi-Supervised Machine-Learning. *Data Science Journal*, *18*, 35–35. https://doi.org/10.5334/dsj-2019-035

Pareek, K., Sharma, R., Sharma, S., & Rao, A. (2022). Machine Learning In Fraud Detection and Prevention. *Tuijin Jishu/Journal of Propulsion Technology*, *43*(4), Article 4. https://doi.org/10.52783/tjjpt.v43.i3.2344

PIOTROSKI, J. D., Wong, T. J., & Zhang, T. (2015). Political Incentives to Suppress Negative Information: Evidence from Chinese Listed Firms. *Journal of Accounting Research*, *53(2)*, 405–459.

Rozeff, M. S., & Zaman, M. A. (1998). Overreaction and Insider Trading: Evidence from Growth and Value Portfolios. *The Journal of Finance*, *53*(2), 701–716. https://doi.org/10.1111/0022-1082.275500

Salas-Molina, F., Rodríguez-Aguilar, J. A., Serrà, J., Guillen, M., & Martin, F. J. (2017). *Empirical analysis of daily cash flow time series and its implications for forecasting* (No. arXiv:1611.04941). arXiv. https://doi.org/10.48550/arXiv.1611.04941

Senvar, O., & Hamal, S. (2022). Examining Fraudulent Financial Statements of Turkish Small and Medium Enterprises (SMEs) from Different Sectors. *Avrupa Bilim ve Teknoloji Dergisi*, *41*, Article 41. https://doi.org/10.31590/ejosat.1063728

Seyhun, H. N. (1986). Insiders' profits, costs of trading, and market efficiency. *Journal of Financial Economics*, *16*(2), 189–212. https://doi.org/10.1016/0304-405X(86)90060-7

Svitlana, Y., & Kostiantyn, H. (2023). World stock market: Current state and prospects of development of stock exchange. *Ekon. Visnik Dnìprovs'kogo Deržavnogo Teh. Unìversitetu*, *2*, 60–66.

Teker, D. L., Teker, S., & Gümüştepe, E. D. (2024). BACKCASTING BITCOIN VOLATILITY: ARCH AND GARCH APPROACHES. *PressAcademia Procedia*, *20*(1), Article 1. https://doi.org/10.17261/Pressacademia.2024.1918

Wells, J. T. (2017). *Corporate Fraud Handbook: Prevention and Detection*. John Wiley & Sons.

Xu, Z., Li, X., Chevapatrakul, T., & Gao, N. (2022). Default risk, macroeconomic conditions, and the market skewness risk premium. *Journal of International Money and Finance*, *127*, 102683. https://doi.org/10.1016/j.jimonfin.2022.102683

Zhang, M., Li, T., Yu, Y., Li, Y., Hui, P., & Zheng, Y. (2022). Urban Anomaly Analytics: Description, Detection, and Prediction. *IEEE Transactions on Big Data*, *8*(3), 809–826. IEEE Transactions on Big Data. https://doi.org/10.1109/TBDATA.2020.2991008

The 1923 Egyptian Mahmal Incident: A Historical Analysis of Al-Qibla's Political Coverage

Ekhlas Mohammed Al-Eide
Al-Balqa Applied University, Jordan

Hmoud Mud'an Iyal Salman
Applied Science University, Bahrain

Hadi Abdulfattah Ali Al-Mahasneh
Aqaba University of Medical Sciences, Jordan

As the official newspaper representing the Hijaz government, Al-Qibla documented the incident of the Egyptian Hajj Mahmal returning to Egypt without performing the Hajj rituals in 1341 AH / 1923 AD, through media coverage that discussed the details and circumstances of this incident. This study aims to analyse Al-Qibla's coverage of the incident. Using a descriptive methodology to interpret events within their historical and political contexts. Additionally, the study relies on the analysis of numerical data derived from historical records to provide a clearer understanding of the media and historical perspectives related to the incident. The study reveals that Al-Qibla's media coverage was not merely a documentation of the event but served as a political tool employed by the Hijaz government to strengthen its position regarding the return of the Mahmal and highlight its independent decision-making in managing Hajj affairs. This coverage occurred within the context of tense relations between the Hejaz and Egypt, as a result of British interventions that sought to strengthen their influence in the region by fueling disputes between Arab countries .

Keywords: Al-Qibla, Egyptian Hajj Mahmal, Egyptian-Hejazi relations, British colonial intervention.

The Egyptian Mahmal pilgrimage was an annual tradition maintained by the Egyptian state, accompanied by an official delegation tasked with delivering the Kiswah (the covering of the Kaaba) and distributing gifts and charitable donations to the needy in Mecca. This practice bore symbolic meanings that intertwined religious patronage with political influence, rendering it a significant tool in shaping relations between Egypt and the Hijaz, particularly in the context of the political transformations that followed the collapse of the Ottoman Empire and the rise of Hashemite rule in the region (Al-Mansour, 2021). Against this backdrop, the present study examines the incident surrounding the return of the Egyptian Mahmal in 1923. This incident greatly strained the political and religious relationship between the Egyptian government and the newly formed Hashemite regime in the Hijaz during the early 20th century. It occurred within a complex regional context shaped by the aftermath of World War I and the influence of colonial powers-

Correspondence concerning this article should be addressed to Dr. Ekhlas Mohammed Al-Eide, Associate Professor, Department of Basic Sciences, Al-Balqa Applied University, Jordan, Email: d.ekhlas1979@bau.edu.jo

particularly Britain, which exercised indirect control over Egypt and played a key role in shaping the political dynamics of the Arabian Peninsula.

Method

This study adopts a dual methodological approach that combines qualitative and quantitative content analysis to offer a comprehensive reading of Al-Qibla's treatment of the 1923 incident. The first part offers a descriptive and contextual analysis to examine the historical content, while the second part applies quantitative textual methods through a digital analysis of the relevant newspaper issues. This aims to extract numerical indicators to evaluate the Media Coverage and to interpret the political and media dimensions of the incident within its historical context.

Research Problem

This study addresses the following central question: How did Al-Qibla's coverage of the 1923 Egyptian Mahmal incident reflect the political orientations of the Hashemite government in the Hijaz? Moreover, what rhetorical strategies did the newspaper employ to articulate the Hijazi narrative of the event within the broader context of the post-World War I struggle over religious legitimacy and political influence in the Arabian Peninsula?

Literature Review

Although numerous studies have addressed the relationship between Egypt and the Hijaz, particularly in relation to pilgrimage and religious institutions, the 1923 Mahmal incident has received limited scholarly attention. Most academic works have focused on the 1926 incident, which led to the Egyptian government's suspension of the Mahmal and financial allocations to the Two Holy Mosques for over a decade. The significance of the present study lies in its focus on an underexplored historical event and its reliance on a primary source—Al-Qibla —that has yet to be examined systematically. Moreover, the study contributes to filling a research gap in the literature on early Arab journalism and its role in shaping political discourse in the Arab East during the 1920s.

Preliminary Historical Study
Egyptian Mahmal: Religious and Political Symbolism

The Egyptian Mahmal stood out from those sent by other Islamic countries to the Hijaz due to its strong religious and political symbolism. Since Sultan Al-Zahir Baybars (r. 1260–1277 CE) transferred the privilege of manufacturing the Kaaba's cloth to Egypt in 1266 AH (Youssef, 1937), the Egyptian Mahmal became responsible for carrying the Kaaba's covering (Kiswah), along with a ceremonial cloth(Surra) containing donations and gifts to be distributed to the needy in the two holy cities. This became an annual tradition, celebrated with official and popular events across Egyptian cities. The Mahmal would proceed in a formal procession, accompanied by flags, Qur'anic recitations, scholars, Huffaz (Qur'an memorizers), and soldiers (Al-Kharboutli, 1991).

Over time, this repeated ceremonial practice transformed the Mahmal into a multidimensional symbol of what can be described as Egypt's "symbolic hegemony" over the two holy cities, presenting itself as a guardian of Islamic sacred sites (Rifaat, 2015). This symbolism was further reinforced by Egypt's close relationship with the Sharif of Mecca, which allowed Cairo to maintain a presence in the Hijaz. The reception of the Egyptian Mahmal in Jeddah often reflected the political dynamics between Cairo and the Hijaz, serving as an indicator of cooperation or

tension. The associated ceremonies and religious speeches frequently carried political messages directed both domestically and internationally (Anqawi, 1972).

At the beginning of the 20th century, especially after World War I, the Mahmal's status came under challenge due to regional political shifts, most notably, the fall of the Ottoman Empire, the rise of the Hashemites in the Hijaz, and the growing influence of Britain in Egypt. During this period, the Mahmal became a symbolic battleground for the legitimacy of overseeing Islamic holy sites. This tension culminated in the incidents involving the Egyptian Mahmal in 1923 and 1926. In response, King Abdulaziz Al-Saud issued a decree to end the tradition, forbidding Egypt from offering gifts to the Sharifs of the Hijaz or needy pilgrims. He also established a factory in the Hijaz to produce the Kaaba's cloth locally. In doing so, King Abdulaziz rejected any religious symbol that could represent external religious or political authority over the Hijaz (Qariqli, 2015).

Al-Qibla Newspaper: The Voice of the Hashemite Government

Al-Qibla was the first Arab Hashemite newspaper, established under the patronage of Sharif Hussein bin Ali, the Sharif of Mecca. It was the official mouthpiece of the Hashemite political leadership, promoting its nationalist and liberationist goals. Closely tied to the project of the Great Arab Revolt, the newspaper played a key role in articulating the Arab anti-Ottoman discourse and presenting Sharif Hussein as the Arab leader who would unite the Arab nation (Khalidi, 2004).

Sharif Hussein bin Ali ordered the newspaper to be printed at the Royal Press in Ajyad Fortress in Mecca (Wahim, 1985), with two issues per week—Mondays and Thursdays—each four pages. The first issue was published on Monday, 15 Shawwal 1334 AH (15 August 1916 CE) and continued for about eight years. The last issue, number 823, was dated Safar 1343 AH (dated September 25, 1924 [1]CE)

The newspaper explicitly stated its mission in a motto that appeared on the front page of every issue: "A newspaper for Islam and the Arabs." Its role was to publish political, military, social, and religious news from the Arab and Islamic world and from around the world in general. This was evident in its interaction with the Arab and international press, exchanging news, articles, and correspondence with various newspapers, magazines, and news agencies (Al-Jawarna, 2012).

From its inception until 1920, the paper was managed by the famous Islamic preacher Sheikh Muhibb al-Din al-Khatib ˙who was titled "Editor-in-Chief". Hassan al-Subban succeeded him from Morocco, who oversaw the publication until 1924 (Osman, 1997). Among the notable contributors was Sharif Hussein bin Ali himself—may he rest in peace—who personally oversaw the editorial direction of the newspaper and wrote many of the articles. The editorial team included famous Arab nationalists such as Fouad Al-Khatib[2] , the poet of the Arab Revolt, and Jamil Al-Azm[3], and many intellectuals who worked for the advancement of the Arab nation (Al-Qibla, 2016).

The newspaper is a must primary reference for researchers studying Hashemite policy in the Hejaz. It documents the government's stance on Arab and regional issues and shows how the Hashemite leadership used political discourse and media to promote the vision and aspirations of Sharif Hussein bin Ali amidst the regional political changes.

The Historical Treatment of the Press Coverage of the Return of the Egyptian Hajj Mahmal in 1923, as Covered by Al-Qibla

Al-Qibla covered the incident of the return of the Egyptian Hajj Mahmal without performing the Hajj rituals in 1923, within issues (704-723). This special press coverage included the following:

The Official Statement of the Hijaz Government Regarding the Incident

The government of the Kingdom of Hijaz announced that on Friday, July 11, 1923, the Egyptian Hajj Mahmal returned from Jeddah to Suez, along with all those accompanying it, without completing the pilgrimage rituals. Given the significance of this incident, the government issued an official statement published in the editorial of issue 704 of Al-Qibla newspaper, dated July 16, 1923. The statement included all the telegrams[4] exchanged between the governments of Hijaz and Egypt. It confirmed that the dispute began when the Egyptian government, contrary to the customary annual practice, decided to send two medical delegations with the Egyptian Hajj Mahmal. Each delegation consisted of two doctors and two pharmacists[5], with one delegation stationed at the Egyptian[6] Takiyya in Mecca and the other at the Mahmal station in Jeddah[7](Al-Qibla,2016, issue 704).

It appears that the Egyptian government based its decision to send the two medical delegations on a report submitted by Mabrouk Fahmy Pasha, the Emir of the Egyptian Hajj mission in 1922. The report highlighted the poor healthcare services provided by the Hijaz government to pilgrims and stressed the need for a medical mission to assist patients, given the scarcity of doctors in Hijaz (Abdelmoula, 2020). However, the Hijaz government rejected this decision, considering it an unacceptable interference in its internal affairs. Instead, it demanded that the Egyptian Ministry of Endowments (Awqaf) fulfil its obligation to provide the designated endowments for the Two Holy Mosques (Al-Qibla,2016, issue 704). Historically, Egypt had regularly sent both monetary and in-kind aid to Hijaz, with the value fluctuating annually (Bayoumi, 2001). However, due to British interventions and their influence on Egyptian financial policies, these contributions had significantly declined since 1922 (Al-Momani, 2006).

The Egyptian Ministry of Foreign Affairs refused to link the issue of endowments owed by the Egyptian Ministry of Awqaf to the Hijaz government with the request to allow the medical delegations. It justified its position by asserting that the endowment matter was a separate issue that could be discussed and resolved at another time. In contrast, the medical delegations were purely a humanitarian concern, and thus, the Egyptian government urged the Hijaz government to approve their deployment. However, before receiving explicit permission, Egypt had already dispatched the medical teams. Upon their arrival at Jeddah's port on July 3, 1923, the Egyptian Hajj delegate in Jeddah, Dr. Mohamed Amin Abdel Rahman, sent a telegram to the Hijaz government requesting permission to unload the medical equipment. The government denied his request, informing him that the decision regarding the medical delegations had already been settled in prior discussions with the Egyptian government (Al-Qibla, 2016, issue 704)[8].

The Hijaz government attempted to persuade Egypt to reconsider its stance, sending a telegram emphasizing its commitment to maintaining strong and amicable relations between the two nations. The message also noted that the medical delegations' missions were projects that required careful study regarding their content and implications, stressing the need to adhere to existing laws governing the establishment of such medical institutions. Despite multiple discussions and proposed solutions from the Hijaz government aimed at preventing the Egyptian Hajj Mahmal

from returning without completing the Hajj, the Egyptian government refused any resolution that did not include the approval of the medical delegations' settlement in Mecca and Jeddah. Consequently, on Monday, July 12, 1923, the Egyptian Hajj Mahmal returned to Suez without performing Hajj, marking the beginning of a period of strained relations between Egypt and the Kingdom of Hijaz (Al-Qibla, 2016, issue 704).

The coverage of the incident reveals the strategic use of a media discourse as a tool to solidify the authority of the King of the Hijaz, establish new boundaries for Hijazi sovereignty, and redefine the relationship with the Islamic world, at a moment when symbols were more expressive than reality. This was confirmed by its editor-in-chief, Hassan al-Subban, who stated that a careful analysis of the events of the Egyptian Mahmal incident in 1923 reveals that the essence of the issue lies in understanding the desired goal behind the stance of each party: the Hijazis and the Egyptians. After the government of the Hijaz realized that the purpose of the demands of the Egyptian government was direct interference in its jurisdiction, diminishing its value and encroaching on its sovereign rights, it decided to reject them and adhere to the principle of its sovereignty and its right to prevent any interference in the affairs of the Hijaz in any form (Al-Qibla, 2016, issue 704).

The Coverage of Egyptian Newspapers on the Return of the Mahmal Incident in 1923: An Analysis by Al-Qibla

A close examination of Al-Qibla's editorial approach reveals that it paid significant attention to engaging with the content of Arabic newspapers on various issues. However, despite this general approach, the newspaper explicitly expressed its desire to avoid addressing the content published in Egyptian newspapers concerning the return of the Mahmal. The editor-in-chief justified this decision by stating that the coverage in Egyptian newspapers contained claims that were inconsistent with the truth. Despite this reservation, it yielded to the pressures coming from Egyptian writers and pilgrims, who sought to refute the claims of the Egyptian press, most notably, Al-Ahram newspaper. The newspaper republished articles and letters refuting what it considered to be journalistic fabrications, as part of a defensive strategy with clear political overtones aimed at exposing the media conspiracies that aim, according to the newspaper's discourse, to undermine the independence of the Hijaz and delegitimize the Hashemite rule.

In this context, Al-Qiblah reflected the diversity of opinions among Egyptian newspapers through its media discourse. Some supported the Egyptian government's decision to recall the Mahmal, others opposed the decision, while some refrained from assigning blame to any Arab party. Instead, they attributed the escalation of tensions surrounding the Mahmal's return to foreign colonial interventions.

Among the materials Al-Qiblah chose to republish were articles, highlighting the hostility of the Egyptian newspapers towards the Hijazi government, which featured a lengthy article titled "They Say with Their Tongues: The Lies of Al-Ahram About the Egyptian Mission." The article, authored by Egyptian pilgrim Abdul Aziz Sabri, warned readers against being misled by the falsehoods propagated by Al-Ahram's editorial management, represented by its Lebanese-born Christian editor-in-chief[9]. He accused him of exploiting the newspaper to serve his religious biases by seizing every opportunity to attack the government of the Holy Lands. This alleged editorial policy was clearly illustrated when Al-Ahram published the Egyptian government's official statement on the Mahmal crisis under the provocative headline: "The Obstinacy and Extremism of the Hejaz Government." The statement noted that the Hejaz government opposed the entry of the Egyptian medical mission, perceiving it as foreign interference and an infringement on its

sovereignty. Al-Ahram's editorial comment on this issue was: "Has anyone ever heard of a government preventing a group of people from entering its land along with their doctors, medicines, and tents? And how could such an act be deemed a violation of sovereignty and interference in internal affairs?".According to Abdul Aziz Sabri, this commentary was intended to fuel resentment among Muslims (Al-Qibla, 1916, Issue 705, p. 3).

In Issue No. 707, published on Thursday, August 2, 1923[10], Al-Qibla printed an article titled: "Indeed, Your Lord Knows Best Who Has Strayed from His Way..." This article was based on a letter received from an Egyptian writer, which contained testimony from several Mahmal officials. They confirmed that all Egyptian pilgrims aboard the Mahmal ship disembarked in Jeddah upon learning of the Egyptian Hajj Amir's decision to return the vessel to Egypt. Only a few officials remained on board, having been prohibited from disembarking by the Amir himself. Upon their arrival in Suez, these officials, including the Amir's secretary, encountered another ship carrying pilgrims heading to Jeddah. They then decided to return with them to perform the pilgrimage, despite obstruction from Egyptian authorities. This eyewitness testimony was cited as evidence to refute the allegations made by Egyptian newspapers against the Hejaz government and its king (Al-Qibla,2016, Issue 707).

Al-Qibla continued its coverage, responding to Egyptian newspapers that supported the Hejaz government's stance through articles contributed by Egyptian writers. One such piece, published in Al-Muqattam newspaper under the title "The Truth about the Dispute between Egypt and Hejaz," recounted the events surrounding the Mahmal's return. The writer emphasized the importance of Egyptian citizens understanding the real situation and supporting the truth wherever it lies. Additionally, Al-Qibla reprinted a telegram sent to Al-Muqattam by Mr. Hafiz Tuqan, head of the Nablus Islamic Society. In it, he expressed Muslim discontent and rejection of the Egyptian newspapers' hostile rhetoric and their denigration of the King of Hejaz (Al-Qibla, 2016, Issue 707)

In Issue No. 708, Al-Qibla republished an article by Mr. Muhammad Al-Hatari, originally printed in Al-Mu'tadil newspaper under the title "They Speak without Knowledge." After reviewing the Mahmal incident, the author argued that, regardless of the nature of the dispute between the two governments, their relations should return to a state of amity and mutual respect due to their shared religious and national ties (Al-Qibla, 2016, Issue 708).

Egyptian writers also addressed the stance of neutral Egyptian newspapers, which did not attribute the responsibility for the Mahmal's return to any Arab party. Instead, they blamed the escalating tensions on foreign colonial interventions opposed to the decision. Among these was an article by an Egyptian pilgrim who had performed Hajj the year the Mahmal returned to Egypt, published in Al-Balagh, a prominent nationalist newspaper advocating Arab unity(Al-Zirikli, 1980). The writer contended that after the King of Hejaz refused to sign the Treaty of Versailles, recognize British and French colonial rule over Arab lands, or accept British guardianship over Hejaz, Britain sought to subjugate Hejaz through political pressure. It cut off financial aid previously pledged to Hejaz and encouraged Ibn Saud to threaten the region. Simultaneously, Britain subtly suggested to the King of Hejaz that only it could shield him from Ibn Saud's threats[11]. After repeated failures to persuade the King to sign a guardianship treaty, Britain resorted to new tactics. In 1339 AH, it sent a memorandum stating that British India had decided to dispatch a medical mission of thirty doctors, pharmacists, and nurses to assist in Hajj health services. Britain insisted that this delegation participate in setting public health regulations in collaboration with the Hejaz authorities. The King

of Hejaz firmly rejected this, viewing it as direct interference in Hejaz's internal affairs (Al-Qibla, 2016, Issue 706).

The author concluded that both the Egyptian and Hejaz governments had fallen into a trap set by Britain. Their mismanagement of the issue transformed their relations from fraternity to hostility, allowing Britain to achieve its objectives. He concluded with a scathing rebuke of Egyptian newspapers, accusing them of exacerbating the dispute through excessive debate, thus deepening the rift between the two nations (Al-Qibla, 2016, Issue 706).

Al-Qibla was keen on deconstructing the official religious discourse that supported the return of the Mahmal by challenging the fatwas of the Egyptian Mufti and the Sheikh of Al-Azhar, which it saw as instrumentalizing religion to serve political agendas that do not represent Islamic or Arab interests. The editor-in-chief of the newspaper, Hassan al-Subban, presented a counter discourse based on delegitimizing those fatwas, calling for a return to the (maqāṣid) of Sharia, not to the directives of the central authority or the state's jurisprudence (Al-Qibla, 2016, issue 710).

Through this analytical reading, it becomes clear that Al-Qibla was not just a platform for voices supporting the Hijaz, but played an interpretive political role, redefining the incident in its editorial stance: defending the independence of the Hijaz, exposing media complicity, and reinforcing the legitimacy of the Hashemite leadership in the face of Egyptian hegemony or British tutelage.

Arab media solidarity and popular reactions to the Mahmal incident.

Al-Qibla's analysis of the Arab newspapers' coverage of the incident of the return of the Egyptian Hajj caravan in 1923 reveals a clear escalation in Arab nationalist discourse and resistance to colonial media narratives. Following its initial interaction with Egyptian newspaper coverage, Al-Qibla expanded its media discourse to include the positions of other Arab newspapers that adopted a supportive stance towards the Hijazi government and rejected the smear attempts carried out by some Egyptian newspapers, including Al-Ahram.

Al-Qibla published in its issue (708) a collection of articles and messages that shed light on a common Arab media discourse characterized by a strong ethos. Among these materials, the newspaper republished an article from the Damascus-based newspaper Al-Ghuraba titled "Al-Hijaz and the Egyptian Press," in which the newspaper asserted that the dispute between the governments of Egypt and Al-Hijaz was an administrative dispute sparked by the Egyptian Amir Al-Hajj. However, the Egyptian newspapers sought to condemn the dispute and turn it into a doctrinal issue to incite public opinion in the Islamic world against the government of Al-Hijaz. The article countered this interpretation by stating that the Egyptian pilgrims performed the rituals in their entirety without any interference from their government, thus denying the religious dimension of the crisis (Al-Qibla, 2016, issue 708).

In this context, Al-Qibla republished an article from the newspaper Al-Sharq titled "The Bright Truth in the Mahmal Case", which stated that the government of the Hijaz did not oppose to receiving the Egyptian medical mission in principle, but objected to Cairo's disregard for the traditional protocols followed, and imposed changes that the Hijaz saw as a violation of its sovereignty. The article called for respecting customs as a safeguard for the independence of the decision of the Hijaz (Al-Qibla, 2016, issue 708).

Al-Qibla also quoted the Palestinian newspaper Al-Karmel, confirming that the Egyptian media hype about the Mahmal was unjustified, and that the King of the Hijaz's refusal to grant additional privileges to the medical mission was motivated by the desire to prevent precedents that other Arab countries under colonization could exploit to demand similar privileges. Thus, the Hashemite media discourse links medical privileges to colonial risks, presenting the government of the Hijaz as a line of defense for Arab sovereignty (Al-Qibla, 2016, issue 708).

Within this common Arab media framework, Al-Qibla published an interview conducted by a Syrian newspaper with Prince Abdullah bin Hussein, in which he expressed his regret for what had happened, indicating that the position of the Hijaz government was simply a commitment to independence, which is a legitimate right for any government. He questioned why Egyptians were objecting to a demand they had long held in their national discourse[12] (Al-Qibla, 2016, issue 708).

In addition to the press release, Al-Qibla highlighted a wide popular interaction with the crisis by publishing in the same issue (708) several messages of support from various Arab countries, including a message from the leaders of Karak expressing their gratitude to King Hussein bin Ali for safeguarding the holy land, and a message from an Iraqi pilgrim praising the services provided by the Hijaz government, denying Egyptian claims of neglect or mistreatment of pilgrims(Al-Qibla, 2016, issue 708).

The newspaper also published in a later issue (713) protest messages from the people of Beirut, Palestine, Syria, Iraq, and Sudan to the Egyptian government and the Prime Minister, expressing their rejection of the false accusations spread by Egyptian newspapers against the King of Hijaz, and demanding an end to these media campaigns. Some of them called for boycotting these newspapers and preventing their circulation in Arab countries, emphasizing the importance of Arab understanding and constructive dialogue (Al-Qibla, 2016, issue 713).

These telegrams and articles of support highlight that the unified stance of the Hijaz was not limited to pilgrims or religious elites but included individuals from various social groups, such as writers, merchants, doctors, students, and scholars. This indicates that the crisis sparked a popular reaction that transcended the local level, leading to a collective expression of national awareness that rejects the politicization of religious sentiments on one hand, and rejects colonial privileges on the other(Al-Qibla, 2016, issue 713).

In conclusion of its coverage of this issue, Al-Qibla in its issue (712) affirmed that the articles and messages it published represent only a small part of the Arab solidarity with the government of the Hijaz, expressing its pride in the Arab spirit of chivalry that stood united against attempts to divide brothers under the guise of religion or humanitarian privileges (Al-Qibla, 2016, issue 712).

A Quantitative Analytical Statistical Study of the Press Coverage Published by Al-Qibla Regarding the Return of the Egyptian Mahmal in 1923

This section of the study employs the quantitative content analysis method as a systematic tool to examine Al-Qibla newspaper's coverage of the return of the Egyptian Hajj caravan in 1923, according to measurable indicators. This method was chosen as it allows for the objective and organized monitoring of media coverage patterns by tracking topic frequency, distribution of information sources, and direction of journalistic discourse. This analysis aims to answer several key questions:

1. What were the priorities in Al-Qibla's coverage of the incident?

2. What types of sources did the newspaper rely on?

3. What was the nature of the journalistic treatment: was Al-Qibla proactive in its coverage, or did it react to what was published, did it express its editorial stance directly, or convey external viewpoints of other parties?

The newspaper articles were classified into three patterns of sources:

• (1) The Official Government Telegrams Included in the Hijaz Government Statement

• (2) Egyptian newspapers, which the newspaper used either by citing their content or critically engaging with their narrative.

• (3) Arab media solidarity and popular reactions to the Mahmal incident. This section includes:

* The Coverage of Al-Qibla on the Arab Press Reporting of the Return of the Egyptian Mahmal Incident

 * Al-Qibla's analysis of Arab Support for the Hijazi Government's Position on the Incident of the Return of the Egyptian Hajj Mahmal

 The study developed a coding scheme that identifies the key elements in each analytical unit, such as the type of material, its source, size, and overall direction of discourse. This analytical framework enabled the extraction of precise quantitative data, facilitating the inference of objective implications about the newspaper's orientations and editorial choices in dealing with the incident.

The Official Government Telegrams Included in the Hijaz Government Statement

   Official government telegrams are among the most important sources that newspapers and magazines rely on in their coverage of events, as they reflect the official stance of the government entity on the matter being covered. Regarding the official telegrams used by Al-Qibla newspaper, it is observed that they were limited to those included in the official statement of the Hijaz government concerning the incident of the return of the Egyptian Mahmal. These telegrams were published in issue No. (704), dated July 16, 1923.

Table 1

Government Telegrams Utilized by Al-Qibla in Constructing Its Coverage of the Caravan Crisis

No.	Sender	Recipient	Date of Telegram Source
1	Minister of Egyptian Foreign Affairs	Egyptian Consulate	3rd Dhul-Qi'dah 1341 AH
2	Minister of Egyptian Foreign Affairs	Egyptian Consulate	4th Dhul-Qi'dah 1341 AH
3	Minister of Egyptian Foreign Affairs	Egyptian Consulate	5th Dhul-Qi'dah 1341 AH
4	Deputy Minister of Egyptian Foreign Affairs	Egyptian Consulate	6th Dhul-Qi'dah1341 AH
5	Minister of Egyptian Foreign Affairs	Egyptian Consulate	7th Dhul-Qi'dah 1341 AH
6	Deputy Minister of Egyptian Foreign Affairs	Egyptian Consulate	7th Dhul-Qi'dah 1341 AH
7	King Hussein bin Ali	Government of Hijaz	20th Dhul-Qi'dah 1341 AH
8	Bureau of Al-Istikhbarat (Intelligence)	Government of Hijaz	20th Dhul-Qi'dah 1341 AH
9	Emir of Hajj, Hijaz	Government of Hijaz	20th Dhul-Qi'dah 1341 AH
10	Chief Judge of the Hijaz Government	Government of Hijaz	27th Dhul-Qi'dah 1341 AH
11	Emir of Hajj, Hijaz	Government of Hijaz	29th Dhul-Qi'dah 1341 AH

   It is noted from the table(1), that Al-Qibla relied on eleven documents during its coverage of the events. These documents included exchanged messages between representatives of the governments of Hejaz and Egypt, dated within the period from 3 Dhu al-Qi'dah – 29 Dhu al-Qi'dah 1341 AH / April 27 – May 23, 1923, which corresponds to the time the Egyptian Hajj Mahmal spent in the port of Jeddah before its return to Egyptian territory.

The newspaper employed these telegrams to produce a media discourse which could be described as 'institutional neutrality', which means publishing the official information without any direct editorial commentary, allowing readers to reach their own conclusions. This provides the newspaper with an objective cover, subtly hiding a slight bias to the Hijazi position.

The importance of these documents was highlighted within the quantitative approach as they form a clear unit of analysis in terms of their sources, dates, and subjects. They also allow the tracking of the incident day by day, adding to the journalistic material a higher level of documentation and reliability. Despite their small number compared to other sources relied upon by the newspaper, their importance lies not in their number density, but in their political and symbolic weight.

Al-Qibla's Analysis of Egyptian Press Coverage of the Return of the Egyptian Mahmal

During its coverage of the articles, telegrams, and press statements sent by Egyptian writers and pilgrims, Al-Qibla was keen on reviewing all the diverse opinions presented in the Egyptian newspapers. This explains the variety of Egyptian newspapers addressed by Al-Qibla in its analysis of the Egyptian press coverage, as illustrated in the following table.

Table 2

Al-Qibla's Analysis of Egyptian Press Coverage of the Return of the Egyptian Hajj Mahmal in 1923

No.	Newspaper	Journalistic Material			Documentation from Al-Qibla Newspaper (by Issue Number)
		Article	Telegram	Press Release	
1	Al-Muqattam	13	4	0	707/709/710/712/714/715/716/717
2	Al-Balagh	9	1	0	706/707/709/715/718/720
3	Al-Mu`tadel	3	0	1	708/709/716/720
4	Al-Siyasa	3	0	0	714/715
5	Al-Nazir	1	0	0	716
6	Al-Mahrousa	1	0	0	718
7	Al-Watan	1	1	0	706/721
8	Wadi Al-Nil	0	1	0	706
9	Al-Umma	0	1	0	706
10	Al-Baseer	0	1	0	706
11	Al-Akhbar	0	1	0	706
12	Al-Afkar	1	1	0	706/721
13	Al-Nizam	0	1	0	706
14	Al-Ahram	1	1	0	706/713
15	Misr	1	1	0	706
Total		**33**	**14**	**1**	

The table's results indicate that Al-Qibla addressed 48 journalistic materials from 15 Egyptian newspapers that covered the incident of the return of the Mahmal. Among these, articles ranked first, with a total of 33 articles analysing the incident. Telegrams came in second place, totalling 14, while press statements were the least utilized journalistic materials, as these newspapers published only one press statement on the incident. This distribution reflects Al-Qibla's focus on using articles to shape an Egyptian media discourse that supports the Hijazi position, as articles are considered the most utilized journalistic tools in presenting general viewpoints compared to telegrams and press releases, which perform a more formal and direct media function.

As for the Egyptian newspapers that provided the most extensive coverage of the incident, this is clearly illustrated in the following Figure.

Figure No. (1): Egyptian Newspapers' Coverage of the Return of the Egyptian Mahmal
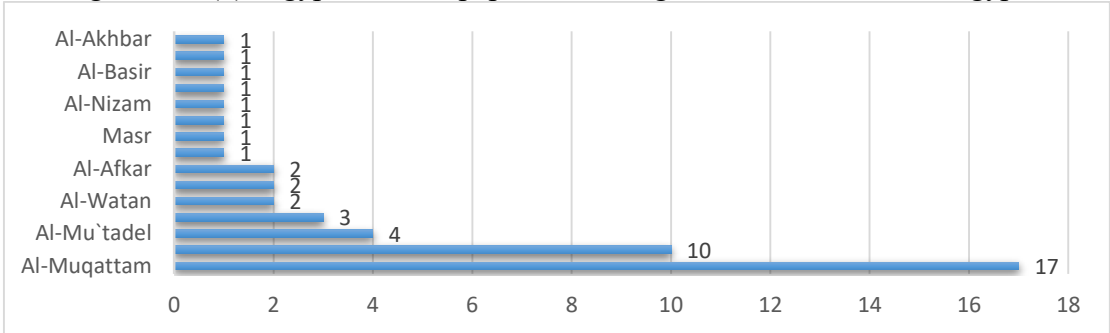
Regarding the Egyptian newspapers that covered the incident the most, Al-Muqattam ranked first, with 17 journalistic treatments of the incident. It was followed by Al-Balagh in second place, with 10 journalistic treatments. Meanwhile, the newspapers Al-Nafir, Al-Mahrousa, Wadi Al-Nil, Al-Umma, Al-Baseer, Al-Akhbar, Al-Nizam, and Misr ranked last, each providing only one journalistic treatment. This result shows Al-Qibla's media discourse's interest in Egyptian papers that support the Hijazi government, despite Al-Qibla's declaration of committing to a neutral position when speaking of its strategy in presenting the Egyptian papers' viewpoints on the incident.

Arab media solidarity and popular reactions to the Mahmal incident
The Coverage of Al-Qibla on the Arab Press Reporting of the Return of the Egyptian Mahmal Incident

Al-Qibla closely followed everything published in the newspapers of the Levant and Iraq regarding the incident of the return of the Egyptian Mahmal. It republished a considerable number of journalistic materials from those newspapers to clarify its supportive stance toward the Hashemite government of Hijaz.

The following Figure illustrates the coverage of those Arab newspapers as published by Al-Qibla newspaper.

Figure 2
The Coverage of Arab Newspapers on the Return of the Egyptian Hajj Mahmal Incident
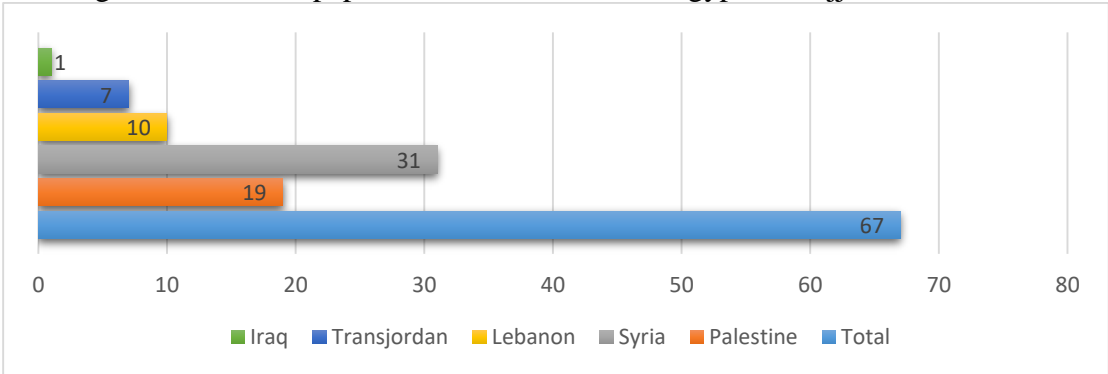
The results of the Figure indicate that the Syrian newspapers provided the most extensive coverage of the return of the Egyptian Hajj Mahmal incident, publishing a total of 31 journalistic pieces on the event. Palestinian newspapers ranked second, covering the incident with 19 journalistic pieces, followed by Jordanian newspapers in third place and Lebanese newspapers in fourth. Meanwhile, Iraqi newspapers ranked last, publishing only one piece.

These results reflect how the media discourse leans towards the Syrian, Palestinian, and Jordanian newspapers, which saw Al-Sharif Al-Hussein and his government in the Hijaz as an extension to the renaissance project, which began alongside the Great Arab Revolt. The results also emphasize the newspaper's striving to create an Arabic media front that supports the Hijazi government's legitimacy in the face of the Arabic and Islamic public opinion. This is what's called 'directed neutrality' in journalistic studies, as allied positions are provided with a more influential portion, while opposing positions are presented in an uninfluential manner. It could be said that Al-Qibla's discourse wasn't merely a news carrier, but was a political and journalistic tool aimed at guiding the public's opinion towards supporting the Hijazi government while maintaining an appearance of formal objectivity.

Al-Qibla's analysis of Arab Support for the Hijazi Government's Position on the Incident of the Return of the Egyptian Mahmal

Various segments of Arab society in the Levant, the Nile Valley, Iraq, and Yemen—including citizens and social institutions—closely followed the tensions that arose in the relations between Hijaz and Egypt due to the stance of the Egyp/tian government and some Egyptian newspapers regarding the return of the Egyptian Mahmal.

The following chart illustrates what Arabs published in Al-Qibla newspaper concerning this event.

Figure 3

Journalistic materials sent by Arabs to support the Hijazi Government's position on the incident.
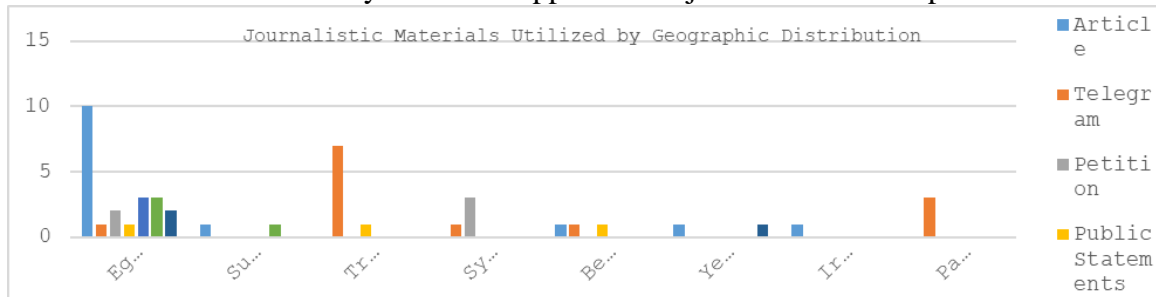
The Figure results show that the focal points of Arab condemnation of the Egyptian government's stance on the incident were concentrated in eight Arab countries: Egypt, Sudan, Transjordan, Syria, Lebanon, Yemen, Iraq, and Palestine. Egypt ranked first, with a total of 22 press materials expressing its citizens' disapproval of the Egyptian government's stance on the incident. Transjordan's free citizens came in second place with a total of 8 press materials, followed by Syria and Palestine, each with a total of two press materials. Graph No. (3) Illustrates these results.

As for the most utilized press materials (articles, telegrams, petitions, public statements, poems, speeches, and sermons), in expressing Arab condemnation of the Egyptian government's stance on the incident, they amounted to a total of 34 press materials. Articles ranked first with a

total of 13, followed by petitions and poems, each with 5). Telegrams and speeches came next, each with a total of 4. The least utilized form was the sermon, with only one instance.

The findings of this section show that Al-Qibla newspaper in its coverage of the 1923 Egyptian Mahmal return, adopted a media discourse strategy of transmitting external positions rather than having an independent editorial line. This is evident in the 180 news items published in the newspaper, 63.88% of which were sourced from other Arab newspapers (Egyptian, Levantine, Iraqi) and 18.89% from Arab societies. Only 11.11% were from Al-Qibla's own editorial team and 6.11% from official government communications and telegrams from the Hejaz government.

This shows how little the newspaper relies on internal or official sources, so the editorial line prioritizes external views over internal narrative. This is confirmed by the editor in chief, Hasan al-Sabban, who said Al-Qibla prefers to reprint materials from other Arab newspapers or from "free Arabs" to get an objective and balanced view of the events. This can be understood in the concept of "external legitimation," which is discussed in political communication studies where media institutions use external sources to boost their credibility and to support the positions they take.

Findings

This study examined the 1923 incident involving the return of the Egyptian Hajj Mahmal through an analysis of official data, telegrams, letters, and articles published in Al-Qibla, the Hijazi newspaper, within issues numbered 704 to 723. The study reached the following conclusions:

1. Al-Qibla's coverage of the Egyptian Hajj Mahmal incident confirmed that the primary reason behind its failure to complete the pilgrimage journey lay in the differing perspectives of the Hijaz and Egyptian governments regarding their objectives. The Hijazi government, upon realizing that the Egyptian government's demands were driven by British colonial ambitions, decided to reject them, asserting its sovereignty and its right to manage its internal affairs without external interference.

2. Al-Qibla emphasized that the dispute between the Hijaz and Egyptian governments in 1923 was administrative in nature. However, Egyptian newspapers transformed it into a religious conflict to incite Islamic public opinion against the King of the Hijaz. In reality, the issue was entirely unrelated to religion, as evidenced by the large number of messages, telegrams, and letters sent by Arabs from the Levant, Iraq, and Yemen, expressing their condemnation of the Egyptian newspapers' stance and rejecting the accusations made against the King of the Hijaz and his government.

3. The study shows Al-Qibla did not just report the return of the Egyptian Mahmal in 1923; it used the event to build a media narrative for the Hejaz government's political views and its authority in Hajj affairs.1. Al-Qibla did not just report the return of the Egyptian Mahmal in 1923; it used the event to build a media narrative for the Hejaz government's political views and its authority in Hajj affairs.

4. Al-Qibla's quantitative content analysis shows that the newspaper was going for an appearance of objectivity. This was done by echoing external views that supported the Hejaz government's policies rather than generating internal editorial content. This is a deliberate and calculated media discourse management to support the Hejaz government and its narrative against the Egyptian official account.

Recommendations

1. More research is needed on Arab press discourse analysis in the 1920s Arab Renaissance as it's a rich source for understanding political and symbolic transformations in the Arab East.

2. Religious rituals—Mahmal procession and Kiswah (Kaaba covering)—should not be seen as mere spiritual practices but as diplomatic and sovereign tools where religious and political interests meet.

3. Historical studies should combine descriptive methods (for interpreting historical narratives) with quantitative methods (digital content analysis). This interdisciplinary approach gives you a deeper understanding of the historical context through descriptive insight and a set of measurable indicators to guide you towards new analytical perspectives.

Endnotes

[1] Due to the significance of this newspaper, which was an established media institution dedicated to promoting the ideology and values of the Arab Renaissance, His Highness Prince Hassan bin Talal ordered, on the occasion of the centenary of the Great Arab Revolt in 2016, the reprinting of all its issues. This project was undertaken by Ward Jordanian Publishing and Distribution House. See :(Al-Qibla, 2016, Editor's Introduction).

[2] Fu'ad al-Khatib was among the prominent Arab intellectuals and thinkers who significantly contributed to the development of the concept of the Arab Renaissance as articulated by Arab nationalists and later adopted by Sharif Hussein bin Ali. His influential and diverse contributions were particularly evident in the numerous articles he published in Al-Qibla newspaper. For an in-depth examination of Fu'ad al-Khatib's views and ideas as presented in Al-Qibla. (Al-Khatib, 2015).

[3] Jamil al-Azm (1873–1933) was a Syrian intellectual and literary figure born in Istanbul and later relocated to Damascus. He was among the pioneers of the reform movement in the early 20th century and founded the Syrian journal Al-Basa'ir. (Al-Zarkali, 2002).

[4] Refer to Table (1) in this study.

[5] (Ajzakhana) (Singular: Ajzakhana) is a Persian-origin word meaning a pharmacy. See: (Academy of the Arabic Language, 2005).

[6] The Egyptian Tekkiyeh (lodging house) is located opposite the Sacred Mosque from the southern side. A superintendent and staff and included rooms, warehouses, a mill, and a kitchen managed it. See: (Bell, 1881, p. 29).

[7] Regarding the mentioned telegram, documents from the Egyptian Council of Ministers state that the Egyptian government's request to send two medical missions was not unprecedented. The records confirm that a medical clinic was established in the Egyptian Tekkiyeh in Mecca as early as 1340 AH/1922 CE. Based on information provided by Mabrouk Fahmy Pasha (the Egyptian Hajj Amir) about the lack of doctors in the Hijaz and the reliance of Egyptian and other pilgrims on the Egyptian medical mission, the Egyptian government submitted a report to King Fuad for appropriate action. Consequently, the king ordered the establishment of a permanent clinic and pharmacy in the Egyptian Tekkiyeh in Mecca. The Egyptian government then assigned Engineer Hamed Afandi Shaker and a group of craftsmen and workers to travel to Mecca and commence construction. Upon their arrival on March 25, 1923, the Chief Justice of the Hijazi government informed Engineer Hamed Afandi that the request to establish the clinic and pharmacy in the Tekkiyeh was denied. The justification was that the Tekkiyeh's function attracted impoverished pilgrims—particularly Javanese, Indians, and others—who gathered there for food, resulting in unsanitary conditions due to food remnants and waste. According to Sharif Hussein, "its harm outweighs its benefit." However, the Egyptian side interpreted the Hijazi government's rejection of the Egyptian project as an attempt by the Hashemite king to eliminate the Tekkiyeh and sever all Egyptian government ties. See: (Abdelmoula, 2020, (33), pp. 5621–5795).

[8] According to Egyptian archival sources, after the medical delegation arrived in Jeddah, customs officials informed its members that they were not authorized to bring in their equipment and supplies. The following day, the Hijazi police summoned the two doctors and the Egyptian Hajj delegate, subjecting them to what the documents describe as inappropriate treatment. The investigating officer accused them of distributing pamphlets that insulted the Hijaz government and placed them under police surveillance. In response, the medical delegation members rejected both the interrogation procedures and the charges, emphasizing that they were subjects of King Farouk (r. 1936–1952) and that their presence in Jeddah was for a purely humanitarian mission (Abdelmoula, 2020).

[9] Editor of Al-Ahram Newspaper: Gabriel Takla was a Lebanese-born journalist who was raised and passed away in Egypt. He managed Al-Ahram from 1912 until 1943. See: (Rizq, 1993, p.31).

[10] This article was published in issue (705) on July 19, 1923. However, the newspaper-ceased publication from Dhul-Hijjah 5 to Dhul-Hijjah 16, 1341 AH due to the editorial team and printing staff performing the Hajj pilgrimage. During this hiatus, Egyptian newspapers—particularly Al-Ahram—escalated their campaign against the Hijazi government and its king, Hussein bin Ali, stirring Arab and Islamic public opinion. Upon resuming publication, Al-Qibla launched an extensive media campaign countering the claims made by Egyptian newspapers. It published numerous articles, telegrams, and statements from pilgrims and Arab intellectuals from Syria, Iraq, Transjordan, and particularly Egypt, criticizing Al-Ahram's editorial stance and refuting its allegations by presenting eyewitness accounts of the pilgrimage.

[11] For more on the threats posed by Ibn Saud to the Hijaz, see: (Youssef, 2019, Vol. 20, (1), pp. 1–49).

[12] An attempt was made to locate the issues of the Arab newspapers referenced by Al-Qibla. Unfortunately, the 1923 issues of these newspapers were not found, despite the availability of some post-1923 editions in the libraries of the University of Jordan and the Jordanian National Library. However, Feldstein newspaper's 1923 issues were available, allowing for a verification of the accuracy of Al-Qibla's quotations, which supports the objectivity of its editor-in-chief.

References

Abdelmoula, N. R. (2020). Hajj affairs and holy places in Egyptian-Hijazi relations (1923–1937). *Annual Journal of the Faculty of Arabic Language in Itay*, (33), 5621–5795.

Academy of the Arabic Language. (2005). *Al-Muʿjam al-wasīṭ* (3rd ed., Vol. 1). Cairo.

Al-Jawarna, A. M. (2012). The Arab renaissance: A study in Arab nationalism through *Al-Qibla* newspaper (1916–1924). *Journal of the Union of Arab Universities for Literature*, 9(1), 335–357.

Al-Khalidi, N. (2004). *Al-Qibla newspaper 1916–1918: A historical study* (Unpublished master's thesis). University of Diyala, Iraq.

Al-Kharboutli, A. H. (1991). *The history of the Kaaba* (3rd ed.). Dar Al-Jeel.

Al-Khatib, J. (2015). Political visions and ideas of Sheikh Fuad Al-Khatib in *Al-Qibla* newspaper. *Dirasat: Human and Social Sciences*, 2(3), 911–927.

Al-Mansour, F. A. (2021). The Hajj Mahmal: A doctrinal and thematic study. *Annals of Ain Shams Arts, Faculty of Arts, Ain Shams University*, 2021, 508–523.

Al-Momani, N. D. (2006). Economic and social relations between Egypt and Hijaz during the period 1908–1925. *Al-Manara Journal for Research and Studies*, 13(1), 1–32.

Al-Momani, N. D. (2007). *Egypt's relations with Hijaz during the reign of Sharif Hussein bin Ali (1908–1925)*. The Higher Committee for Writing the History of Jordan.

Al-Qibla Newspaper. (2016). *Issues (704–723)*. Dar Ward Publishing.

Al-Zirikli, K. (2002). *Al-Aʿlām* (15th ed., Vols. 2–3) [Biographical dictionary]. Dar Al-Ilm Lil-Malayin.

Anqawi, A. A. (1972). *The Mahmal: Its origin and historians' views on it*. Faculty of Arts, University of Riyadh.

Bayoumi, M. A. (2001). *Allocations for the two holy mosques in Egypt during the Ottoman era* (1st ed.). Dar Al-Qahira Lil-Kitab.

Bell, M. S. (1881). *The Mahmal torch*. Wadi Al-Nil Press.

Osman, F. A. (1997). Sheikh Muhibb Al-Din Al-Khatib. *Al-Tawheed Magazine*, (5), 58–61.

Qariqli, M. (2015). The Egyptian Mahmal: An important symbol of the Caliphate (A. Kamal, Trans.). In Y. Caglar & S. Kolen (Eds.), *The Noble Mahmal* (pp. 141–146). Dar Al-Nile.

Rifaat, I. (2015). The Mahmals and their history: A key symbol of the Caliphate (A. Kamal, Trans.). In Y. Caglar & S. Kolen (Eds.), *The Noble Mahmal* (pp. 141–146). Dar Al-Nile.

Rizq, Y. L. (1993). *Al-Ahram: The diwan of contemporary life*. Al-Ahram History Center.

Wahim, T. M. (1989). *Al-Qibla* newspaper and the Arab cause (1916–1924). *University of Basrah – Center for Basrah and Arabian Gulf Studies*, 21(1), 83–116.

Youssef, A. M. (1937). *The Mahmal and Hajj*. Hejazi Press.

Youssef, A. M. (2019). The influence of the King of Hijaz, Sharif Hussein bin Ali (1334 AH / 1916 AD). *General Union of Arab Archaeologists Journal*, 20(1), 1–49.

Influence of K-Pop Dramas on Pakistani Youth: A Case Study on Netflix's Role in Cultural Transformation

Saima Waheed
Universiti Utara Malaysia, Sintok, Malaysia
University of Management and Technology, Lahore, Pakistan

Mohd. Khairie Ahmad
Universiti Utara Malaysia, Sintok, Malaysia

Zafar Iqbal Bhatti
Minhaj University Lahore, Pakistan

This study investigates the cultural influence of K-Pop and K-Dramas on Pakistani youth, emphasizing Netflix's role in shaping these preferences. Social Cognitive and Cultural imperialism theories applied in this study. Adopting a qualitative case study approach, the research utilizes focus group discussions to explore the perceptions of youth, parents, educators, and religious and cultural scholars. Four focus groups, each consisting of 6-8 participants, were conducted to examine shared experiences, cultural shifts, and differing perspectives. The findings highlight that while youth enthusiastically embrace Korean entertainment, citing its aesthetic appeal, storytelling, and emotional depth, concerns arise regarding cultural displacement, unrealistic beauty standards, and diminishing interest in local entertainment. Parents and educators emphasize the need for media literacy to foster critical engagement, ensuring that global media exposure does not erode Pakistani cultural values. The study underscores the necessity of a balanced media approach that encourages cultural exchange while preserving indigenous traditions. Given the qualitative nature of this research, future studies may benefit from a mixed-methods approach to quantify media influence further. Additionally, policymakers and content creators should develop compelling local content to sustain youth engagement with their cultural heritage while adapting to global media trends .
Keywords: Korean wave, Netflix, Pakistani youth, cultural transformation

The Hallyu Wave has expanded globally, including in Pakistan, driven by K-Pop and K-Dramas. Once confined to East Asia, Korean entertainment now thrives in South Asia, the Middle East, and beyond, with Netflix boosting accessibility (Jin, 2023; Rahim et al., 2020). In Pakistan, its appeal stems from compelling storytelling, high production quality, and relatable themes (Yaqoub et al., 2024; Hidayatullah et al., 2023). K-Dramas' emotional depth and socially conscious narratives attract young audiences (Khalid, 2024), while K-Pop's music, performances, and aesthetics influence youth fashion and lifestyle (Lie, 2014; Nain & Chaudhary, 2022).

Netflix has expanded K-Dramas and K-Pop documentaries in Pakistan through heavy investment and algorithm-driven recommendations (ProPakistani, 2023; Bhatti et al., 2022). Its $2.5 billion commitment fuels global interest (Kuo, 2024). This exposure influences Pakistani youth's language, fashion, and values (Saeed et al., 2023), sparking debates on cultural exchange versus traditional identity (Agrawal et al., 2024).

This study aims to analyze the influence of K-Pop and K-Dramas on Pakistani youth by examining the cultural shifts, identity changes, and Netflix's role in shaping these transformations. By conducting a case study through focus group discussions, the research seeks to explore:

- To examine the role of Netflix in promoting K-Pop and K-Dramas among Pakistani youth.
- To explore the cultural impact of Korean entertainment on the values, behavior, and identity of Pakistani youth.
- To analyze the perceptions of parents, educators, and cultural scholars regarding the influence of K-Pop and K-Dramas on Pakistani culture.

Understanding this cultural phenomenon will provide valuable insights into how global media influences local cultures and whether this transformation is a form of cultural appreciation, hybridization, or a crisis (Mumtaz & Farooqi, 2022; Bajwa et al., 2022).

Literature Review

The Hallyu wave's global rise rivals Hollywood, driven by digital connectivity. This study reviews 100 studies (2000–2019) on Hallyu, revealing research gaps, especially in low-income regions. Findings emphasize the need for broader exploration beyond East Asia and the Pacific (Ganghariya & Kanozia, 2020).

The Korean Wave (Hallyu) blends Eastern and Western influences, serving as soft power through K-pop, K-dramas, and cinema. Driven by digital platforms and government support, it shapes consumer behavior, language, and global entertainment, reinforcing South Korea's cultural and economic influence (Glodev et al., 2023; Rana, 2021).

Netflix's glocalization strategy expands cultural diffusion, as seen in *Squid Game* fostering global reach and exchange (Wang & Weng, 2022). It shapes entertainment consumption through market dominance (Sekartaji, 2023). Meanwhile, K-pop fandoms enhance Hallyu's spread and social capital, exemplified by PKCI's role in the Philippines (Yoon, 2023).

Soft power shapes global media expansion, as seen in China's focus on entertainment over news for cultural diplomacy, necessitating new media theories (Flew, 2016; Jang & Song, 2017; Roy & Das, 2022). Meanwhile, Indonesia's STEAM-based economics education enhances critical thinking and social character, emphasizing innovative teaching over traditional methods (Mawaddah et al., 2024).

Italy's evolving multicultural policies highlight challenges in integrating immigrant youth. The Identity Project (IP), adapted from the U.S., improved identity exploration and psychosocial outcomes in Italian adolescents. Findings support structured school-based interventions to foster inclusivity and interethnic relationships (Ceccon, 2024).

Cognitive and Theoretical Framework

The cognitive dimension of this study is grounded in Bandura's Social Cognitive Theory, which explain how individuals internalize media content and adjust their behaviors accordingly.

Individuals learn by observing others and modeling their behavior. Media, particularly visual formats like dramas, serve as symbolic models that influence viewers' thoughts and actions. When Pakistani youth watch K-Pop dramas, they are not passive recipients but active observers who may adopt Korean fashion, speech patterns, relational behaviors, and lifestyle elements portrayed on screen (Bandura, 1986).

In the context of this study, Netflix acts as a platform that increases exposure and accessibility, thereby reinforcing behavioral modeling. The repeated engagement with idealized portrayals of Korean society may stimulate imitation and internalization of Korean cultural norms. "Most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed". To further analyze the broader societal implications of K-Pop content consumption, this study draws upon the following theoretical models.

Cultural Imperialism Theory asserts that dominant cultures can overshadow or erode the uniqueness of local cultures through mass media dissemination. In this case, South Korea, with strong state backing of Hallyu (Korean Wave), strategically exports its cultural content globally. Netflix, acting as a distribution partner, accelerates the process (Kamon, 2024).

For Pakistani youth, continual exposure to polished Korean media may result in the marginalization of indigenous languages, attire, social values, and traditional family systems. This potential erosion or hybridization signifies a subtle yet profound cultural shift. "The penetration of global media undermines the autonomy of local cultures…" (Tomlinson, 1991).

Why These Frameworks Fit

Framework	Key Role in Topic	Contribution
Social Cognitive Theory	Shows how youth observe and imitate K-Drama content	Explains *behavioral changes* like adopting Korean fashion, values
Cultural Imperialism Theory	Shows how dominant Korean media may affect Pakistani culture	Explains *cultural transformation at the societal level*

Method

This study adopts a qualitative case study approach, which is an effective method for exploring complex social phenomena within their real-life context (Habes et al., 2021). Since the cultural impact of K-Pop and K-Dramas especially in Pakistani youth needs to be explored in detail especially from the lenses of the participants; the qualitative analysis will provide an in-depth understanding of their experiences and preferences as consumers of media (Creswell, 2014; Shah & Ahmad, 2023) and how the meaning of consumption changes across socio-cultural factors. Using a case study approach also allows the researcher an exploration into what meanings the youth attribute to their media contact, to what these influences entail in the framework of Pakistan as a society and, in what ways Netflix becomes a form of cultural transmission (Wolf, 1991).

The primary data collection method used was focus group discussions, to obtain the rich data needed to understand the context. Krueger and Casey (2015) note focus groups are especially

appropriate when the goal is to examine common experiences and social context that the best be examined through discussion and reflection in a group. This allows the researcher to understand how one influences their opinion in a group and/or how group experiences vary across social categories such as age, profession, or culture (Morgan 1997; Martínez Copete, 2016).

Four separate focus group sessions were conducted (one each per category): (1) Youth (university students, Netflix subscribers, K-Pop/K-Drama fans), (2) Parents (mothers and fathers of youth, ages 18–30), (3) Educators (teachers, university professors and media experts), and (3) Religious and Cultural Scholars (Islamic scholars, sociologists, and media analysts). Purposive sampling is a sampling technique where the researcher seeks participants with certain characteristics needed for the research question (Patton, 2014), and this enabled us to select the aforementioned participant groups. This method is reliable as by choice giving the participants exposure to or experience in the topic, multiple perspectives may be explored by the researcher and complex, descriptive, rich data gathered (Etikan et al., 2016).

In order to do so, this study utilizes a dual approach, that helps the researcher to be able to gain an in-depth understanding of the cultural changes happening through the consumption of Korean entertainment among the Pakistani audiences. Participant groups in this study are important in order to reach a holistic and multidimensional view about the impact of K-Pop and K-Dramas on Pakistani youth. Each participant group represented a different viewpoint in terms of how culture acted upon these preferences and what role Netflix played. Below, you can find an explanation of the choice of each group:

Target Audience: Youth (University Students, Netflix Subscribers and K-Pop + K-Drama Enthusiasts)

• Aligned with the focus of the study: The influence of K-Pop and K-Dramas are directed towards the youth, especially university students who often use online platforms such as Netflix and are more participative in following international entertainment trends. Youth culture constantly evolves, and their media consumption brings about impactful, noticeable changes within the culture, making them the object of this study.

• Familiarity with the K-Pop/K-Drama: Given that they are fans of K-Pop and K-Dramas, this group has experienced the content being examined first hand. Through their perspectives and experiences, further insight will be provided on how these products of culture affect them in their identities, values, behaviors, and other areas of perception within cultural aspects.

Engagement with Netflix: Since Netflix is one of the largest sources of K-Dramas, it provides many of the commonly viewed content in assessing how youth view the role of Netflix in culture consumption. This will help show even more just how important the youth's engagement in Netflix is to the spread of K-Pop and K-Drama culture.

Parents: (Fathers + Mothers of youth aged 18-30 years)

• Cultural and Generational Context: Parents provide an even more distinct generational lens about the cultural change that is happening amongst their message's children. This study is telling us that getting their perspectives is useful in closing the generation gap by framing the differences between how older generations and younger generations view consumption habits and cultural ramifications of K-Pop/K-Drama content. We also seek input from parents, who provide an

important perspective when it comes to worries about cultural change, values and their impressions of international media.

• Role Model: Parents are one of the most important people that influence youth behavior, believes and values. The study thus seeks insight into the larger cultural response to K-Pop/K-Drama by interpreting how parents see the effect of K-Pop/K-Drama on children. There might nevertheless be parental concerns about "Westernization," loss of traditional values or other cultural losses, and these may provide insight into the school perceptions.

• Tradition vs Globalisation: Pakistan is a cultural amalgam of traditionalism and globalisation, and parents can talk about how they see things related to entertainment affect the cultural envelope?

Teachers, University Professors, Media Experts
• Response from Educators and Media Scholars: Compared to academics and experts, the informed responses from educators and media scholars offer a more informed response on how the exposure to K-Pop and K-Dramas affect the educational, social, and cultural outcomes of youth. With their background they interpret trends from a more cultural and social perspective, examining the impact of education and media on youth taste.

• Influence on Interaction and Education – Educators are frequently at the forefront of changes in youth behavior, learning, and social interaction. This puts them in a good position to at least consider the potential educational consequences of K-Dramas and K-Pop, which may change the way students view education, social norms, and global citizenship.

• Effects on Media Literacy and Critical Thinking: Media experts can help understand the impact of foreign media content such as K-Pop and K-Dramas on youth media literacy and critical thinking. We should explore how these media forms foster either positive or negative experiences in Cultural Awareness, Social Behaviors, and Critical Media Consumption, and these exploring would be helped by their input.

Religious & Cultural Experts (Islamic Scholars, Sociologists, Media Analysts):
• Cultural and Religious Views: Pakistan is a land where the glue between religion and culture is strong; therefore, if religious and cultural scholars interpret the foreign media effects on local traditions and values, it really provides a boost to their efforts. Thus, this group offers further insight into perceptions of K-Pop and K-Dramas from religious and cultural perspectives, especially in terms of cultural preservation, religious morality, and Western versus non-Western cultural influences.

Social and Cultural Effects: Sociologists can provide an overview of social changes in the society–the impact of the consumption of media products from abroad on the changes of social norms, changes in family relationships and social organization. They can provide insights on how do you think the consumption of the K-Pop/K-Dramas by the youth is affecting their social behaviour and what kind of culture is being created in Pakistan.

• Media and Culture Analysis: Media suffers from a lack of understanding of what it means to be not only a communication medium but also a means of cultural production, replacing and departing from an academic eye to the matter. They might be able to critique what Korean entertainment on Netflix is helping do in the cultural transformation in Pakistan.

Clarification of Key Concepts

- **Hallyu (Korean Wave):**
  A term used to describe the global popularity of South Korean culture, especially in music (K-Pop), television dramas, film, and fashion. It is a state-sponsored soft power strategy aimed at cultural export and image-building.

- **K-Pop:**
  Although primarily associated with music, K-Pop also refers to a broader entertainment ecosystem that includes Korean TV dramas (K-Dramas), which share similar aesthetic, narrative, and cultural elements. K-Dramas often serve as an entry point into Hallyu culture.

- **Netflix:**
  A global streaming platform that provides on-demand access to media content, including K-Pop dramas. Its role in content curation, recommendation algorithms, and regional accessibility makes it a critical agent in the international dissemination of Korean culture.

- **Cultural Transformation:**
  A process through which individuals or communities undergo a shift in cultural values, norms, and practices, often influenced by exposure to foreign media. In this study, it refers to observable changes in attitudes, language use, fashion preferences, and interpersonal behavior among Pakistani youth resulting from engagement with K-Pop dramas.

Table 1

Focus Group Composition and Sampling Technique

Focus Group Category	Participants	Focused Group Interviews	City	Criteria for Selection
Youth	• University students • Netflix users • K-Pop/K-Drama fans	02 02 02	Lahore	Aged 18-30, actively engaged with Korean entertainment
Parents	• Mothers • Fathers of youth aged 18-30	03 03	Lahore	Parents of youth influenced by K-Pop/K-Dramas
Educators	• Teachers • University Professors • Media experts	02 02 02	Lahore	Professionals with insights into media influence & education
Religious & Cultural Scholars	• Islamic scholars • Sociologists • Media analysts	02 02 02	Lahore	Experts in culture, religion, and media discourse
Total:	**4 Groups**	**24 participants**		

Table 2

Themes Aligned with Research Questions

Research Questions	Themes	Sub-Themes
1. How does Netflix contribute to the popularity of K-Pop and K-Dramas among Pakistani youth?	Netflix as a Catalyst for Korean Entertainment Popularity	- Accessibility and Convenience of Korean Content - Netflix's Role in Curating and Promoting K-Dramas and K-Pop Documentaries - Algorithm Influence and Personalized Recommendations - Binge-Watching Culture and Engagement with Korean Content
2.What cultural transformations have emerged among Pakistani youth due to the influence of Korean entertainment?	Cultural Transformations in Pakistani Youth Due to Korean Entertainment	- Influence on Fashion, Beauty Trends, and Lifestyle Choices - Adoption of Korean Language and Slang in Daily Conversations - Impact on Social Behavior and Romantic Ideals - Shift in Entertainment Preferences and Local vs.

Research Questions	Themes	Sub-Themes
3. How do parents, educators, and cultural scholars perceive the impact of K-Pop and K-Dramas on Pakistani traditions and identity?	Perceptions of Parents, Educators, and Cultural Scholars on Cultural Identity and Traditions	Foreign Media Consumption - Concerns Over Cultural Erosion and Identity Crisis - Perspectives on Moral and Ethical Values in K-Entertainment - Influence of K-Dramas on Family Dynamics and Social Norms - Media Literacy and the Need for Cultural Awareness Among Youth

Theme 1: Netflix as a Catalyst for Korean Entertainment Popularity

Netflix has played a significant role in the rising popularity of K-Pop and K-Dramas among Pakistani youth. Through its accessibility, strategic content promotion, algorithm-driven recommendations, and binge-watching culture, Netflix has influenced youth preferences and cultural engagement with Korean entertainment. The responses from different groups—Youth, Parents, Educators, and Religious & Cultural Scholars—highlight both positive and negative aspects of this influence.

Accessibility and Convenience of Korean Content
Group 1: Youth (University Students, Netflix Users, K-Pop/K-Drama Fans)

"Netflix makes it easy for youth to access high-quality Korean content with subtitles".

"Many students prefer Netflix over traditional TV because it offers uninterrupted viewing without advertisements".

"K-Dramas and K-Pop-related documentaries are readily available, making it effortless for fans to engage with Korean entertainment".

Group 2: Parents (Mothers & Fathers)

"Parents acknowledge that Netflix provides a safe and legal way to access Korean entertainment compared to pirated websites".

"Some parents are concerned that their children are more exposed to Korean culture than Pakistani content, which could weaken their connection to local tradition's.

"The easy availability of K-Dramas encourages longer screen time and emotional attachment to Korean entertainment".

Group 3: Educators (Teachers, University Professors, and Media Experts)

"University professors note that students are consuming international media more than ever before, with Korean content being one of the most dominant".

"Media experts observe that Netflix has eliminated the barriers of traditional TV programming, allowing students to explore global entertainment without limitations".

"Some educators worry that Netflix reduces exposure to Pakistani media, potentially influencing language preferences and cultural awareness".

Group 4: Religious & Cultural Scholars (Islamic Scholars, Sociologists, and Media Analysts)

"Islamic scholars express concern that unrestricted access to foreign content can expose youth to values that may conflict with Pakistani cultural norms".

"Sociologists highlight that Netflix has bypassed traditional cultural gatekeeping, allowing foreign influences to integrate into daily life".

"Media analysts believe that Korean entertainment has become a mainstream part of youth culture, altering their fashion choices, social behaviors, and entertainment preferences".

Netflix's Role in Curating and Promoting K-Dramas and K-Pop Documentaries

Youth

"Many young viewers first encountered K-Dramas and K-Pop content on Netflix's trending section or featured recommendations".

"Netflix provides access to exclusive content such as K-Pop documentaries and behind-the-scenes interviews, increasing engagement with Korean culture".

Parents

"Parents note that Netflix actively promotes Korean entertainment, even when their children watch unrelated content".

"Some believe Netflix's targeted promotions encourage deeper involvement in K-Pop and K-Dramas, sometimes leading to obsession".

Educators

"University lecturers highlight that Netflix markets K-Dramas aggressively, making them a popular topic of discussion among students".

"Media studies professors argue that this constant exposure has made Korean entertainment a global phenomenon, influencing students' linguistic preferences, beauty standards, and lifestyle choices".

Religious & Cultural Scholars

"Islamic scholars worry that Netflix normalizes foreign social behaviors, some of which might not align with Islamic values".

"Media analysts argue that Netflix's promotional strategies shape what youth consider "trendy", leading to an increased preference for Korean entertainment over local content".

Algorithm Influence and Personalized Recommendations

Youth

"Many students note that once they watch a single K-Drama, Netflix continuously recommends similar content, keeping them engaged".

"They appreciate how the algorithm helps them discover new K-Pop and K-Drama content effortlessly".

Parents

"Parents worry that the algorithm reinforces addiction by repeatedly suggesting Korean entertainment, limiting exposure to diverse content".

"Some parents feel that Netflix is influencing their children's entertainment choices rather than allowing them to explore content independently".

Educators

"Professors highlight that students do not actively search for K-Dramas, but rather start watching because Netflix recommends it, leading to long-term engagement".

"Media experts argue that algorithm-driven content exposure is reshaping media preferences among students, potentially limiting their awareness of Pakistani cultural productions".

Religious & Cultural Scholars

"Sociologists believe that Netflix's algorithmic recommendations are creating a cultural bubble, where youth consume more Korean content than Pakistani entertainment".

"Media analysts warn that Netflix's content suggestions might gradually shift identity and cultural preferences, making Pakistani youth more aligned with Korean media aesthetics and storytelling styles".

Binge-Watching Culture and Engagement with Korean Content

Youth

"Many youth admit that Netflix's autoplay feature encourages binge-watching, often leading to late-night screen time".

"Some express emotional connections to Korean characters and storylines, making them deeply invested in Korean culture".

Parents

"Parents observe that their children prioritize finishing K-Dramas over studies, family time, and religious activities".

"Some are worried that binge-watching reduces social interactions and promotes isolation".

Educators

"University professors note that excessive binge-watching affects student productivity, academic performance, and class engagement".

"Media experts argue that immersive storytelling in K-Dramas leads to high emotional involvement, causing students to neglect their academic and personal responsibilities".

Religious & Cultural Scholars

"Islamic scholars warn that binge-watching contributes to moral and social concerns, as excessive exposure to Korean culture may overshadow traditional Islamic teachings".

"Sociologists highlight that the immersive nature of K-Dramas creates strong identification with Korean characters, leading some youth to adopt Korean speech patterns, clothing styles, and social behaviors".

Theme 2: Cultural Transformations in Pakistani Youth Due to Korean Entertainment

Korean entertainment, particularly K-Dramas and K-Pop, has significantly influenced the fashion choices, beauty trends, language preferences, social behaviors, and entertainment consumption patterns of Pakistani youth. Netflix has played a crucial role in facilitating this cultural shift by providing unrestricted access to Korean content. The responses from different groups—Youth, Parents, Educators, and Religious & Cultural Scholars—highlight varying perspectives on these transformations.

Influence on Fashion, Beauty Trends, and Lifestyle Choices

Group1: Youth (University Students, Netflix Users, K-Pop/K-Drama Fans)

"Many students admire the aesthetic appeal of Korean fashion, leading them to adopt oversized clothing, pastel colours, and minimalist styles".

"Korean skincare routines, such as glass skin trends, sheet masks, and 10-step skincare regimens, have gained popularity among youth, especially females".

"Some youth express a preference for Korean hairstyles, coloured contact lenses, and natural makeup looks, which they see as a symbol of modernity".

Group 2: Parents (Mothers & Fathers)

"Parents have noticed a shift in their children's dressing styles, with some adopting modest yet trendy Korean fashion".

"Some parents are concerned that Pakistani traditional attire is being replaced by Korean-inspired casual wear, leading to a loss of cultural identity".

"A few parents acknowledge the positivity of skincare awareness but worry about consumerism and unrealistic beauty standards influenced by K-Dramas".

Group 3: Educators (Teachers, University Professors, and Media Experts)

"Professors note that students increasingly discuss Korean beauty trends in classrooms, demonstrating the influence of social media and Netflix".

"Media experts argue that Pakistani fashion brands have started incorporating Korean aesthetics, proving the widespread influence of Korean entertainment".

"Some educators worry that students are comparing themselves to Korean celebrities, leading to body image issues and unrealistic beauty expectations".

Group 4: Religious & Cultural Scholars (Islamic Scholars, Sociologists, and Media Analysts)

"Islamic scholars express concerns that Korean fashion and beauty standards may conflict with Islamic modesty principles, particularly among young women".

"Sociologists highlight that the preference for Korean beauty ideals over South Asian beauty norms may create self-esteem challenges among Pakistani youth".

"Media analysts observe that global beauty trends are redefining youth identity, making Korean fashion a status symbol in urban Pakistan".

Adoption of Korean Language and Slang in Daily Conversations

Youth

"Many fans frequently use Korean phrases such as "Oppa" (older brother), "Saranghae" (I love you), and "Aigoo" (expression of frustration) in daily conversations".

"Some students try to learn Hangul (Korean alphabet) and even incorporate Korean words in their English or Urdu speech".

"Watching K-Dramas with subtitles has led to passive learning of the Korean language, making it easier to recognize and understand common expressions".

Parents

"Parents notice their children using Korean words while speaking Urdu or English, which sometimes confuses family members".

"Some parents believe learning multiple languages is beneficial, while others worry about the reduced use of Urdu in family discussions".

"A few parents argue that obsession with Korean culture might disconnect youth from their own linguistic heritage".

Educators

"Language teachers observe that some students mimic Korean speech patterns in an attempt to sound like their favourite actors or idols".

"Media experts believe this linguistic influence is temporary but still indicates the deep engagement of youth with Korean entertainment".

"Some educators worry that this shift may reduce interest in learning regional Pakistani languages, such as Punjabi or Sindhi".

Religious & Cultural Scholars

"Islamic scholars argue that language reflects cultural identity, and replacing Urdu with Korean slang could indicate cultural dilution".

"Sociologists note that using Korean phrases has become a trend among urban youth, signalling prestige and belonging to a global pop culture".

"Media analysts suggest that the incorporation of Korean words into daily speech is a sign of cultural assimilation through digital media".

Impact on Social Behavior and Romantic Ideals

Youth

"Many young viewers idealize the romantic relationships portrayed in K-Dramas, expecting similar grand gestures and emotional depth in real life".

"Some youth admit that Korean entertainment has reshaped their views on dating, friendships, and gender roles, often in contrast to Pakistani social norms".

"Many students admire Korean values such as respect, politeness, and hard work, incorporating them into their daily interactions".

Parents

"Parents worry that K-Dramas portray an unrealistic version of romance, which may set unattainable relationship expectations for their children".

"Some parents appreciate that K-Dramas promote clean romance and emotional depth, which differs from Western media's focus on explicit content".

"A few parents believe that the idealization of Korean relationships may lead to dissatisfaction in real-life interactions".

Educators

"Professors observe that students often discuss romantic themes from K-Dramas, showing their emotional investment in Korean storytelling".

"Media experts note that K-Dramas reinforce soft masculinity, where male leads display gentle, caring, and respectful behavior, influencing students' expectations from partners".

"Some educators caution that over-romanticizing relationships could create unrealistic standards that do not align with Pakistani societal norms".

Religious & Cultural Scholars

"Islamic scholars express concerns that romanticized relationships in K-Dramas may contradict Islamic values of modesty and marriage traditions".

"Sociologists believe that exposure to Korean social behaviors is gradually shifting perceptions of love and relationships among youth".

"Media analysts suggest that Pakistani youth may subconsciously internalize Korean dating culture, leading to a change in how relationships are perceived in society".

Shift in Entertainment Preferences and Local vs. Foreign Media Consumption

Youth

"Many young viewers prioritize Korean content over Pakistani dramas, citing better production quality, storytelling, and emotional depth".

"Some students admit that Pakistani media feels outdated, leading them to prefer Netflix's Korean entertainment library".

"A few youth believe Pakistani dramas focus too much on repetitive family conflicts, whereas K-Dramas offer diverse genres".

Parents

"Parents worry that their children watch more Korean content than Pakistani TV, leading to reduced interest in local culture".

"Some parents believe Pakistani dramas should evolve to compete with global entertainment standards".

"A few parents acknowledge that K-Dramas provide a refreshing alternative, but still want their children to appreciate Pakistani media and values".

Educators

"Media professors argue that Pakistani content creators must innovate to regain youth interest in local dramas".

"Teachers note that students often compare Pakistani and Korean dramas in class discussions, showing a clear preference for Korean storytelling".

"Media experts suggest that Pakistani TV needs to embrace global storytelling techniques while maintaining its cultural essence".

Religious & Cultural Scholars

"Islamic scholars worry that excessive preference for foreign content could weaken Pakistani cultural identity".

"Sociologists highlight that the globalization of media consumption is inevitable, but balancing local and foreign influences is crucial".

"Media analysts believe that Netflix and digital platforms will continue to shape entertainment choices, requiring Pakistan's media industry to adapt and compete globally".

Theme 3: Perceptions of Parents, Educators, Cultural Scholars, and Youth on Cultural Identity and Traditions

The impact of K-Pop and K-Dramas on Pakistani youth has raised significant concerns among parents, educators, and cultural scholars, but it has also led to enthusiastic acceptance among young audiences. While many fear cultural erosion, youth perceive their engagement with Korean entertainment as a form of global cultural exchange rather than a loss of identity. Below are the responses from all four groups, including youth, on key aspects related to cultural identity, traditions, and media literacy.

Concerns Over Cultural Erosion and Identity Crisis

Group 1: Youth (University Students, Netflix Users, K-Pop/K-Drama Fans)

"Many youth reject the idea that they are abandoning Pakistani culture, instead arguing that exposure to Korean entertainment broadens their worldview".

"Some youth feel more connected to Korean culture than their own, as they engage with it daily through music, dramas, and fashion trends".

"Others acknowledge that Pakistani media does not offer engaging content, making Korean entertainment a more appealing choice".

Group 2: Parents (Mothers & Fathers)

"Parents worry that their children are more interested in Korean traditions than their own, leading to cultural detachment".

"Some parents see Korean entertainment as an extension of globalization, but fear the dilution of Pakistani values".

"A few parents argue that as long as youth respect Pakistani traditions, exposure to foreign cultures is not harmful".

Group 3: Educators (Teachers, University Professors, and Media Experts)

"Professors observe that students often use Korean phrases, follow Korean fashion, and admire Korean social norms, sometimes at the expense of their own culture".

"Some educators believe that Pakistani culture is resilient, and global influences will not erase national identity if local media strengthens its presence".

"Media experts argue that the problem is not cultural exposure but the absence of high-quality local content that engages youth".

Group 4: Religious & Cultural Scholars (Islamic Scholars, Sociologists, and Media Analysts)

"Islamic scholars warn that Korean entertainment promotes values that may not always align with Islamic teachings, which could lead to identity conflicts".

"Sociologists highlight that cultural transformation is inevitable, but there should be efforts to preserve traditional values alongside global influences".

"Media analysts suggest that Pakistan needs stronger policies to promote its own cultural content, counterbalancing the foreign media influx".

Perspectives on Moral and Ethical Values in K-Entertainment

Youth

"Many youth argue that K-Dramas promote positive values, such as respect, discipline, and strong work ethics, which they appreciate".

"Some youth believe that Pakistani media often portrays regressive narratives, whereas Korean entertainment provides more progressive role models".

"Others admit that idealized romance in K-Dramas has influenced their expectations in relationships, sometimes creating unrealistic standards".

Parents

"Parents appreciate that K-Dramas are less explicit than Western media, but worry about the unrealistic romantic ideals they portray".

"Some parents believe that youth are too influenced by Korean beauty standards, leading to body image concerns".

"A few parents stress that not all Korean content aligns with Islamic ethics, and youth should be guided in their media consumption".

Educators

"Teachers observe that students often compare Pakistani and Korean moral values, sometimes viewing the latter as superior".

"Professors stress the need for critical media literacy so that youth can analyze entertainment instead of passively adopting its values".

"Media experts argue that Pakistani drama creators should learn from Korean storytelling to modernize local narratives".

Religious & Cultural Scholars

"Islamic scholars express concern that K-Dramas normalize relationships that may conflict with Islamic values, requiring youth to navigate these influences carefully".

"Sociologists argue that moral transformation is complex and should be studied with a balanced perspective rather than outright rejection".

"Media analysts advocate for educational initiatives that teach youth to differentiate entertainment from reality".

Influence of K-Dramas on Family Dynamics and Social Norms

Youth

"Many youth find Korean family values relatable, particularly the respect for elders and emphasis on hard work".

"Some youth feel that Pakistani family dynamics can be restrictive, and K-Dramas introduce more progressive ideas about independence and personal choice".

"Others enjoy discussing K-Dramas with family members, which strengthens their relationships rather than weakening them".

Parents

"Some parents appreciate that their children are watching content that emphasizes family values".

"Others worry that K-Dramas promote independence in ways that challenge Pakistani family structures".

"A few parents report positive changes in their children's attitudes, as they learn respectful behavior from Korean entertainment".

Educators

"Teachers note that students discuss family relationships from K-Dramas in class, comparing them to their own experiences".

"Professors argue that youth should be encouraged to critically assess cultural differences rather than blindly imitating them".

"Media experts believe that Pakistani dramas should evolve to reflect the modern aspirations of youth while maintaining traditional values".

Religious & Cultural Scholars

"Islamic scholars warn against youth adopting cultural behaviors that conflict with Islamic teachings".

"Sociologists believe that Pakistani families should use these conversations as a way to strengthen intergenerational understanding".

"Media analysts argue that local content creators must innovate to keep Pakistani entertainment relevant".

Media Literacy and the Need for Cultural Awareness Among Youth

Youth

"Most youth do not see Korean entertainment as a replacement for Pakistani culture, but rather an addition to their interests".

"Some youth wish that Pakistani media produced more diverse and engaging content, so they wouldn't have to look elsewhere".

"Others argue that watching foreign media makes them more globally aware, helping them appreciate both their own culture and others".

Parents

"Parents stress that youth need guidance in media consumption, ensuring they engage with content critically rather than blindly adopting trends".

"Some parents suggest introducing media literacy programs in schools and universities".

"A few parents believe that exposure to multiple cultures is beneficial, but should not come at the cost of neglecting Pakistani traditions".

Educators

"Teachers argue that students should be encouraged to analyze media content from a cultural perspective, rather than consuming it passively".

"Professors stress that youth should be taught to appreciate their own culture before engaging with foreign entertainment".

"Media experts recommend that Pakistan should create its own streaming platforms to promote local content".

Religious & Cultural Scholars

"Islamic scholars emphasize that mosques and community centers should educate youth on balancing cultural engagement with religious values".

"Sociologists advocate for a blended approach, where youth can appreciate global media while remaining grounded in their own culture".
"Media analysts call for collaborations between educators, parents, and media creators to ensure a culturally aware generation".

Results and Discussions

R Q1: How Does Netflix Contribute to the Popularity of K-Pop and K-Dramas Among Pakistani Youth?

Netflix has played a pivotal role in the rising popularity of K-Pop and K-Dramas among Pakistani youth by offering unrestricted access, personalized recommendations, and fostering a binge-watching culture. Its global reach and strategic promotion of Korean entertainment have significantly shaped Pakistani youth's entertainment choices, social behaviors, and cultural engagement. According to Mukhtar (2024), international streaming platforms like Netflix have revolutionized media consumption, making Korean entertainment more accessible than ever. Youth participants in this study confirmed that Netflix's high-quality K-Dramas with subtitles and uninterrupted streaming enhance their immersion in Korean entertainment, eliminating barriers of traditional TV programming.

Netflix actively promotes K-Dramas through its trending sections and recommendation algorithms, ensuring even new viewers are exposed to Korean content. Kim (2025) argues that this strategic content curation has turned K-Dramas into a global phenomenon. University educators in this study echoed this view, noting that Netflix markets K-Dramas aggressively, making them dominant discussion topics among students. However, parents raised concerns that Netflix's continuous promotion of Korean entertainment reduces youth engagement with Pakistani cultural productions.

Netflix's advanced algorithm reinforces user engagement by continuously suggesting similar content after watching a single K-Drama or K-Pop documentary. Yoh (2025) found that such recommendations create a content bubble, limiting exposure to diverse content. Youth respondents confirmed that Netflix's suggestions make Korean entertainment a major part of their media consumption. However, parents and educators worry that excessive exposure to Korean entertainment may lead to shifts in cultural identity, fashion preferences, and language adoption among Pakistani youth (Habib et al., 2024).

Another critical factor is Netflix's binge-watching culture. The platform's autoplay feature encourages prolonged viewing, fostering deep emotional connections with Korean narratives. Youth respondents admitted that Netflix tempts them to watch multiple episodes in one sitting, intensifying their engagement. However, parents and educators observed negative effects on academic performance, social interactions, and family dynamics. Religious and cultural scholars warned that such immersion may overshadow traditional Islamic and Pakistani values (Kim et al., 2024).

In conclusion, Netflix has significantly influenced the growing popularity of K-Pop and K-Dramas among Pakistani youth. While it enhances global entertainment access, concerns remain regarding its impact on local media preferences and cultural identity. As Buckingham (2013) suggests, balancing global and local content consumption is crucial to maintaining cultural diversity in the era of digital (Chelysheva & Mikhaleva, 2022).

R Q 2: What cultural transformations have emerged among Pakistani youth due to the influence of Korean entertainment?

The rise of Korean entertainment, particularly K-Dramas and K-Pop, has led to notable cultural transformations among Pakistani youth, influencing fashion, beauty standards, language, social behaviors, and entertainment preferences. With Netflix providing unrestricted access, young Pakistanis increasingly adopt Korean aesthetics and values, shaping their perceptions of identity and lifestyle. This reflects what Kim et al., (2024) describe as the global diffusion of Korean pop culture, where digital platforms facilitate cross-cultural exchanges, influencing youth worldwide.

One of the most visible changes is the shift in fashion and beauty trends. Many Pakistani university students embrace minimalist styles, oversized clothing, and pastel colours inspired by Korean fashion. Korean beauty trends, such as the glass skin look, natural makeup, and elaborate skincare routines, have gained popularity, particularly among young women. Cross and Joo (2023) argue that Korean entertainment promotes aspirational beauty standards globally. However, parents and educators express concerns that the increasing preference for Korean-inspired fashion over traditional Pakistani attire signals a cultural shift driven by consumerism.

Language adoption is another major influence. Many youth frequently use Korean phrases like "Oppa" (older brother) and "Saranghae" (I love you) in daily conversations, with some even learning Hangul. Herrero et al., (2023) notes that foreign media exposure facilitates passive language acquisition. While some parents appreciate multilingualism, others worry that excessive use of Korean slang could undermine Urdu and regional languages. Educators and religious scholars caution that language is a key part of cultural identity, and increasing Korean language use may indicate deeper cultural assimilation.

K-entertainment has even influenced social behaviors and romantic ideals. K-Dramas tend to depict romantic relationships that are emotionally intense, and male leads often exude what is described as "soft masculinity," marked by kindness and emotional depth. Which influences young viewers to idolize such relationships causing the expectations in them to change. Media narratives create social context and influence perceptions of romance and gender roles, leading to unattainable expectations (Ju, 2021). Not every parent loves K-Drama feeling that drama becomes ground for distorted real relationships. And religious scholars also worry that romantic notions in Korea may not mesh in Pakistan with Islamic values and traditional marriage customs.

Similarly, entertainment preferences have too changed as most of the Pakistani youth enjoys watching the K-Dramas rather than the local content. For students, K-Dramas have better production quality, captivating stories, and a wider range of characters while Pakistani dramas revolve around the same family feuds. Azmee (2024) observe that the special narratives and quality of production found in K-Dramas attract global fans. Nevertheless, parents, educators and cultural scholars fear a loss of connection to Pakistani media and culture amongst youth through an overzealous appetite for Korean content. Local creatives are being told to update storytelling but still be true to their cultures, experts say

In conclusion, the impact of Korean entertainment on Pakistani youth represents not only the appreciation of a foreign culture but also the potential change in their identity. So although exposure to a melting pot of local culture can create better global appreciation, there is concern that this exposure goes too far and there is no longer anything to preserve. With the rise of digital media platforms changing the way we consume media, it is important for Pakistani audiences to critically

engage with foreign entertainment but also find the right balance between integrating into global culture and retaining our heritage.

R Q 3: What are the views of parents, teachers and cultural critics about K-Pop and K-Dramas impact on Pakistani culture and identity?

Now, while the influence of K-Pop and K-Dramas on Pakistani traditions and identity has both positive and negative opinions. K-pop fans see their involvement with Korean entertainment as cultural exchange, while older generations worry about a loss of tradition and cultural identity crises. According to Appadurai (1996) theory of cultural globalization and media flows generate hybrid identities, where people are able to assimilate foreign cultural aspects while they still are able to preserve their own. But the parents are concerned that the children show so much interest in Korean traditions that they are distancing themselves from the cultural identity which Giddens (1991) defines as identity change. Others recognize globalization as an unstoppable force but fear loss of Pakistani values, reminiscent of Tomlinson (1991) on cultural imperialism.

Educators observe the growing influence of Korean entertainment on students' language, fashion, and behaviors. Many students use Korean phrases, follow Korean fashion, and idealize Korean social norms, reflecting Hall et al., (2024) concept of cultural representation. Some argue that Pakistani culture is resilient, while others note the decline of local media engagement, aligning with Straubhaar's (2007) cultural proximity theory, where youth seek relatable media but turn to Korean content due to the lack of high-quality Pakistani productions. Media experts advocate revitalizing Pakistani storytelling to meet youth aspirations, in line with Jenkins (2006) media convergence theory, which emphasizes innovation in local media to remain relevant (Kim, 2023).

Scholars of religion and culture raise objections that Korean entertainment may be in clash with Islamic values as well as the traditions of Pakistan. Others caution that K-Dramas idealize relationships that are akin to haram/un-Islamic, which resonates with theory of cultural hegemony, where dominant media (Korean soap operas and dramas) slowly but surely change cultural norms. Korean ideals of beauty also serve to reinforce Wolf's (1991) "beauty myth" by dictating how women should view themselves, which in turn impacts their body image, such as experiencing depression when they cannot live up to this idealized self. On the contrary, sociologists see cultural change as unavoidable and causal, which closely aligns with Robertson (1995) glocalization theory, where the global is internalized into the local level. Media analysts have advocated for policies that favour the local media landscape to re-establish local reporting, resonating with Hesmondhalgh's (2013) perspective on cultural production.

Although Korean entertainment promotes cultural exchange, the potential for love, identity conflict and unrealistic expectations of Korean lifestyle and people remain as tensions. Writing in 2003, Buckingham stresses that critical shaping of foreign content is the type of media literacy education that is needed. According to Jenkins (2006), With the evolution of national media afflictions, the need to adapt becomes a necessity so they can compete on a global platform. If only the content creators (writers, directors, producers, etc.) could encourage each other to modernize the narratives to fit the needs of today's youth while not disconnecting from the cultural roots, the Pakistani youth can enjoy the entertainment of the world without divorcing from their heritage and hence enjoy a wholesome identity.

While analyzing the data, it became evident that not all group members' responses were identical. Instead, participants expressed a range of views depending on their social roles and

perspectives. Youth respondents highlighted Netflix's accessibility, emotional appeal, and Korean content's influence on their entertainment choices and identity. In contrast, parents raised concerns about cultural detachment and declining interest in Pakistani traditions, while educators focused on behavioral shifts and the academic impact of binge-watching. Cultural and religious scholars emphasized the potential conflict between Korean media values and Islamic norms. This diversity aligns with Braun and Clarke's (2006) approach to thematic analysis, which values variation in participant narratives as a strength in qualitative inquiry. Thus, assuming homogeneity among group members would oversimplify the complex, multilayered nature of their responses.

Conclusion

These findings highlight the indisputable role of Netflix as a catalyst in the emergence of K-Pop and K-dramas in their lives as cultural identity, social behaviours and entertainment of Pakistani youth shows considerable shift. Despite this helped children in Korea getting enthusiastic and immersed into Korean content, fashion, language, and lifestyle trends, parents and educators, cultural scholars expressed concern about this cultural shift within youth. The findings expose a complex relationship between K-Culture and local culture, where love for Korean media exists in tandem with fears of losing local culture, the rise of unrealistic beauty ideals, and changing social norms. This cultural shift needs a more critical approach toward media and societal influence so that limited Pakistani culture can be preserved with the global society.

With Korean entertainment becoming a more prominent factor in the daily life of Pakistani youth, the study underlines the need for better media awareness and cultural education to deal with the changing media environment. Although international entertainment offers avenues for learning and exposure to foreign cultures, the need to preserve local traditions is still crucial. Policymakers, educators, and families can promote critical media consumption while providing a healthy balance between in-and out-and media, ensuring that cultural exchange does not result in cultural erosion, but in a more informed and culturally rich generation.

Limitations

There are some limitations of this study like it is qualitative based upon interviews thus cannot cover and cannot accurately reflect the entire context of K-Pop and all the K-Dramas preferences within Pakistani youth. In part, this is because the research is really about Netflix as a streaming service, overlooking all the other digital, social, and media forces that are diverging and/or converging to change culture.

Future Research Direction / Recommendations

However, the present research being of qualitative nature, lack the quantitative dimension which need to be addressed in the future through mixed methods approach. Policy-makers along with educators are advised to create Media Literacy Programs that would allow youth to critically interact with foreign contents while still being able to retain their culture or identity. Moreover, there is a need for Pakistani entertainment industry, to invest in quality youth-centric content that compete the global media, in order to make sure that cultural narratives echo in the digital landscape.

References

Agrawal, G., Madhukar, V., & Kulshrestha, R. (2024, June). The Impact of Hallyu (Korean Wave) on Indian Youth's Intention to Visit South Korea. In *Proceedings of the International Conference on Innovation and Regenerative Trends in Tourism and Hospitality Industry (IRTTHI 2024)* (Vol. 285, p. 4). Springer Nature.

Appadurai, A. (1996). *Modernity at large: Cultural dimensions of globalization*. University of Minnesota Press.

Azmee, F. (2024). *Lights, Camera, Hallyu: The Intricacies of Diplomacy and Economics of South Korean Popular Culture* (Master's thesis, University of Nevada, Reno). https://www.proquest.com/openview/2d2f2a51101bc937c039768dde7560b3/1?pq-origsite=gscholar&cbl=18750&diss=y

Bajwa, S., Khan, M. A., & Waheed, S. (2022). Role of social media in perspective of media information literacy during pandemic Covid-19. *International Journal of Media and Information Literacy, 7*(2), 305–314. https://cyberleninka.ru/article/n/role-of-social-media-in-perspective-of-media-information-literacy-during-pandemic-covid-19

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bhatti, M. A., Khalid, A., & Khalid, R. (2022). The Rise of Hallyu: A study on the consumption of Korean content in Pakistan during Covid-19 pandemic. *Pakistan Journal of Social Research, 4*(1), 521–532. https://pjsr.com.pk/wp-content/uploads/2022/10/55.-Vol.-4-No.-1-March-2022-Bhatti-Khalid-Khalid-The-Rise-of-Hallyu.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://www.tandfonline.com/doi/abs/10.1191/1478088706QP063OA

Buckingham, D. (2013). *Media education: Literacy, learning and contemporary culture*. John Wiley & Sons.

Ceccon, C. (2024). Promoting adolescents' cultural identity development: Adaptation and implementation of the Identity Project intervention in Italian schools. https://tesidottorato.depositolegale.it/handle/20.500.14242/177971

Chelysheva, I., & Mikhaleva, G. (2022). Media school "Media education and media literacy for all" as a system model of continuous mass media education. *Медиаобразование, (2)*, 147-156. https://cyberleninka.ru/article/n/media-school-media-education-and-media-literacy-for-all-as-a-system-model-of-continuous-mass-media-education

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.

Cross, S. E., & Joo, M. (2023). Sociocultural perspectives on romantic relationships. In *The sociocultural context of romantic relationships* (pp. 29–54). https://books.google.com.my/books?hl=en&lr=&id=NdjbEAAAQBAJ&oi=fnd&pg=PA29&dq=Cross,+S.+E.,+%26+Joo,+M.+(2023).+Sociocultural+perspectives+on+romantic+relationships.+In+The++sociocultural+context+of+romantic+relationships+(pp.+29%E2%80%9354).&ots=e7jst8Up1u&sig=zV8WOxjmsf7T6PJB6fwo-obSq1o&redir_esc=y#v=onepage&q&f=false

Dal Yong Jin, K. Y., & Han, B. (2023). Platformization of the Korean Wave: a critical perspective. DAL YONG, J. I. N. (2023). Critical Cultural Industries Studies: A New Approach to the Korean Wave in the Netflix Era. *International Journal of Communication (19328036), 17*. https://ijoc.org/index.php/ijoc/article/view/20719

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4.

Flew, T. (2016). Entertainment media, cultural power, and post-globalization: The case of China's international media expansion and the discourse of soft power. *Global Media and China, 1*(4), 278–294. https://journals.sagepub.com/doi/full/10.1177/2059436416662037

Ganghariya, G., & Kanozia, R. (2020). Proliferation of Hallyu wave and Korean popular culture across the world: A systematic literature review from 2000–2019. *Journal of Content, Community & Communication, 11*(6), 177–207. https://www.amity.edu/gwalior/jccc/pdf/june_14.pdf

Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003320609-62/modernity-self-identity-anthony-giddens

Glodev, V., Wijaya, G., & Ida, R. (2023). The Korean wave as the globalization of South Korean culture. *WACANA: Jurnal Ilmiah Ilmu Komunikasi, 22*(1), 108–120. https://www.journal.moestopo.ac.id/index.php/wacana/article/view/2671

Habib, N., Zainab, S. S., & Sheeraz, M. I. (2024). Thanks to Social Media, Now We Can Waste Our Time More Efficiently: Use of Social Media and Employees' Productivity. *FWU Journal of Social Sciences*, *18*(1).

Habes, M., Ali, S., & Pasha, S. A. (2021). Statistical package for social sciences acceptance in quantitative research: from the technology acceptance model's perspective. *FWU Journal of Social Sciences*, *15*(4), 34-46.

Hall, S., Evans, J., & Nixon, S. (2024). *Representation: Cultural representations and signifying practices*. https://www.torrossa.com/it/resources/an/5909098

Herrero, C., Suarez, M. F., & Sánchez-Requena, A. (2023). Screen Media in Language Education: Towards a Student-Centred Approach. In *Teaching Languages with Screen Media: Pedagogical reflections and case studies*, 17-45. https://www.torrossa.com/en/resources/an/5494002#page=34

Hesmondhalgh, D. (2013). *The cultural industries* (3rd ed.). Sage. https://www.torrossa.com/en/resources/an/5018673

Hidayatullah, A., Naz, F., & Niazi, S. (2023). Internet addiction: Predictor of disturbed emotion regulation, sleep quality and general health in university students. *FWU Journal of Social Sciences*, *17*(2), 78-89.

Jang, W., & Song, J. E. (2017). The influences of K-pop fandom on increasing cultural contact. *Korean Association of Regional Sociology, 18*(2), 28. https://barnettcenter.osu.edu/sites/default/files/2019-08/the_influences_of_k-pop_fandom.pdf

Jenkins, H. (2006). *Convergence culture: Where old and new media collid*. New York, NY: New.

Jin, D. Y. (2023). Netflix's effects on the Korean Wave: power relations between local cultural industries and global OTT platforms. *Asian Journal of Communication, 33*(5), 452-469. https://www.tandfonline.com/doi/abs/10.1080/01292986.2023.2232368

Ju, H. (2021). K-dramas meet Netflix. In *The Soft Power of the Korean Wave: Parasite, BTS and Netflix* (pp. 171–181). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003102489-15/dramas-meet-netflix-hyejung-ju

Kamon, B. (2024). Cultural Imperialism of the Korean Wave and its Impact on Thai Society. *Journal of Ecohumanism*, *3*(7), 907-912. https://www.ceeol.com/search/article-detail?id=1275812

Khalid, R. (2024). The impact of the Korean cultural wave on the attitudes and practices of Pakistani youth. *Liberal Arts and Social Sciences International Journal (LASSIJ), 8*(2), 167–185. https://ideapublishers.org/index.php/lassij/article/view/1160

Kim, J. H., Kim, J., Chung, N., & Koo, C. (2024). The Netflix effect: exploring the nexus of content exposure, destination appeal, and behavioural intention. *Journal of Travel & Tourism Marketing,* *41*(3), 433-450. https://www.tandfonline.com/doi/abs/10.1080/10548408.2024.2323944

Kim, S. Y. (2023). *Surviving Squid Game: A Guide to K-Drama, Netflix, and Global Streaming Wars*. Rowman & Littlefield.

Kim, W. B., Lee, H. K., & Kang, Y. (2024). How Do International Students Idealize Beauty Standards? A Study of Vietnamese Students Living in Korea. *Journal of the Korean Society of Clothing and Textiles,* *48*(2), 328–349. https://koreascience.kr/article/JAKO202412976211162.pdf

Kim, Y. K. (2025). *Public Diplomacy Without Borders: South Korea's Humanity-Centered Approach to Global Engagement* (Master's thesis, American University). https://www.proquest.com/docview/3195951286?pq-origsite=gscholar&fromopenview=true&sourcetype=Dissertations%20&%20Theses

Krueger, R. A., & Casey, M. A. (2015). *Focus groups: A practical guide for applied research* (5th ed.). Sage Publications.

Kuo, C. W. (2024). The Global Success of Netflix with Korean Contents: The collaboration between the Korean government and local OTTs. *INContext: Studies in Translation and Interculturalism,* *4*(1), 162-186. https://incontextjournal.org/index.php/incontext/article/view/73

Lie, J. (2014). *K-pop: Popular music, cultural amnesia, and economic innovation in South Korea*. Univ of California Press.

Martínez Copete, A. (2016). Passive learning. The impact of TV shows on students' learning behaviours and performance. https://rua.ua.es/dspace/handle/10045/64736

Mawaddah, I., Wahyono, H., Andayani, E. S., & Sumarsono, H. (2024). The effect of STEAM approach to economics media based on Bima local wisdom in elementary schools. *Journal of Ecohumanism, 3*(7), 1396–1411. https://www.ceeol.com/search/article-detail?id=1275919

Morgan, D. L. (1997). *Focus groups as qualitative research* (2nd ed.). Sage Publications.

Mukhtar, A. S. B. (2024). Changing norm: A comparative study of soft masculine perceptions among K-pop fans and non-fans in Malaysia.

Mumtaz, M., & Farooqi, M. W. (2022). Cultural invasion via electronic media and its impact on Pakistan's youth. *The Journal of Cultural Perspectives, 1*(2). https://tjcp.aec.org.pk/index.php/tjcpdata/article/view/6

Nain, H., & Chaudhary, M. (2022). Internet Usage by Young Kids in India. *FWU Journal of Social Sciences*, *16*(3).

Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage publications.

ProPakistani. (2023, May 02). Why is Netflix pouring billions into South Korean shows? https://propakistani.pk/lens/why-is-netflix-pouring-billions-into-south-korean-shows/

Rahim, S., Pervez, S., & Andleeb, S. (2020). Facebook Addiction and Its Relationship with Self-Esteem and Narcissism. *FWU Journal of Social Sciences*, *14*(1). http://www.sbbwu.edu.pk/journal/Winter2021-Vol.15,No.4/11.%20Use%20of%20Narcotics%20in%20Pakistan.pdf

Rana, A. (2021). Hallyu: The globalization of Korean entertainment industry. *International Journal of Research Culture Society, 22*, 84.

Robertson, R. (1995). Glocalization: Time-space and homogeneity-heterogeneity. *Global Modernities, 2*(1), 25–44.

Roy, R. K., & Das, B. (2022). Transcultural flow in the age of globalization: Digital platforms, fandom and mediated culture in South Asia. In *Korean Wave in South Asia: Transcultural Flow, Fandom and Identity* (pp. 1–21). Springer Nature Singapore. https://link.springer.com/chapter/10.1007/978-981-16-8710-5_1

Rumelhart, D. E. (1980). Schemata: The building blocks of cognition. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 33–58). Erlbaum. https://www.taylorfrancis.com/chapters/edit/10.4324/9781315107493-4/schemata-building-blocks-cognition-david-rumelhart

Saeed, A., Shabbir, S. B., & Abbasi, S. (2023). Fiction, fantasizing, and romanticizing: Studying the effect of Korean dramas on Pakistani youth. *Journal of Media & Communication, 4*(2), 173–184. https://ojs.ilmauniversity.edu.pk/index.php/jmc/article/view/37

Sekartaji, S. (2023). The four factors dominating online streaming platforms as witnessed by Netflix in the wake of globalization. *Rubikon: Journal of Transnational American Studies, 10*(2), 161–174. https://journal.ugm.ac.id/rubikon/article/view/86392

Shah, A., & Ahmad, N. (2023). Exploring cross-cultural influences in the Pakistani drama industry: A critical analysis. *International Journal of Cultural Studies, 26*(3), 456–472. https://shibata.yubetsu.com/article/9FYjiDVT

Straubhaar, J. (2007). *World television: From global to local*. Sage.

Tomlinson, J. (1991). *Cultural imperialism: A critical introduction*. Continuum.

Wang, Y., & Weng, X. (2022, June). Analysis on how "globalization" affects Netflix to cultural diffusion. In *2022 8th International Conference on Humanities and Social Science Research (ICHSSR 2022)* (pp. 2082–2086). Atlantis Press. https://www.atlantis-press.com/proceedings/ichssr-22/125974763

Wolf, N. (1991). *The beauty myth: How images of beauty are used against women*. Harper Perennial.

Yaqoub, M., Jingwu, Z., & Haizhou, W. (2024). Exploring the Popularity and Acceptability of Indian and South Korean Films among Chinese Audiences: A Survey-Based Analysis. *SAGE Open, 14*(4), 21582440241302580. https://journals.sagepub.com/doi/full/10.1177/21582440241302580

Yoh, O. (2025). *Exploring Media Influence: Analyzing Public Perceptions, Genre-Specific Content, and Comparative Studies in Music and Film* (Doctoral dissertation, University of Miami). https://www.proquest.com/docview/3200470412?pq-origsite=gscholar&fromopenview=true&sourcetype=Dissertations%20&%20Theses

Yoon, K. (2023). K-pop Trans/nationalism. In *Routledge Handbook of Asian Transnationalism*. Taylor & Francis. https://library.oapen.org/handle/20.500.12657/60455

Digital Public Service Ecosystems in Local Governance: Insights from Northeastern Thailand's Local Administrative Organizations

Krisada Prachumrasee and Peerasit Kamnuansilpa
Khon Kaen University, Thailand

Prasongchai Setthasuravich
The University of Tokyo, Japan

This study examines the digital public service ecosystems within Local Administrative Organizations (LAOs) in Northeastern Thailand, focusing on the factors that facilitate or hinder the adoption of key digital technologies. The research employs a qualitative design, involving in-depth interviews and focus group discussions with 56 informants across 20 LAOs, to explore eight core elements of digital public services: regulatory frameworks, organizational structure, digital literacy, infrastructure, service activities, stakeholder collaborations, citizen engagement, and budget allocations. The findings indicate that while national policies and certain regulatory instruments provide an enabling environment, fragmented governance, constrained budgets, and insufficient human resource capacity persist as significant barriers to the adoption of sustainable digital practices. Larger municipalities demonstrate higher levels of digital integration and often have dedicated IT units, whereas smaller or resource-constrained LAOs struggle to deliver even basic e-services. Drawing on Digital Ecosystem Theory, this study proposes a dual strategy that combines top-down support—encompassing funding, policy directives, and legislative reforms—with bottom-up initiatives focused on local innovation, multi-stakeholder partnerships, and citizen-oriented approaches. This integrated model underscores that robust infrastructure and regulatory clarity alone are insufficient without parallel investments in institutional capacity-building and community outreach. The policy recommendations include establishing specialized IT units within LAOs, refining budgetary allocations for digital initiatives, and enhancing national-level coordination to optimize resource allocation.

Keywords: digital ecosystems, digital public services, digital transformation, developing countries, local governance

The global shift toward digital transformation was significantly accelerated by the COVID-19 pandemic, which reshaped various sectors, including public administration, education, and commerce (United Nations, 2020). Digital transformation in the public sector, often referred to as digital government, involves integrating digital technologies into governmental operations to enhance public service delivery, improve operational efficiency, and increase transparency and accountability. This transformation is essential for enabling governments to meet the needs of

modern societies, respond to rapidly changing environments, and ensure that services are accessible to all citizens. The importance of digital government is recognized globally, especially in developing countries, where digital tools help to reduce the gap in service access, making services more convenient, efficient, and equitable, particularly in underserved or remote areas (Omweri, 2024).

In Thailand, the government has acknowledged the need for digital transformation through its Thailand 4.0 initiative, which aims to enhance the efficiency, accessibility, and transparency of public services by utilizing advanced technologies. This initiative led to the establishment of the Ministry of Digital Economy and Society, which is responsible for overseeing the implementation of digital transformation policies at the national level. Despite substantial progress having been made at the central government level, local administrative organizations (LAOs)—the primary units of service delivery at the grassroots level—have faced challenges in fully adopting and implementing digital public services. This is particularly evident in the northeastern region of Thailand, where infrastructural and capacity-related issues have hindered the widespread deployment of digital technologies for public service provision (Thonmanee & Lowatcharin, 2024; Setthasuravich & Kato, 2022; Setthasuravich et al., 2024).

The digital transformation of public services involves leveraging key technologies, such as cloud computing, artificial intelligence, and data analytics, which facilitate improved decision-making, streamlined service delivery processes, and more efficient data storage and processing (David et al., 2019; Zia-ud-Din & Elhajraoui, 2023). These technologies are essential for automating routine tasks, enhancing citizen engagement, and increasing the overall effectiveness of government operations. For example, cloud-based platforms and artificial intelligence can enable local governments to offer more responsive services by providing real-time access to data and enhancing public decision-making processes. However, despite these technologies' potential to revolutionize public administration, significant challenges remain. Issues such as digital divides, resistance to change, and cybersecurity risks must be addressed to ensure that digital transformation initiatives can be implemented effectively and reach all citizens equally (Setyawan, 2024; Djatmiko et al., 2025; Balaji, 2025; Bjerke-Busch & Aspelund, 2021).

In the context of public services, particularly in healthcare and other essential sectors, digital transformation has been shown to enhance accessibility and improve service quality. For instance, research has shown that digital government initiatives can improve the utilization of public health services among marginalized populations, such as migrants in China, by improving access to health information and services (Jia, 2024). Similarly, studies across the European Union have demonstrated that e-government initiatives serve as catalysts for improving healthcare efficiency, making public health systems more responsive, and reducing healthcare costs (Kwilinski et al., 2024). These examples demonstrate the potential benefits of digital government transformation in enhancing public service delivery and promoting a more inclusive society.

Despite the positive global trends, Thailand's local governments face a unique set of challenges in implementing digital services. While there has been a significant push for digital adoption in the private sector, the digital transformation of local administrative organizations remains slow. The Digital Government Development Agency has been at the forefront of driving digital government policies nationwide. However, local administrative organizations often struggle with issues such as inadequate budgets, limited access to technology, and a shortage of personnel with the digital skills necessary to manage these transformations (Digital Economy Promotion

Agency, 2020). These barriers to digitalization impede the ability of LAOs to offer timely and efficient services, particularly in rural or remote areas, where the need for accessible and responsive public services is greatest (Prachumrasee et al., 2024; Van Deursen & Van Dijk, 2019).

Understanding the digital ecosystem within local administrative organizations is crucial for identifying areas where targeted interventions can be implemented to facilitate digital transformation. A digital ecosystem is a dynamic and interconnected system of technologies, people, processes, and organizations working together to deliver digital services. Boley and Chang (2007) define a digital ecosystem as an "open network, loosely coupled, domain-clustered, demand-driven, and self-organizing system," in which each agent operates autonomously yet remains accountable to the broader system. This perspective, which aligns with that presented by Tuamsuk et al., (2023), is crucial for understanding how local governments can effectively implement digital public services that meet citizens' needs while addressing regional challenges and limitations. By assessing the current state of this ecosystem, it becomes possible to identify which factors enable or hinder the successful development of digital services in local administrations (Jakob & Krcmar, 2018; Omweri, 2024; Giest & Raaphorst, 2018).

In recent years, several studies have examined digital ecosystems in public services, particularly in countries such as Singapore, Japan, and South Korea. These studies demonstrate that robust digital ecosystems substantially enhance the modernization, convenience, and transparency of public services. For instance, the integration of digital infrastructure and data connectivity has been found to enhance the delivery of public services at the local government level (Das, 2024). Furthermore, research by Nica et al., (2023) highlights that to enhance the efficiency of digital services, public servants need to possess digital skills. However, there remains a lack of research into the digital ecosystem within local Thai governments, particularly regarding how these ecosystems can be developed to meet the needs of local populations effectively.

Northeastern Thailand, often referred to as the Isan region, is uniquely significant for examining digital public service ecosystems due to its large geographic area, substantial population, and pivotal role in Thailand's decentralization efforts. Empirical data indicate that this region hosts a particularly high concentration of LAOs, many of which struggle with budgetary constraints, inadequate technical resources, and shortages of digitally skilled personnel (Department of Local Administration, 2023). These limitations tend to exacerbate existing socio-economic disparities, emphasizing the urgent need for targeted digital interventions to enhance public service provision (Robru et al., 2024; Chantasoon et al., 2025).

Moreover, the region's predominantly agricultural economy and dispersed rural settlements underscore the crucial role that LAOs play in delivering core services to underserved communities (National Economic and Social Development Council, 2022). Past studies have repeatedly underscored that limited broadband coverage and insufficient digital infrastructure are barriers to consistent and effective service delivery, especially in remote localities (Shaengchart & Bhumpenpein, 2025; Setthasuravich & Kato, 2025). Consequently, an in-depth exploration of Northeastern Thailand's LAOs not only sheds light on the distinct challenges they face—such as lower digital literacy and constrained fiscal capacity—but also provides a foundational framework for digital governance strategies that can bridge gaps in service quality (Milakovich, 2012, 2022; Pukdeewut & Setthasuravich, 2024). By focusing on this region, the present study ensures that its findings are both grounded in local realities and potentially adaptable to comparable contexts in other developing regions.

In light of these issues, this research aims to investigate the current state of the digital ecosystem as perceived by local administrative organizations in northeastern Thailand. By focusing on the readiness of these organizations to adopt and deploy digital technologies, the study will examine the components of the ecosystem and identify key gaps and opportunities for improvement. The primary research question guiding this study is: What is the current state of the digital ecosystem for public services provided by local administrative organizations in the northeastern region? Through this exploration, the research aims to provide a comprehensive understanding of the challenges faced by local governments in their digital transformation efforts and to offer insights into the factors that can facilitate the successful integration of digital technologies. Ultimately, this study's findings will inform the development of context-sensitive strategies to enhance digital public service delivery, improve accessibility, and ensure that all citizens benefit from more efficient and transparent governance.

Literature review
Digital Public Services Concept
The digital transformation of public services has become a critical pillar of modern governance, enhancing efficiency, transparency, and citizen engagement. Local governments, as frontline service providers, have increasingly integrated e-government platforms, digital identity systems, open data initiatives, and smart service applications into their daily operations in order to improve service delivery and administrative efficiency (Janssen & Estevez, 2013; Jan, 2025). This shift aligns with broader global initiatives, such as the European Union's digital government strategy, which aims for full digital accessibility by 2030 (Varisco & Pattinson, 2024). However, digital transformation is not solely a technological process: it requires institutional reforms that prioritize citizen participation, data-driven decision-making, and interoperability (Mergel et al., 2019). While automation reduces transaction costs and enhances service efficiency, its success depends on policy coherence, administrative capacity, and public trust (Roehl & Hansen, 2024; Tveita & Hustad, 2025). Persistent challenges—including policy fragmentation, bureaucratic inertia, and digital inclusion disparities—hinder progress, particularly in marginalized communities where digital literacy and internet access remain limited (Van Deursen & Van Dijk, 2019).

A critical aspect of digital governance is digital maturity, which assesses a government's ability to implement and sustain digital initiatives. Wodecka-Hyjek et al., (2024) identify six key dimensions of digital maturity—management focus, stakeholder openness, employee competencies, process digitalization, technology integration, and e-innovativeness—that reveal disparities between municipal and regional levels, influencing the adoption of digital services.

Emerging technologies, including artificial intelligence (AI), blockchain, the Internet of Things (IoT), and big data analytics, have transformed public administration. AI facilitates predictive analytics and automated decision-making, enhancing policy responsiveness and operational efficiency (Roehl & Hansen, 2024). Blockchain strengthens data security and transparency, particularly in public finance management and digital identity verification (Kshetri, 2017). IoT technologies play a crucial role in the development of smart cities, enhancing infrastructure, improving energy efficiency, and promoting urban mobility (Koonmee et al., 2021; Prachumrasee et al., 2019; Meijer & Bolívar, 2016). Big data has empowered governments to assess social and economic trends, optimizing resource allocation and crisis management (Lee, 2020; Vasilopoulou et al., 2023). Several countries, including the UK, have incorporated these innovations into national strategies, as highlighted in the State of Digital Government Review, which underscores the role of AI-driven governance and blockchain-based public services (Ubaldi et al.,

2019; Berryhill et al., 2018). However, these technologies also present governance challenges, including data privacy concerns, regulatory complexities, and financial constraints, which affect their widespread adoption (Local Government Association, 2025a).

Governance plays a central role in the sustainability and effectiveness of digital public services. Scholars emphasize the need for collaborative governance models that strike a balance between technological innovation and ethical oversight to maximize public value (Gasco Hernandez, 2024). Policy frameworks such as the Local Government Centre for Digital Technology have been proposed to coordinate digital initiatives, standardize best practices, and align local efforts with national digital strategies (Local Government Association, 2025b). However, systemic barriers, including funding disparities, digital literacy gaps, and interoperability challenges, continue to impede progress (Varisco & Pattinson, 2024). Furthermore, ethical concerns surrounding AI-driven decision-making and data governance necessitate regulatory safeguards to protect citizens' privacy and prevent algorithmic bias (Latupeirissa et al., 2024). A holistic approach that integrates technology with governance reforms, capacity-building initiatives, and equity-driven policies is essential. Future research should investigate the long-term impact of digital public services on citizen participation and explore hybrid models that strike a balance between automation and human-centered service delivery.

Digital Ecosystem Concept

The concept of a digital ecosystem, as defined by Boley and Chang (2007), revolves around dynamic networks involving various actors, technologies, and processes that collectively drive digital governance. In public administration, digital ecosystems comprise interconnected components, including governance frameworks, technological infrastructure, service providers, citizen engagement mechanisms, data governance policies, and financial models (Janssen & Estevez, 2013). In contrast to traditional bureaucratic systems, digital ecosystems prioritize flexibility, collaboration, and the co-creation of public services (Weißmüller et al., 2023; Edelmann & Virkar, 2023).

Governance frameworks are essential for coordinating the activities of multiple stakeholders within the ecosystem. Policies, regulations, and institutional arrangements must align with technological advancements to ensure transparency, accountability, and inclusivity (Sha et al., 2024). Digital ecosystems rely on the integration of scalable technological infrastructure, including cloud computing and interoperability frameworks, to facilitate seamless communication across government agencies and ensure the sustainability of digital services (OECD, 2024a, 2024b). Chang (2012) further highlights the role of technology in enhancing public service and participation.

Service providers and innovation partners, such as private sector organizations, civic tech firms, and academia, play a crucial role in driving technological innovation and enhancing service delivery (Verma & Jayasimha, 2014; Alonso & Andrews, 2022). Madan and Ashok (2023) examine the potential and challenges of AI in government, highlighting the importance of integrating advanced technologies to enhance public sector operations.

Citizen engagement and digital inclusion remain central to the ecosystem. Increasingly, citizens are seen as active participants in the design and implementation of public services, rather than passive recipients (Meijer, 2015). The digital divide continues to pose significant challenges, particularly for marginalized groups lacking access to technology or digital literacy (Curtis et al.,

2022). To promote inclusivity, governments must implement policies such as digital literacy programs, for example, mobile-first strategies, to ensure equitable access to digital services (Wang & Si, 2024; Correa et al., 2020). Additionally, data governance plays a crucial role in managing public sector data ethically and ensuring compliance with privacy regulations, such as the General Data Protection Regulation (GDPR), while fostering innovation and transparency through open data initiatives (Moriniere et al., 2024). Financial sustainability mechanisms, such as government budgets, are also vital for the continued development and success of digital ecosystems (Senyo et al., 2024; Chen et al., 2021).

Elements of Digital Public Services Ecosystem

The conceptual framework for evaluating the digital public services ecosystem in this study, as illustrated in Figure 1, is organized around eight elements that define the success and sustainability of digital public services within LAOs. These elements are interconnected and essential for creating a robust digital ecosystem that can deliver efficient public services.

The first element, "regulations and laws", often becomes a source of uncertainty in practice when new practices or digital technologies are introduced into public service delivery. Public sector personnel frequently encounter hesitation in implementation due to concerns about whether such actions are legally permissible, stemming from the absence of clear legal support and regulatory frameworks that encompass the emerging practices or technologies (Putra & Sara, 2024; Ruka, 2024; Sha et al., 2024). "Organizational structure and human resources," which comprise the second element, form the internal governance framework of public agencies, emphasizing leadership, institutional capacity, and the ability of public servants to manage and adapt to digital tools (Shaddiq et al., 2023; Xia & Md Johar, 2024). The third element, "digital literacy and skills," underscores the importance of digital literacy and capacity-building for both government staff and citizens, ensuring equitable access to services and fostering a culture of continuous learning (Oladimeji et al., 2024; Djatmiko et al., 2025). "Digital infrastructure," the fourth element, ensures the reliable functioning of digital services through robust hardware, software, and technical systems (GPAI, 2024; Baptista & Nunes, 2025). The fifth element, "activities," addresses the processes involved in digitalizing public services, ensuring that they meet the evolving needs of citizens (Janssen & Estevez, 2013). The sixth element, "collaboration" is also essential, as digital government initiatives are most successful when they involve partnerships among government agencies, the private sector, and civil society, thereby fostering innovation and enhancing service delivery (Alonso & Andrews, 2022). "Service recipients," or citizens, are the seventh element and are central to the ecosystem, driving the focus on designing accessible, inclusive, and user-friendly services that cater to all segments of the population (Meijer, 2015; Sahamies & Anttiroiko, 2024). Lastly, "budget allocations" ensure that sufficient financial resources are available to build, maintain, and scale digital infrastructure while supporting capacity-building efforts and ensuring the sustainability of digital services (Senyo et al., 2024; Chen et al., 2021).
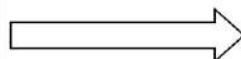
Figure 1. A conceptual framework

Although existing literature offers valuable insights into governance frameworks, technological infrastructures, and citizen engagement (GPAI. 2024; Das, 2024), previous studies have primarily examined digital public services in high-income countries or at the national level, often neglecting the distinct conditions of local governance in developing regions (Van Deursen & Van Dijk, 2019). Research on digital ecosystems rarely examines how limited resources, infrastructural challenges, and grassroots realities impact service delivery at the municipal or district level. This oversight is particularly significant in regions such as Northeastern Thailand, where socio-economic disparities, budgetary constraints, and cultural nuances complicate digital transformation efforts (Prachumrasee et al., 2022; Thonmanee & Lowatcharin, 2024).

Consequently, a gap remains in understanding how LAOs adapt and implement digital strategies in the face of these constraints. By examining critical ecosystem elements—such as regulatory frameworks, organizational capacities, and collaborative arrangements—this study offers a context-sensitive analysis that addresses the underexplored intersection of digital transformation and local governance in developing regions.

Method

This study employs a qualitative research design to investigate the digital public service ecosystem within Local Administrative Organizations (LAOs) in Northeastern Thailand. We chose to take a qualitative approach to gain in-depth insights into the structural, technological, and administrative challenges facing LAOs during their digital transformation journey. By focusing on participant perspectives and institutional contexts, this study provides a rich, descriptive analysis of the factors that enable or inhibit digital service adoption.

Site Selection Area

We employed a purposive sampling technique to select LAOs with varying levels of digital service adoption, ensuring the inclusion of informants who could provide rich, context-specific information relevant to the research objectives (Patton, 2015). In this study, we examined 20 LAOs across the four largest provinces in Northeastern Thailand, namely, Khon Kaen, Nakhon Ratchasima, Ubon Ratchathani, and Udon Thani. Within each province, all five types of local government entities were represented: Provincial Administrative Organizations (PAOs), City Municipalities, Town Municipalities, Sub-district Municipalities, and Sub-district Administrative Organizations (SAOs). We selected these provinces due to their combination of urbanized municipalities and rural sub-district organizations, which reflect varying levels of digital readiness and allow for a representation of the broader challenges encountered by Thai Local Administrative Organizations (LAOs) in their digital transformation processes. Khon Kaen and Nakhon Ratchasima exemplify more advanced digital initiatives (Digital Economy Promotion Agency, 2020), whereas Ubon Ratchathani and Udon Thani highlight ongoing challenges in less-developed contexts. This selection encompasses a broad spectrum of digital governance capacities, influenced by variations in fiscal resources and administrative contexts (Budget Bureau, 2022; Prachumrasee et al., 2024). By incorporating both advanced and underdeveloped models, the study offers a holistic perspective on the factors influencing digital transformation at the local level.

We selected these provinces because they are among the five in the region that have City Municipalities, which typically function as economic and administrative hubs and therefore play a key role in advancing digital public services (Digital Economy Promotion Agency, 2020; Nimmanphatcharin et al., 2021). To maintain balanced coverage across the five types of local government structures, we selected one Local Administrative Organization (LAO) of each type

within each province, enabling a comparative analysis of digital public service ecosystems across municipal governance structures in Northeastern Thailand. Using this approach, we captured variations in digital service adoption across different governance models, facilitating an in-depth exploration of the dynamics influencing digital public services.

Although we obtained valuable insights into the digital public service ecosystem in LAOs, our findings should be interpreted with consideration for the contextual limitations that affect them. As we conducted the study within a specific region of Thailand, caution should be exercised in generalizing the results to all Thai LAOs. However, the regulatory ambiguities, disparities in digital infrastructure, constraints in human resources, and financial limitations identified in this study are widely observed across Thailand's local governance landscape. These challenges are not confined to Northeastern Thailand but instead reflect broader structural characteristics of Thailand's decentralized administrative system. Therefore, although we do not claim statistical generalizability, the findings provide transferable insights that can contribute to digital transformation strategies in other Thai provinces with similar governance and socio-economic conditions.

Interviewees

The study involves 56 key informants from both executive and operational levels within the LAOs, as shown in Table 1. We purposively selected the participants based on their expertise and responsibilities in implementing digital public services, ensuring a comprehensive understanding of both strategic decision-making and practical execution. This group includes executives and senior officials involved in governance, policy formulation, and strategic planning, as well as operational staff and service providers directly responsible for the implementation, management, and daily delivery of these services.

Table 1
Number of interviewees.

	Khon Kaen		Nakorn Ratchasima		Ubon Ratchatani		Udon Thani		Total
	Executive	Staff	Executive	Staff	Executive	Staff	Executive	Staff	
PAO	2	4	1	1	2	4	1	3	18
City	1	2	1	1	1	2	1	1	10
Town	2	4	2	1	1	1	1	1	13
Sub-district	1	1	1	1	1	1	1	0	7
SAO	1	1	1	1	1	1	1	1	8
Total	**7**	**12**	**6**	**5**	**6**	**9**	**5**	**6**	**56**

Data Collection

Data collection took place in two main formats: in-depth interviews and focus group discussions, determined by the number of participants available at each session. When only one or two individuals were present, the session proceeded as a semi-structured interview. These interviews followed an interview protocol aligned with key ecosystem elements, including regulations, organizational capacity, and digital literacy. They featured open-ended questions that allowed participants to discuss relevant challenges, successes, and potential improvements freely and openly. In situations where three or more individuals participated simultaneously, we employed a focus group format (Morgan, 1997). Group sizes typically ranged from three to six participants,

facilitating robust interaction while ensuring each person had an opportunity to contribute (Guest et al., 2017).

We conducted all interviews and focus group discussions between May 2022 and December 2023, with each session lasting between 1 and 2 hours. Regardless of the format, all sessions were audio-recorded with the participants' informed consent, allowing for the capture of nuanced opinions and dynamics. Both the semi-structured interview guides and focus group protocols maintained a similar thematic focus, addressing organizational readiness, technological resources, service design, stakeholder collaboration, and budgetary constraints (Wodecka-Hyjek et al., 2024).

Sample Guiding Questions for In-Depth Interviews
- Can you describe your organization's current state of readiness for digital transformation?
- How do existing laws and regulations affect your organization's ability to deliver digital services?
- How would you evaluate the level of digital literacy among your staff?
- Can you provide a specific example of a digital initiative your organization has undertaken? What were the key factors contributing to its success or failure?
- What are the primary organizational challenges you encounter when adopting or scaling digital technologies?
Sample Guiding Questions for Focus Group Discussions
- What common challenges do agencies or departments face in delivering digital public services?
- In what ways do budget planning and allocation influence your organization's ability to deliver digital public services?
- From your perspective, what are the most critical success factors for effective digital transformation in the public sector?
- Is there additional support you would like to receive? If so, what is it?

Data Analysis

We audio-recorded, transcribed (verbatim), and analyzed all interviews and focus group discussions using the approach proposed by Braun and Clarke (2006). We chose this method for its flexibility and suitability in identifying, analyzing, and reporting patterns (themes) within qualitative data, particularly in complex public sector environments. Our analysis began with reading all transcripts repeatedly to ensure immersion in the data and to develop a comprehensive understanding of the content. During this process, we made notes and documented our initial observations.

The first phase involved generating initial codes. We employed both inductive and deductive coding approaches. We developed a preliminary coding scheme based on the study's conceptual framework. It included categories such as regulations, organizational structure, digital literacy, infrastructure, activities, service recipients, collaborations, and budget allocations. We derived additional codes inductively from the data to capture unanticipated insights and emerging themes. In the second phase, we identified themes by grouping codes into potential themes based on the identification of shared patterns, relationships, and meanings. This involved reviewing coded segments and aggregating similar codes into broader thematic categories. The third phase focused on reviewing themes. We refined identified themes by evaluating their internal consistency and

distinctiveness. We conducted a two-level review process—first within individual coded extracts and then across the entire data set—to ensure that the themes were representative and relevant.

In the fourth phase, we defined and named the themes. Each theme was clearly articulated and labeled to reflect its core meaning. We developed a codebook to document theme definitions, along with illustrative quotes, to enhance transparency and interpretability. Finally, we produced our report by synthesizing a coherent narrative based on the finalized themes, structured around the research questions that guided our investigation. We incorporated direct quotations from participants to preserve authenticity and to provide depth and context to the findings.

To ensure the credibility and trustworthiness of the analysis, we applied several qualitative validation strategies. We conducted triangulation by comparing insights obtained from interviews, focus group discussions, and relevant policy or administrative documents (Lincoln & Guba, 1985; Korstjens & Moser, 2018). We undertook member checking by sharing summarized findings with selected participants, who were invited to confirm the accuracy and relevance of the interpretations (Merriam & Tisdell, 2015). Additionally, we maintained an audit trail throughout the analytical process by documenting key decisions, code definitions, and the development of themes (Nowell et al., 2017). Through this rigorous and systematic approach, we promoted transparency, minimized researcher bias, and strengthened the overall validity and reliability of the qualitative findings.

Ethical Considerations

We conducted this study following the principles outlined in the Declaration of Helsinki. It was reviewed by the Institutional Ethics Committee of Khon Kaen University, Khon Kaen, Thailand (Reference Number HE653052, Approval date: April 12, 2022).

Results and Discussion

This study examined 20 Local Administrative Organizations (LAOs) across four provinces in Northeastern Thailand—Khon Kaen, Nakhon Ratchasima, Ubon Ratchathani, and Udon Thani—encompassing five types of LAOs: Provincial Administrative Organizations (PAOs), City Municipalities, Town Municipalities, Sub-district Municipalities, and Sub-district Administrative Organizations (SAOs). These LAOs differ in administrative responsibilities, population size, and budgetary capacities. Larger municipalities, such as cities and towns, tend to have more substantial budgets and often maintain dedicated information technology (IT) units. In contrast, smaller, rural-based SAOs frequently lack specialized personnel and rely on external service providers. Such diversity highlights the heterogeneity of digital readiness among these LAOs, providing the context for the findings that follow.

Current State of the Digital Ecosystem

We structured the qualitative analysis of the digital public services ecosystem around eight key elements: regulations and laws, organizational structure and human resources, digital literacy, digital infrastructure, service activities, collaborations, service recipients, and budget allocation, as illustrated in Figure 2.

Figure 2: Eight elements of the digital public services ecosystem.

Regulations and Laws

Regulations and laws play a crucial role in shaping the adoption of digital systems. Although several legislative frameworks support digital transformation, ambiguities and inconsistencies in regulatory provisions often hinder the effective implementation of this transformation. For instance, while the Personal Data Protection Act (PDPA) mandates stricter compliance measures, many Local Administrative Organizations (LAOs) perceive a lack of clear operational guidelines, leading to cautious adoption and fragmented digital service implementation (Putra & Sara, 2024; Ruka, 2024; Sha et al., 2024; Kandasamy et al., 2023). This challenge is reflected in the perspectives of LAO representatives, as illustrated in the following excerpts from interviews. Some interviewees highlight the restrictive nature of existing administrative regulations, which impede the complete transition to digital public services, particularly in processes that still require physical documentation:

...Certain bureaucratic regulations are not yet conducive to a complete shift towards fully digital public service delivery, especially in cases where approval processes still necessitate physical documentation... (A1).

Conversely, personnel from other LAOs contend that the current legal framework does not present a substantial barrier, as existing legislation, including the Licensing Facilitation Act and the Electronic Transaction Act, provides sufficient legal support for digital service delivery:

...Regulations do not hinder the adoption of digital systems in public service provision, as the Facilitation of Official Services Act and the Electronic Transactions Act already provide a legal foundation for digital transactions... (A2).

Organizational Structure, Digital Literacy, and Skills

In terms of organizational structure and human resources, the findings indicate that most Local Administrative Organisations (LAOs) in Thailand lack dedicated digital units, resulting in the fragmented implementation of digital initiatives. Even in municipalities with designated digital departments, a significant shortage of specialized personnel persists, resulting in the assignment of digital governance responsibilities to general administrative staff who often lack the necessary digital competencies. This study aligns with the work of Lohr (2025), who underscores the critical role of human resources in driving digital government transformation. It further extends this perspective by illustrating how decentralization, while empowering local administrations, can inadvertently widen the digital skills gap. In a context where local governments have varying levels of resources, leadership capacity, and access to training, decentralization leads to unequal development of digital competencies. As one interviewee noted:

...There is a lack of personnel with direct digital expertise. Existing staff are often tasked or assigned responsibilities that do not align with their positions. The organizational structure does not facilitate digital transformation, and there is a lack of systematic management in place. Recruiting skilled personnel is challenging due to regulatory constraints imposed by the central government, which limit the autonomy of local governments... (D1).

This issue highlights concerns regarding the digital literacy and skills of LAO personnel, as well as digital literacy among officials and citizens. The varying levels of digital competence among different stakeholders exacerbate the challenges of digital transformation. While some LAOs periodically offer training sessions, there is no standardized digital capacity-building program in place. As illustrated by the following interview excerpts, digital proficiency remains limited:

...Overall, digital knowledge and skills among personnel are at approximately 40%. There is a small group with high digital competency, while the majority possess only moderate proficiency... (B1)

...Executives should have sufficient digital literacy to integrate technology into management and policymaking. Department heads, in particular, need adequate skills to manage data effectively. However, the agency does not provide a structured training program to enhance digital competencies... (B2)

This reflects a broader trend of digital inequality, stemming from disparities in digital skills and knowledge. These disparities serve as barriers to the development of digital government initiatives (Van Deursen & Van Dijk, 2019; Setthasuravich et al., 2024; Pukdeewut & Setthasuravich, 2024).

Digital Infrastructure

Digital infrastructure is the most essential and salient determinant of the preparedness and quality of digital public services, particularly in larger municipalities that benefit from greater budgetary support. Certain city municipalities have invested in cloud systems and automation tools. However, smaller LAOs continue to face challenges, including outdated software, unreliable internet connectivity, and inefficient data management systems. As one respondent noted:

...Hardware is insufficient and outdated. The software in use may be obsolete and poses licensing issues... System connectivity remains incomplete... (C2).

The adoption of digital platforms for public service delivery varies significantly among LAOs. While some organizations effectively utilize e-portals and mobile applications, others primarily rely on social media for citizen engagement. This fragmentation in service provision presents a significant challenge, aligning with the findings of ICLEI (2023) and Latupeirissa et al., (2024), which emphasize the risks associated with uncoordinated digital initiatives. Previous research has demonstrated that sustained investment in digital infrastructure significantly enhances the effectiveness of local governance (Xu & Dai, 2024; Mofokeng et al., 2025). These findings underscore the importance of adopting a strategic and integrated approach to digital service delivery—one that improves usability, ensures accessibility, and strengthens overall service effectiveness.

Activities and Service Recipients

In terms of service activities, most LAOs have yet to incorporate digital service initiatives into their annual operational plans. Rather than implementing comprehensive digital strategies, LAOs primarily establish working groups and utilize online communication channels such as Line, Facebook, and official websites to engage with citizens. However, digital services remain largely fragmented, with limited cross-agency data integration, reflecting broader challenges in digital coordination among government entities. As one respondent noted:

...There are no structured initiatives to advance digital public services. Traditional service delivery methods remain functional due to the manageable size of the jurisdiction and population... (B5)

Another interviewee highlighted:

...Line and Facebook are used for communication and handling citizen complaints, but identity verification for official requests must still be conducted in person at the municipal office... (D4)

This issue aligns with key challenges previously identified in e-government transition research (Janssen & Estevez, 2013). Digital infrastructure alone is insufficient for meaningful transformation without concurrent advancements in policy and human resource capabilities (Zhang & Chen, 2024; Ruiz et al., 2024). Despite these gaps, many LAOs have started integrating digital platforms for specific functions, such as revenue collection and citizen engagement. However, the

extent of digital adoption varies significantly, with some municipalities implementing comprehensive digital solutions while others restrict their digital presence to fundamental social media interactions.

Collaboration

Collaborations with external stakeholders, including private technology firms and academic institutions, remain underutilized by many local authorities. Most partnerships align with provincial-level mandates rather than being directly related to digital public service provision. While some municipalities have engaged in collaborative efforts for digital training and software implementation, these partnerships tend to be ad hoc rather than systematically embedded within governance frameworks. Strengthening institutional partnerships could facilitate digital adoption by leveraging external expertise and shared resources. This finding is consistent with several studies, which likewise affirm that collaborations between government and the private sector enhance digital service delivery (Verma & Jayasimha, 2014; Alonso & Andrews, 2022; Ma et al., 2023; Liu et al., 2024). As one respondent noted:

> …*LAOs have partnerships with Krung Thai Bank for electronic salary and welfare payments, but there are no collaborations with other agencies in digital initiatives… (A5).*

The study also reveals an increasing level of citizen engagement with digital public services, particularly in urban areas where digital literacy is higher. However, significant difficulties persist in rural communities, where access to digital platforms remains limited due to both infrastructural deficiencies and a lack of digital skills. Addressing these challenges necessitates targeted digital inclusion policies to ensure equitable access to government services (Friederici et al., 2017). As one interviewee observed:

> …*Most citizens are not yet prepared to use digital services, particularly older people and those in remote areas… (A1).*

Budget Allocation

Budget allocation constraints persist as a significant challenge across all LAOs, restricting long-term investment in digital transformation. As long as municipalities allocate limited funding to basic IT infrastructure, there is a minimal financial commitment to comprehensive digital strategies, advanced cybersecurity measures, or personnel training programs. As interviewees noted:

> …*There is budget allocation for digital investment, but it remains a tiny proportion of the overall budget… (A3).*

Another respondent highlighted:

> … *A tiny budget of approximately 5,000 baht is allocated annually for website maintenance out of a total central government allocation of 80 million baht, while no budget has been designated for other digital systems… (B5).*

Similarly,

> …*There is funding for website domains and annual fees for Line Official accounts, but no budget allocated for developing specialized digital systems… (B3).*

This reactive budgeting approach hinders sustainable digital governance and reinforces reliance on external support for service development. Our findings suggest that structured and predictable budgetary allocations for digital public services are essential to achieving long-term transformation. Previous research has emphasized that financial sustainability is a crucial factor in the success of e-government initiatives (Senyo et al., 2024; Chen et al., 2021; Sigurjonsson et al., 2024). However, this study indicates that financial planning in Thai LAOs remains reactive rather than strategic, thereby limiting the effectiveness and sustainability of digital transformation efforts.

Comparisons by LAO Type

Table 2 summarizes the comparative readiness of different types of LAO. City Municipalities demonstrate the highest level of digital development, supported by relatively modern infrastructure, specialized IT units, and active public engagement. Town Municipalities follow closely, yet continue to face bureaucratic and connectivity challenges. PAOs show mixed readiness, with some leading in digital adoption while others struggle with limited IT governance and uneven staff capabilities. Sub-district Municipalities exhibit lower levels of integration and rely primarily on basic social media communication. SAOs rank lowest, constrained by unclear regulations, minimal IT staffing, and rudimentary digital platforms. These combine to leave them less equipped to offer citizen-centered e-services.

Table 2

The comparative readiness of different types of LAO

Category	City Municipalities	Town Municipalities	PAOs	Sub-district Municipalities	SAOs
Legal Readiness	Moderate (some outdated regulations)	Moderate (bureaucratic obstacles)	Mixed (some facilitative, some restrictive)	Weak (unclear regulations)	Weak (unclear and inconsistent policies)
Organizational Structure	Well-defined IT units	IT under strategic departments	Varies (some have digital units, others lack structure)	Limited digital governance	Minimal digital staffing
Human Resources	Digital expertise available but constrained	General awareness but skill gaps	Highly variable (some trained, others lacking)	Staff often lack specialized training	Digital tasks assigned to non-experts
Digital Literacy & Training	Ongoing digital upskilling programs	Efforts to enhance competencies	Inconsistent training programs	Sporadic training	Rare or informal training
Infrastructure Readiness	Advanced (modern hardware, stable internet)	Mostly modern but occasional connectivity issues	Mixed (some well-equipped, others lacking)	Outdated systems in many areas	Limited investment, infrastructure gaps
Digital Service Integration	High (diverse digital services, citizen engagement)	Moderate (good but uneven service implementation)	Basic integration with inconsistencies	Basic social media/web-based communication	Minimal digital services
Public Readiness & Access	High engagement with digital platforms	Moderate but some barriers remain	Mixed (some digital adoption, others reluctant)	Low, with accessibility challenges	Very low, particularly in rural areas
External Collaboration	Active partnerships with agencies/private sector	Some collaborations, but lacking strategy	Mixed (some initiatives, but not sustained)	Limited cooperation	Minimal partnerships
Overall Readiness Ranking	1st	2nd	3rd	4th	5th

Comparisons by Province

To derive the "Overall Readiness Ranking" by province, as shown in Table 3, we employed the same qualitative criteria as were used in Table 2. Specifically, we examined each province's performance across the eight ecosystem elements and aggregated the insights from interviews and focus groups. We then ranked the provinces from 1 (highest) to 4 (lowest) based on the extent of digital service integration, alignment with existing regulations, staff digital competencies, and evidence of sustainable investment in IT infrastructure. We found that Khon Kaen stands out for its relatively modern infrastructure and range of digital services, although there is room for improvement in governance and public adoption. Ubon Ratchathani benefits from active

collaborations and moderate infrastructure but struggles with staff skill gaps and a persistent digital divide. Nakhon Ratchasima has adequate infrastructure yet lacks specialized digital personnel and fails to prioritize holistic digital transformation. Udon Thani faces the most severe constraints, including a shortage of skilled staff, minimal budget allocations, and low public readiness. Common to all provinces are the burdens of outdated policies, limited training, and underinvestment, which collectively impede robust e-government delivery.

Table 3

The comparative readiness by province.

Factor	Khon Kaen	Ubon Ratchathani	Nakhon Ratchasima	Udon Thani
Digital Infrastructure	Well-developed, stable internet	Moderate, stable in urban areas	Adequate but uneven	Limited, connectivity issues
Organizational Structure	Dedicated digital service units	Moderate specialization	Lacks specialized units	Relies on outsourcing
Human Resources	Skilled but limited expertise	Skills gaps among personnel	Limited specialized staff	Severe shortage of skilled staff
Digital Public Service Offerings	Diverse and innovative	Moderate, sector-specific	Basic but expanding	Limited, mostly social media-based
Collaboration with External Organizations	Strong partnerships	Active collaborations	Moderate engagement	Minimal collaboration
Budget Allocation for Digitalization	Moderate but strategically invested	Moderate but inconsistent	Prioritized for hardware, not services	Minimal allocation
Regulatory Readiness	Supportive but needs updates	Some alignment, minor gaps	Moderate alignment	Outdated regulations hinder progress
Public Readiness	Increasing but not universal	Growing but urban-centered	Improving, uneven adoption	Low, requires digital literacy programs
Overall Readiness Ranking	1st	2nd	3rd	4th

The variations we observe in digital adoption among LAOs can be explained via multiple theoretical frameworks. Larger municipalities demonstrate higher levels of digital integration, which aligns with Digital Ecosystem Theory (Boley & Chang, 2007), emphasizing the interdependence of governance structures, technological capabilities, and institutional collaboration. Well-developed digital ecosystems foster innovation, efficiency, and responsiveness, which is why municipalities with strong governance and robust funding mechanisms tend to perform better. In contrast, smaller LAOs remain constrained by limited financial capacity, fragmented IT governance, and a lack of strategic vision, inhibiting their ability to develop robust digital services.

However, this study partially challenges Diffusion of Innovation Theory (Rogers, 2003), which suggests that innovations naturally spread when they offer clear advantages and observable success cases. Despite some municipalities successfully implementing digital governance, these practices do not readily diffuse to other LAOs, primarily due to regulatory constraints, financial disparities, and institutional inertia. This suggests that, beyond technological readiness, regulatory and financial barriers must also be considered significant inhibitors to digital transformation.

The Supportive and Inhibitive Factors Affecting the Development and Effectiveness of the Digital Ecosystem in Public Services within LAOs.

A mix of both supportive and inhibiting factors shapes the digital transformation of LAOs in Northeastern Thailand. While advances in digital infrastructure, regulatory frameworks, and citizen engagement have created an environment conducive to digital adoption, persistent challenges in human resource capacity, financial sustainability, and fragmented governance structures continue to hinder progress.

One of the most significant enablers is digital infrastructure readiness, particularly in city municipalities, where investments in cloud-based systems and broadband connectivity have facilitated the expansion of digital public services. This finding is consistent with Digital Ecosystem Theory (Boley & Chang, 2007), which posits that a well-integrated technological infrastructure is fundamental for sustainable digital ecosystems. In line with the Technology-Organization-Environment (TOE) framework (Tornatzky et al., 1990; Xiao et al., 2022; Adade & de Vries, 2025), digital transformation in LAOs appears to be driven by the availability of technological resources and organizational capacity.

The presence of regulatory frameworks also supports digital transformation. National legislation, such as the Electronic Transactions Act and the Licensing Facilitation Act, provides a legal basis for online transactions and digital service delivery. This finding aligns with Fountain (2001) and Irbe (2024), who argue that regulatory support is essential for shaping digital governance structures. However, while some municipalities effectively leverage these laws, others are uncertain regarding their interpretation and enforcement, leading to inconsistent implementation. This challenges the assumption that regulatory presence alone guarantees adoption, as observed in earlier studies on e-government failures due to regulatory misalignment (Heeks, 2003).

Beyond legal and infrastructure factors, public engagement with digital services emerges as a key enabler, particularly in urban areas where younger populations are more inclined to interact with government agencies through online platforms. This pattern aligns with the Diffusion of Innovation Theory (Rogers, 2003), which posits that younger, tech-savvy populations tend to act as early adopters, influencing the wider social acceptance of digital public services.

Despite these enabling factors, several barriers continue to hinder digital transformation efforts across LAOs. Significant challenges are the limited human resource capacity and digital literacy gaps within government agencies. Many LAOs lack specialized IT personnel, and digital service responsibilities are frequently assigned to general administrative staff with minimal technical training. While some municipalities conduct periodic training workshops, these programs often lack standardization and continuity, resulting in inconsistencies in digital service management and innovation. This finding partially contradicts the assumption that training alone is sufficient to enhance digital service management. Research suggests that long-term institutional reforms, structured governance frameworks, and policy standardization play a far greater role in sustaining digital transformation (Veenstra et al., 2011; OECD, 2022). Without such systemic changes, short-term training initiatives are unlikely to produce lasting improvements in e-government performance.

Other critical barriers are fragmented digital governance and weak inter-agency coordination. Unlike national-level agencies that operate under centralized digital strategies, many LAOs implement digital services independently, resulting in duplication of effort, lack of interoperability, and inefficient service delivery. This aligns with Meijer's (2015) assumption that interconnected digital platforms naturally lead to more efficient governance. Moreover, our findings support the research of Lam (2005) and Scott and Gong (2021), who argue that organizational silos and decentralized decision-making structures often pose significant barriers to the integration of e-government.

Budgetary constraints and short-term financial planning further complicate the adoption of digital solutions. Many LAOs operate under tight financial conditions, with funding primarily allocated for IT maintenance rather than for strategic digital development. Officials frequently express concerns that while government grants are available for basic infrastructure support, long-term investments in digital platforms, cybersecurity, and human resource development remain inadequate. Dunleavy et al., (2006) emphasize that digital transformation necessitates ongoing investment beyond IT infrastructure, encompassing cybersecurity, workforce training, and system maintenance. However, these critical areas are often overlooked in short-term public sector funding models, leading to fragmented digitalization efforts. Our findings align further with the E-Government Readiness Models (United Nations, 2020), which indicate that in low-resource environments, short-term investments rarely lead to sustained digital adoption without comprehensive financial strategies.

Finally, regulatory ambiguities and bureaucratic barriers add further complications. Despite national efforts to encourage digital transformation, several outdated legal provisions still require physical documentation for official approvals, creating a disconnect between policy intentions and actual administrative practices. Additionally, conflicting regulations regarding data protection and digital transactions have generated uncertainty among local officials, leading to hesitancy in adopting fully automated government processes. This echoes findings from Heeks' (2003) model of e-government failure, which suggests that in developing countries, regulatory frameworks often fail to align with digital governance needs, resulting in bureaucratic resistance and system inefficiencies.

This study's findings confirm several established models of e-government adoption, including the Technology-Organization-Environment (TOE) framework, Institutional Theory, and the Diffusion of Innovation Theory. However, they also challenge existing assumptions, particularly those related to Smart Governance Theory and Capability Maturity Models, which often overlook the context-specific challenges of decentralized governance structures and fragmented financial planning in developing countries. Our results suggest that successful digital transformation in LAOs requires a multi-faceted approach, integrating infrastructure investment, regulatory reforms, human capital development, and governance restructuring. Table 4 presents a summary of the key supportive and inhibitive factors this study identifies.

Table 4

Summary of Key Enablers and Barriers Affecting Digital Public Services in LAOs

Factor	Enablers (Supportive Factors)	Barriers (Inhibitive Factors)
Digital Infrastructure	Well-developed IT infrastructure in urban municipalities supports cloud-based systems and broadband connectivity.	Rural LAOs face slow internet, outdated hardware, and limited technical support, restricting service expansion.
Regulatory Frameworks	National legislation such as the Electronic Transactions Act provide legal support for e-services.	Lack of clear local enforcement and regulatory ambiguities create uncertainty, slowing adoption.
Public Digital Engagement	Younger and urban citizens are increasingly willing to use online services.	Elderly and rural populations exhibit low adoption rates due to digital literacy gaps and distrust of online services.
Human Resource Capacity	Some municipalities have IT teams managing digital services, facilitating smoother implementation.	Many LAOs lack dedicated IT personnel, and training programs for digital governance are inconsistent.
Digital Governance and Coordination	Some cities engage in cross-agency digital initiatives, improving interoperability.	The lack of a centralized digital governance framework leads to fragmented implementation and inefficiencies.
Financial Sustainability	Central government provides some funding for IT infrastructure.	Budget allocations are short-term and insufficient, limiting investment in long-term digital transformation projects.

| Bureaucratic Processes | Certain processes have moved online, reducing the administrative burden. | Some legal requirements still mandate physical documentation, preventing a full transition to digital services. |
| Stakeholder Collaboration | Partnerships with banks facilitate e-payment integration in some LAOs. | Most LAOs lack structured collaborations with private tech firms or academic institutions, limiting innovation. |

The Digital Public Services Ecosystem Model for LAOs

Based on our findings, we propose a dual-strategy model, as illustrated in Figure 3. It integrates digital ecosystem theory (Boley & Chang, 2007; Baptista & Nunes, 2025; Prachumrasee et al., 2022; GPAI, 2024) with public administration frameworks (Meijer, 2015; Alonso & Andrews, 2022; Ma et al., 2023; Mofokeng et al., 2025). In this model, regulatory environments, human capital, and infrastructure are identified as foundational elements that influence the adoption of digital services. Additionally, we identify adaptive governance mechanisms, including strategic collaborations and budget prioritization, as key enablers of sustainable digital transformation.

We advance the theoretical discourse, emphasizing the interdependence among digital ecosystem components, rather than treating them as isolated factors. We also emphasize that financial sustainability and regulatory clarity are equally crucial as technological infrastructure in shaping digital governance outcomes. To further explore digital transformation trajectories, this model should be applied in longitudinal studies over time.
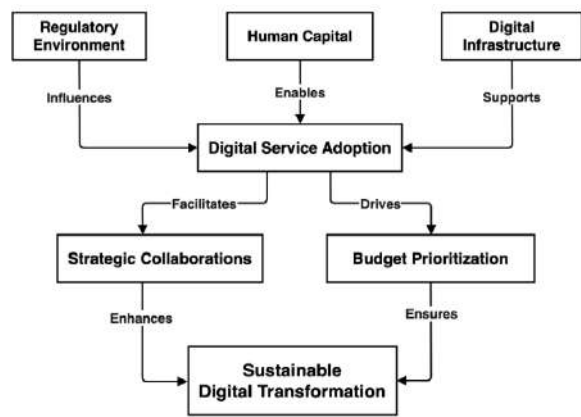
Figure 3: Digital Public Services Ecosystem of Local Administration Organizations Model.

Policy Recommendations for Improving Digital Public Service in Local Administrative Organizations

Based on the study's findings, a structured set of policy recommendations is essential for improving digital public service delivery in LAOs. Policymakers at all levels—including LAOs, the Ministry of Digital Economy and Society, and international development agencies—must implement targeted interventions to address the institutional, financial, and infrastructural barriers identified in this study.

At the local level, LAOs should institutionalize digital public service delivery by establishing dedicated digital governance units responsible for planning, maintaining, and expanding digital platforms. Without such teams, digital efforts remain fragmented and unsustainable. Equally important is the integration of digital services into annual planning and budgeting processes. A strategic and long-term perspective is needed to ensure that digital transformation becomes a core function of governance, rather than an option or ad hoc initiative. Additionally, enhancing citizen digital literacy and engagement is crucial. LAOs should conduct public education campaigns and offer training workshops, particularly in rural areas with lower

levels of digital competency. Collaboration with universities and private technology firms can significantly enhance the reach and effectiveness of these initiatives.

At the national level, the Ministry of Digital Economy and Society should develop a comprehensive framework for digital public services tailored to local administrative organizations (LAOs). This framework should outline the best practices, interoperability standards, and cybersecurity protocols to promote consistency and reliability across municipalities. The ministry should also provide targeted financial and technical support to under-resourced LAOs. A tiered funding model could prioritize smaller municipalities by offering direct subsidies, access to cloud-based service platforms, and customized training programs tailored to their specific needs. Furthermore, regulatory frameworks must be modernized to support digital innovation. Streamlining procedures, such as the approval process for digital procurement, can help Local Area Offices implement digital services more efficiently.

International development agencies should have a critical role in supporting the improvement of digital public services. These agencies should also invest in capacity-building initiatives that strengthen the digital competencies of LAOs personnel, enabling them to manage and expand the e-government platform effectively. They can also facilitate multi-stakeholder projects that combine private sector innovation, public sector leadership, and academic insight to test scalable models of digital service delivery.

Finally, international partners should invest in digital infrastructure, particularly in rural and underserved regions, by supporting the expansion of broadband and cloud-based solutions to reduce the digital divide and enhance service accessibility.

Conclusion

This study examined the ecosystem of digital public services within LAOs in Northeastern Thailand, illuminating both the potential and the persistent obstacles associated with digital transformation at the local government level. Our findings reveal that although national policies and certain regulatory frameworks create an enabling environment, fragmented governance structures, limited budget allocations, and insufficient human resource capacity frequently hinder sustained digital adoption. In particular, LAOs benefiting from larger budgets and dedicated IT departments demonstrate comparatively high levels of digital integration. In contrast, those operating under strict resource constraints face challenges in delivering even basic e-government services.

A key contribution made by this research is its dual-strategy approach, which integrates top-down mechanisms—such as national-level directives, funding support, and legislative reforms—with bottom-up initiatives that prioritize local innovation, stakeholder collaboration, and citizen participation. This approach underscores that meaningful and sustainable digital transformation relies on both robust infrastructure and clear regulatory guidance as well as localized capacity-building and community engagement. The successes observed in selected municipalities exemplify how comprehensive training, strategic partnerships, and focused investments can address organizational and financial barriers, ultimately fostering an inclusive digital ecosystem.

Despite these contributions, we acknowledge that this study is affected by several limitations. The qualitative design, while offering in-depth perspectives, does not capture the whole variety of digital readiness across all Thai LAOs. Likewise, the regional focus in Northeastern Thailand limits the generalizability of findings to other provinces or international contexts.

Furthermore, the cross-sectional nature of the data collection restricts insights into how LAO digital maturity evolves.

To address these gaps, future research should explore mixed-methods or longitudinal designs, extending across multiple regions or countries. Comparative analyses, whether interprovincial or cross-national, would shed light on how diverse institutional and socio-economic contexts shape digital transformation. In addition, assessing the long-term impacts of policy and organizational reforms would strengthen the understanding of how strategies evolve to sustain digital public services.

In conclusion, effective digital governance frameworks require concerted efforts from national policymakers, local authorities, and external stakeholders. By aligning financial resources, regulatory modernization, and grassroots participation, LAOs can enhance service delivery, bridge the digital divide, and advance transparent and efficient public administration. The insights generated by this study offer a pathway for both Thai policymakers and international practitioners seeking to optimize digital government initiatives in diverse governance settings.

References

Adade, D., & de Vries, W. T. (2025). An extended TOE framework for local government technology adoption for citizen participation: Insights for city digital twins for collaborative planning. *Transforming Government: People, Process and Policy*, 19(1), 53–73. https://doi.org/10.1108/TG-01-2024-0025

Alonso, J. M., & Andrews, R. (2022). Can public-private innovation partnerships improve public services? Evidence from a synthetic control approach. *Public Administration Review*, *82*(6), 1138–1153. https://doi.org/10.1111/puar.13514

Balaji, K. (2025). E-Government and E-Governance: Driving Digital Transformation in Public Administration. In K. Wongmahesak, J. Ahmad, & A. Mustanir (Eds.), *Advances in Computational Intelligence and Robotics* (pp. 23–44). IGI Global. https://doi.org/10.4018/979-8-3693-9286-7.ch002

Baptista, C. S., & Nunes, D. (2025). Digital ecosystems and their influence on business relationships. *Review of Managerial Science*. https://doi.org/10.1007/s11846-025-00865-2

Berryhill, J., Bourgery, T., & Hanson, A. (2018). *Blockchains unchained: Blockchain technology and its use in the public sector*. OECD Working Papers on Public Governance No. 28). OECD Publishing. https://doi.org/10.1787/3c32c429-en

Bjerke-Busch, L. S., & Aspelund, A. (2021). Identifying barriers for digital transformation in the public sector. In *Digitalization: Approaches, case studies, and tools for strategy, transformation and implementation* (pp. 277-290). Cham: Springer International Publishing.

Boley, H., & Chang, E. (2007). Digital Ecosystems: Principles and Semantics. *2007 Inaugural IEEE-IES Digital EcoSystems and Technologies Conference*, 398–403. https://doi.org/10.1109/DEST.2007.372005

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Budget Bureau. (2022). *Thailand's budget in brief: Fiscal year 2023*. https://www.bb.go.th/en/topic-detail.php?id=15053&mid=456&catID=0

Chang, K. (2012). Digital Governance: New Technologies for Improving Public Service and Participation. *International Review of Public Administration*, *17*(2), 175–178. https://doi.org/10.1080/12294659.2012.10805235

Chantasoon, M., Pukdeewut, A., & Setthasuravich, P. (2025). Smart mobility in a secondary city: Insights from food delivery app adoption among Thai university students. *Urban Science,* *9*(4), 104. https://doi.org/10.3390/urbansci9040104

Chen, C.-L., Lin, Y.-C., Chen, W.-H., Chao, C.-F., & Pandia, H. (2021). Role of Government to Enhance Digital Transformation in Small Service Business. *Sustainability*, *13*(3), 1028. https://doi.org/10.3390/su13031028

Correa, T., Pavez, I., & Contreras, J. (2020). Digital inclusion through mobile phones?: A comparison between mobile-only and computer users in internet access, skills and use. *Information, Communication & Society*, *23*(7), 1074–1091. https://doi.org/10.1080/1369118X.2018.1555270

Curtis, M. E., Clingan, S. E., Guo, H., Zhu, Y., Mooney, L. J., & Hser, Y. (2022). Disparities in digital access among American rural and urban households and implications for telemedicine-based services. *The Journal of Rural Health*, *38*(3), 512–518. https://doi.org/10.1111/jrh.12614

Das, D. K. (2024). Exploring the Symbiotic Relationship between Digital Transformation, Infrastructure, Service Delivery, and Governance for Smart Sustainable Cities. *Smart Cities*, *7*(2), 806–835. https://doi.org/10.3390/smartcities7020034

David, V.-C., Ruvalcaba-Gomez, E. A., Sandoval-Almazan, R., & Criado, J. I. (2019). A review of artificial intelligence in government and its potential from a public policy perspective. *Proceedings of the 2019 International Conference on Artificial Intelligence (pp. 91-99)*. https://doi.org/10.1145/3325112.3325242

Department of Local Administration. (2023). *Local Performance Assessment (LPA) 2024: Public service provision (Section 4)*. Ministry of Interior, Thailand. https://www.dla.go.th/servlet/EbookServlet

Digital Economy Promotion Agency. (2020). *Thailand digital technology foresight 2035*. https://depa.or.th/storage/app/media/file/depa-Technology-Foresight-Final-Report-EN-250320.pdf

Djatmiko, G. H., Sinaga, O., & Pawirosumarto, S. (2025). Digital Transformation and Social Inclusion in Public Services: A Qualitative Analysis of E-Government Adoption for Marginalized Communities in Sustainable Governance. *Sustainability*, *17*(7), 2908. https://doi.org/10.3390/su17072908

Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. (2006). New public management is dead—Long live digital-era governance. *Journal of Public Administration Research and Theory, 16*(3), 467–494. https://doi.org/10.1093/jopart/mui057

Edelmann, N., & Virkar, S. (2023). The Impact of Sustainability on Co-Creation of Digital Public Services. *Administrative Sciences*, *13*(2), 43. https://doi.org/10.3390/admsci13020043

Fountain, J. E. (2001). *Building the Virtual State: Information Technology and Institutional Change*. Brookings Institution Press. https://www.jstor.org/stable/10.7864/j.ctvcb59n3

Friederici, N., Ojanperä, S., & Graham, M. (2017). The Impact of Connectivity in Africa: Grand Visions and the Mirage of Inclusive Digital Development. *The Electronic Journal of Information System in Developing Countries*, *79*(1), 1–20. https://doi.org/10.1002/j.1681-4835.2017.tb00578.x

Gasco Hernandez, M. (2024). Reflections on three decades of digital transformation in local governments. *Local Government Studies*, *50*(6), 1028–1040. https://doi.org/10.1080/03003930.2024.2410830

Giest, S., & Raaphorst, N. (2018). Unraveling the hindering factors of digital public service delivery at street-level: The case of electronic health records. *Policy Design and Practice*, *1*(2), 141–154. https://doi.org/10.1080/25741292.2018.1476002

GPAI. (2024). *Digital ecosystems that empower communities: Exploring case studies to develop digital ecosystems theory and templates for technology stacks* (Report, November 2024). https://wp.oecd.ai/app/uploads/2024/12/18-Digital-Ecosystems-that-Empower-Communities-Exploring-case-studies-to-develop-theory-and-templates-for-technology-stacks.pdf

Guest, G., Namey, E., Taylor, J., Eley, N., & McKenna, K. (2017). Comparing focus groups and individual interviews: Findings from a randomized study. *International Journal of Social Research Methodology, 20*(6), 693–708. https://doi.org/10.1080/13645579.2017.1281601

Heeks, R. (2003). Most eGovernment-for-Development Projects Fail: How Can Risks be Reduced? *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3540052

ICLEI – Local Governments for Sustainability. (2023). *Digitalization: A game changer for local governments & communities: Enhancing capacities to deploy transformative solutions*. https://iclei.org/wp-content/uploads/2023/12/2022-Academy-Digitalization-Policy-Brief-ICLEI.pdf

Irbe, I. (2024). Digital Governance and Regulation. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4723373

Jakob, M., & Krcmar, H. (2018). Which barriers hinder a successful digital transformation in small and medium-sized municipalities in a federal system? *Central and Eastern European eDem and eGov Days*, *331*, 141–150. https://doi.org/10.24989/ocg.v331.12

Jan, M. A. (2025). Democratic Disconnect in E-government Policy Initiatives of Khyber Pakhtunkhwa. *FWU Journal of Social Sciences*, *19*(1). 113 – 121. http://doi.org/10.51709/19951272/Spring2025/10

Janssen, M., & Estevez, E. (2013). Lean government and platform-based governance—Doing more with less. *Government Information Quarterly*, *30*, S1–S8. https://doi.org/10.1016/j.giq.2012.11.003

Jia, H. (2024). Government Digital Transformation and the utilization of Basic Public Health Services by China's migrant population. *BMC Public Health, 24*(1), 3253. https://doi.org/10.1186/s12889-024-20730-3

Kandasamy, J., Venkat, V., & Mani, R. S. (2023). Barriers to the adoption of digital technologies in a functional circular economy network. *Operations Management Research, 16*(3), 1541-1561. https://doi.org/10.1007/s12063-023-00375-y

Koonmee, S., Somintara, O., Intarawichian, P., Aphivatanasiri, C., Sangkhamanon, S., Laohawiriyakamol, S., Panawattanakul, R., Mahantassanapong, P., Rattadilok, C., Jeeravongpanich, P., Krongyute, W., Prachumrasee, K., & Alaghehbandan, R. (2021). Pathum Raksa Project: Addressing Disparity in Breast Cancer Care Through National Innovation in Thailand. *Cancer Management and Research*, *Volume 13*, 8737–8753. https://doi.org/10.2147/CMAR.S335386

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, *24*(1), 120–124. https://doi.org/10.1080/13814788.2017.1375092

Kshetri, N. (2017). Blockchain's roles in strengthening cybersecurity and protecting privacy. *Telecommunications Policy, 41*(10), 1027–1038. https://doi.org/10.1016/j.telpol.2017.09.003

Kwilinski, A., Szczepanska-Woszczyna, K., Lyulyov, O., & Pimonenko, T. (2024). Digital public services: Catalysts for healthcare efficiency. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(3), 100319. https://doi.org/10.1016/j.joitmc.2024.100319

Lam, W. (2005), Barriers to e-government integration, *Journal of Enterprise Information Management*, Vol. 18 No. 5, pp. 511-530. https://doi.org/10.1108/17410390510623981

Latupeirissa, J. J. P., Dewi, N. L. Y., Prayana, I. K. R., Srikandi, M. B., Ramadiansyah, S. A., & Pramana, I. B. G. A. Y. (2024). Transforming Public Service Delivery: A Comprehensive Review of Digitization Initiatives. *Sustainability*, *16*(7), 2818. https://doi.org/10.3390/su16072818

Lee, J. W. (2020). Big Data Strategies for Government, Society and Policy-Making. *The Journal of Asian Finance, Economics and Business*, *7*(7), 475–487. https://doi.org/10.13106/JAFEB.2020.VOL7.NO7.475

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

Liu, L. X., Clegg, S., & Pollack, J. (2024). The Effect of Public–Private Partnerships on Innovation in Infrastructure Delivery. *Project Management Journal*, *55*(1), 31–49. https://doi.org/10.1177/87569728231189989

Local Government Association. (2025a). *State of digital local government*. https://www.local.gov.uk/publications/state-digital-local-government

Local Government Association. (2025b). *Digital Centre of Government Parliamentary Review*. https://www.local.gov.uk/parliament/briefings-and-responses/digital-centre-government-parliamentary-review

Lohr, K. D. (2025). Digital Literacy and Access: Equity From a Global and Local Perspective. *New Directions for Adult and Continuing Education*, *2025*(185), 39–43. https://doi.org/10.1002/ace.20559

Ma, L., Christensen, T., & Zheng, Y. (2023). Government technological capacity and public–private partnerships regarding digital service delivery: Evidence from Chinese cities. *International Review of Administrative Sciences*, *89*(1), 95–111. https://doi.org/10.1177/00208523211018849

Madan, R., & Ashok, M. (2023). AI adoption and diffusion in public administration: A systematic literature review and future research agenda. *Government Information Quarterly*, *40*(1), 101774. https://doi.org/10.1016/j.giq.2022.101774

Meijer, A. (2015). E-governance innovation: Barriers and strategies. *Government Information Quarterly*, *32*(2), 198–206. https://doi.org/10.1016/j.giq.2015.01.001

Meijer, A., & Bolívar, M. P. R. (2016). Governing the smart city: A review of the literature on smart urban governance. *International Review of Administrative Sciences*, *82*(2), 392–408. https://doi.org/10.1177/0020852314564308

Mergel, I., Edelmann, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly, 36*(4), 101385. https://doi.org/10.1016/j.giq.2019.06.002

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.

Milakovich, M. E. (2012). *Digital Governance* (1st ed.). Routledge. https://doi.org/10.4324/9780203815991

Milakovich, M. E. (2022). *Digital governance: Applying advanced technologies to improve public service* (Second edition). Routledge, Taylor & Francis Group.

Mofokeng, S., Ramolobe, K. S., & Bogopa, D. L. (2025). Assessing the impact of digital technologies on service delivery in local government. *Journal of Local Government Research and Innovation*, *6*. https://doi.org/10.4102/jolgri.v6i0.234

Morgan, D. (1997). *Focus Groups as Qualitative Research*. SAGE Publications, Inc. https://doi.org/10.4135/9781412984287

Moriniere, S., Keller, J. R., & Inverarity, C. (2024). *Empowering Thailand's digital government with open data*. Open Data Institute. https://theodi.org/documents/501/Empowering_Thailands_Digital_Government_with_Open_Data.pdf

National Economic and Social Development Council. (2022). *Regional development plan for Thailand*. Prime Minister's Office.

Nica, E., Mișa, A., & Melenciuc, M. (2023). How do we ensure the qualification of civil servants with digital skills in Europe? A comparative study. *Applied Research in Administrative Sciences*, *4*(3). https://doi.org/10.24818/ARAS/2023/4/3.04

Nimmanphatcharin, N., Prathombutr, P., Siddhichai, S., Non, A., & Treethidtaphat, W. (2021). *Smart city initiatives in Thailand: Key concepts and methods*. Digital Economy Promotion Agency. https://www.depa.or.th/storage/app/media/file/Smart-City-Thailand-Hitachi-Review-20210624.pdf

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, *16*(1), 1609406917733847. https://doi.org/10.1177/1609406917733847

OECD. (2022). *Open and Connected Government Review of Thailand*. OECD. https://doi.org/10.1787/e1593a0c-en

OECD. (2024a). *Digital public infrastructure for digital governments* (OECD Public Governance Policy Papers No. 68). OECD Publishing. https://doi.org/10.1787/ff525dc8-en

OECD. (2024b). *Enabling digital innovation in government: The OECD GovTech policy framework*. OECD Publishing. https://doi.org/10.1787/a51eb9b2-en

Oladimeji, K. A., Abdulkareem, A. K., & Adejumo, A. (2024). From Tech Skills to Performance Gains: How Digital Literacy Drives Productivity Improvements in the Public Sector. *Institutiones Administrationis*, *4*(1), 56–73. https://doi.org/10.54201/iajas.v4i1.93

Omweri, F. S. (2024). A Systematic Literature Review of E-Government Implementation in Developing Countries: Examining Urban-Rural Disparities, Institutional Capacity, and Socio-Cultural Factors in the Context of Local Governance and Progress towards SDG 16.6. *International Journal of Research and Innovation in Social Science*, *8*(8), 1173-1199. https://dx.doi.org/10.47772/IJRISS.2024.808088

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (Fourth edition). SAGE Publications, Inc.

Prachumrasee, K., Juthong, N., Waisopha, B., Suthiporn, W., Manerutanaporn, J., & Koonmee, S. (2019). IoT in Pre-Analytical Phase of Breast Cancer Specimens Handling in Thailand Hospitals. *2019 16th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON)*, 842–845. https://doi.org/10.1109/ECTI-CON47248.2019.8955143

Prachumrasee, K., Laochankam, S., & Kamnuansilpa, P. (2022). Digital Ecosystem in Public Services of the Northeastern Local Administrative Organizations: Initial Findings. *2022 International Conference on Digital Government Technology and Innovation (DGTi-CON)*, 47–50. https://doi.org/10.1109/DGTi-CON53875.2022.9849193

Prachumrasee, K., Ronghanam, P., Thonmanee, K., Phonsungnoen, P., Mangma, P., Setthasuravich, P., & Lowatcharin, G. (2024). From traditional to digital: Transforming local administrative organization workflows in Thailand through social listening tools. *Social Sciences, 13*(12), 666. https://doi.org/10.3390/socsci13120666

Pukdeewut, A., & Setthasuravich, P. (2024). Bridging the third-level digital divide: Socio-demographic determinants of the digital outcomes in Thailand. *FWU Journal of Social Sciences, 18*(4), 19–39. http://doi.org/10.51709/19951272/Winter2024/2

Putra, M. A., & Sara, R. (2024). Legal Uncertainty in Digital Application-Based Transportation Services. *International Journal of Social Service and Research*, *4*(12). https://doi.org/10.46799/ijssr.v4i12.1129

Robru, K., Setthasuravich, P., Pukdeewut, A., & Wetchakama, S. (2024). Internet use for health-related purposes among older People in Thailand: An analysis of nationwide cross-sectional data. *Informatics, 11*(3), 55. https://doi.org/10.3390/informatics11030055

Roehl, U. B. U., & Hansen, M. B. (2024). Automated, administrative decision-making and good governance: Synergies, trade-offs, and limits. *Public Administration Review*, *84*(6), 1184–1199. https://doi.org/10.1111/puar.13799

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Ruiz, L., Benitez, J., Castillo, A., & Braojos, J. (2024). Digital human resource strategy: Conceptualization, theoretical development, and an empirical examination of its impact on firm performance. *Information & Management*, *61*(4), 103966. https://doi.org/10.1016/j.im.2024.103966

Ruka, P. (2024). The legal challenges related to the digitalization of public services: A principles perspective. In *Collection Regional Law Review* (Vol. 5, pp. 31–41). Institute of Comparative Law. https://doi.org/10.56461/iup_rlrc.2024.5.ch3

Sahamies, K., & Anttiroiko, A.-V. (2024). Ecosystem approach in public management: Insights from the city of Espoo. *International Journal of Public Sector Management*, *37*(4), 555–570. https://doi.org/10.1108/IJPSM-06-2023-0176

Scott, I., & Gong, T. (2021). Coordinating government silos: Challenges and opportunities. *Global Public Policy and Governance*, *1*(1), 20–38. https://doi.org/10.1007/s43508-021-00004-z

Senyo, P. K., Karanasios, S., Komla Agbloyor, E., & Choudrie, J. (2024). Government-Led digital transformation in FinTech ecosystems. *The Journal of Strategic Information Systems*, *33*(3), 101849. https://doi.org/10.1016/j.jsis.2024.101849

Setthasuravich, P., & Kato, H. (2022). Does the digital divide matter for short-term transportation policy outcomes? A spatial econometric analysis of Thailand. *Telematics and Informatics, 72*, 101858. https://doi.org/10.1016/j.tele.2022.101858

Setthasuravich, P., & Kato, H. (2025). Confronting policy myopia: Short-term government policy and information-seeking behaviors in rural Thailand. *Review of Policy Research*, https://doi.org/10.1111/ropr.12645

Setthasuravich, P., Sirikhan, K., & Kato, H. (2024). Spatial econometric analysis of the digital divide in Thailand at the sub-district level: Patterns and determinants. *Telecommunications Policy, 48*, 102818. https://doi.org/10.1016/j.telpol.2024.102818

Setyawan, A. C. (2024). Enhancing Public Service Delivery through Digital Transformation: A Study on the Role of E-Government in Modern Public Administration. *Global International Journal of Innovative Research*, *2*(10), 2439–2453. https://doi.org/10.59613/global.v2i10.340

Sha, K., Taeihagh, A., & De Jong, M. (2024). Governing disruptive technologies for inclusive development in cities: A systematic literature review. *Technological Forecasting and Social Change*, *203*, 123382. https://doi.org/10.1016/j.techfore.2024.123382

Shaddiq, S., Khuzaini, & M. Irpan. (2023). Governance of Human Resources Management in the Digital Era. *Journal of Business and Management Studies*, *5*(3), 80–96. https://doi.org/10.32996/jbms.2023.5.3.8

Shaengchart, Y., & Bhumpenpein, N. (2025). Bridging the digital divide in rural Thailand: Understanding potential factors influencing Starlink's satellite internet adoption. *Social Sciences & Humanities Open*, *11*, 101355. https://doi.org/10.1016/j.ssaho.2025.101355

Sigurjonsson, T. O., Jónsson, E., & Gudmundsdottir, S. (2024). Sustainability of Digital Initiatives in Public Services in Digital Transformation of Local Government: Insights and Implications. *Sustainability*, *16*(24), 10827. https://doi.org/10.3390/su162410827

Thonmanee, K., & Lowatcharin, G. (2024). The Digital Divide and Citizens' Perceptions of Government Responsiveness: A Case Study of Udon Thani Municipality, Thailand. *Journal of Social Sciences and Humanities Research in Asia*, *30*(1), 75–90. Retrieved from https://so05.tci-thaijo.org/index.php/psujssh/article/view/268308

Tornatzky, L. G., Fleischer, M., & Chakrabarti, A. K. (1990). *The processes of technological innovation*. Lexington Books.

Tuamsuk, K., Nguyen, L. T., Kanjug, I., Lowatcharin, G., Manakul, T., Poonpon, K., Sarakorn, W., Somabut, A., Srisawasdi, N., & Traiyarach, S. (2023). Key success factors for transforming classrooms into learning communities in digital learning ecosystem at secondary schools in Thailand. *Contemporary Educational Technology*, *15*(2), ep408. https://doi.org/10.30935/cedtech/12920

Tveita, L. J., & Hustad, E. (2025). Benefits and Challenges of Artificial Intelligence in Public sector: A Literature Review. *Procedia Computer Science*, *256*, 222–229. https://doi.org/10.1016/j.procs.2025.02.115

Ubaldi, B., Fevre, E. M. L., Petrucci, E., Marchionni, P., Biancalana, C., Hiltunen, N., Intravaia, D. M., & Yang, C. (2019). *State of the art in the use of emerging technologies in the public sector* (OECD Working Papers on Public Governance No. 31; OECD Working Papers on Public Governance, Vol. 31). https://doi.org/10.1787/932780bc-en

United Nations. (2020). United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development (With addendum on COVID-19 Response). United Nations. https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020

Van Deursen, A. J., & Van Dijk, J. A. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media & Society*, *21*(2), 354–375. https://doi.org/10.1177/1461444818797082

Varisco, L., & Pattinson, M. (2024). *Digital transformation of public services: A Policy Brief from the Policy Learning Platform for a smarter Europe* . Interreg Europe Policy Learning Platform. https://www.interregeurope.eu/find-policy-solutions/policy-briefs/digital-transformation-of-public-services#anchor-download-the-policy-brief

Vasilopoulou, C., Theodorakopoulos, L., & Giotopoulos, K. (2023). Big Data Analytics: A Catalyst for Digital Transformation in e-Government. *Technium Social Sciences Journal*, *45*, 449–459. https://doi.org/10.47577/tssj.v45i1.9134

Veenstra, A. F. V., Klievink, B., & Janssen, M. (2011). Barriers and impediments to transformational government: Insights from literature and practice. *Electronic Government, an International Journal*, *8*(2/3), 226. https://doi.org/10.1504/EG.2011.039838

Verma, R., & Jayasimha, K. R. (2014). Service delivery innovation architecture: An empirical study of antecedents and outcomes. *IIMB Management Review*, *26*(2), 105–121. https://doi.org/10.1016/j.iimb.2014.03.002

Wang, C., & Si, L. (2024). The Intersection of Public Policy and Public Access: Digital Inclusion, Digital Literacy Education, and Libraries. *Sustainability*, *16*(5), 1878. https://doi.org/10.3390/su16051878

Weißmüller, K. S., Ritz, A., & Yerramsetti, S. (2023). Collaborating and co-creating the digital transformation: Empirical evidence on the crucial role of stakeholder demand from Swiss municipalities. *Public Policy and Administration*, 09520767231170100. https://doi.org/10.1177/09520767231170100

Wodecka-Hyjek, A., Kusa, R., & Kafel, T. (2024). Evaluating the current state of Digital Era Governance application in local government units in the Małopolska region. *Engineering Management in Production and Services*, *16*(1), 19–30. https://doi.org/10.2478/emj-2024-0002

Xia, Y., & Md Johar, M. G. (2024). Government support, employee structure and organisational digital innovation: Evidence from China. *Heliyon*, *10*(16), e36399. https://doi.org/10.1016/j.heliyon.2024.e36399

Xiao, J., Han, L., & Zhang, H. (2022). Exploring Driving Factors of Digital Transformation among Local Governments: Foundations for Smart City Construction in China. *Sustainability*, *14*(22), 14980. https://doi.org/10.3390/su142214980

Xu, X., & Dai, M. (2024). Evaluation of Local Government Digital Governance Ability and Sustainable Development: A Case Study of Hunan Province. *Sustainability*, *16*(14), 6084. https://doi.org/10.3390/su16146084

Zhang, J., & Chen, Z. (2024). Exploring Human Resource Management Digital Transformation in the Digital Age. *Journal of the Knowledge Economy*, *15*(1), 1482–1498. https://doi.org/10.1007/s13132-023-01214-y

Zia-ud-Din, M., & Elhajraoui, F. E. (2023). Role of Artificial Intelligence in Legal Education in the 21st Century. *FWU Journal of Social Sciences*, *17*(2). 62 – 77. http://doi.org/10.51709/19951272/Summer2023/5

Explaining Economic Growth Using Threshold Inflation and Factors from Growth Theories: Empirical Analysis of Pakistan

Sumera Arshad and Muhammad Azmat Hayat
University of the Punjab, Lahore, Pakistan

The present study investigates the impact of threshold inflation on economic growth of Pakistan using factors from growth theories. The empirical analysis is based on data from 1973 to 2023. The study used threshold regression to estimate the threshold level of inflation. The estimated threshold levels are 9.3 and 9.6 percent for inflation computed from consumer price index and wholesale price index respectively. The estimates revealed that after reaching the threshold inflation level, labour force growth and trade act as Keynesian theory suggests but the role of money supply contradicts from the Monetarists theory. This study is foremost in using regression trees in the analysis of threshold inflation and growth. The analysis of regression trees indicates that inflation and money supply are the major determinants of the growth of economy. The study concludes inflation above the threshold level of inflation corresponds to very low levels of growth in the country. The study suggests keeping inflation below threshold for the sustainable growth of the country .
Keywords: GDP growth, threshold inflation, CPI, WPI, regression trees

Sustainable growth requires growth of gross domestic product (GDP) for long periods that increase employment and income. The macroeconomic theories explain economic growth by highlighting various factors. Classical growth theory states that the growth of an economy is determined through labour and capital. Endogenous growth theory highlights the role of human capital, innovation and knowledge spillovers (Romer, 1990). In Keynesian theory short-term fluctuations in GDP can occur due to changes in aggregate demand, which is influenced by consumption, investment, government spending, and net exports (Mankiw, 2016). In Monetarist theory, the key relationship is that in long-run the growth in money supply does not affect GDP growth but only cause inflation (Friedman, 1968). However, some studies found the increasing relationship between growth and inflation while others revealed the relationship decreasing (Drukker et al., 2005). Until the late twentieth century, it was hypothesised that the relationship changes its nature after a specific level of inflation that was named as the threshold inflation.

Following this approach, the studies found empirical evidence of the threshold inflation level in cross country analysis, and later the estimates were based on some specific country of interest. The empirical literature investigates the threshold inflation level for Pakistan and found various levels of threshold inflation for Pakistan including 5.5, 7, 8 and 9 percent (Mubarik, 2005; Ayyoub et al., 2011; Arby & Ali 2017; Jacob et al., 2023). However, the studies in Pakistan remained limited to the empirical literature of threshold inflation and growth while defining the variables of the model let alone considering the effect of threshold inflation on factors highlighted

---

Correspondence concerning this article should be addressed to Ms. Sumera Arshad, PhD Scholar, School of Economics, University of the Punjab, Lahore, Pakistan email: ecomaster68@yahoo.com

in growth theories; the present study fills this gap. This study takes the most important factors from the growth theories and check the impact of these factors before threshold level of inflation and after it. Furthermore, empirical investigations of studies exploring threshold inflation in Pakistan were based on consumer price index (CPI). However, the research on the other countries has also used inflation derived from wholesale price index (WPI) in the analysis of threshold inflation and growth (Singh, 2010; Behera & Mishra, 2017; Bhoi & Tabasum, 2024). Following the literature, the present study includes both CPI and WPI as the measures of inflation to check their relationship with economic growth. Moreover, the existing empirical studies on Pakistan use regression analysis and remain limited to the interpretation of its coefficient, but this study use regression tree analyses and found evidence that before threshold level of inflation GDP growth was above than the average growth whereas after the threshold level of inflation GDP growth was below than the average growth of the country. Therefore, the study concludes that inflation must be kept below its threshold level to obtain the sustainable growth in Pakistan.

The study proceeds in the following manner, section 2 indicates the studies from literature, section 3 highlights the method, section 4 explains the empirical results and section 5 provides the conclusion.

Literature Review

Sustainable growth is considered as the key to sustainable environment (Khan et al., 2019). To achieve the goal of sustainable growth the theoretical and empirical literature have focused on the relationship between inflation and growth. This section is divided into two parts for the convenience of the readers. The first part explains theoretical underpinnings and the second part includes empirical literature.

Theoretical Literature on Growth Theories

The classical economists, Adam Smith and his proponents, take the money as medium of exchange only, so real variables like growth have no effect of changes in the price level; in other words, money remains neutral. The economic growth, in these theories, is due to the factors of production namely labour and capital. Later, Solow (1956) found that a large share of growth remined unexplained by the labour and capital which is captured by the residual that later named as the Solow's residual. The theory considers that investment in physical capital and growth of workforce increase production but diminishing returns apply to both capital and labour. Endogenous growth theory added a parameter that elaborate effectiveness of labour and capital to explain the growth of economy (Romer, 1990). This theory focuses on innovation and knowledge as the major component of economic growth; however, money remained neutral and the medium of exchange only. Later, Keynesians argued that short-term variations in GDP can occur due to changes in aggregate demand (Mankiw, 2016). In the Keynesian framework the money in the short run increases consumption, government spending, trade and investment that ultimately increase the growth; hence, the money is not neutral. In the Monetarist's framework, inflation might initially increase output in short run through increased demand, but it eventually leads to higher inflation expectations that undermine long-term growth; therefore, inflation over time can lead to uncertainty, reduced investment, and lower real income growth (Friedman, 1968). Hence, the money is considered neutral in the long run but not in the short run. Therefore, the theory emphasis the role of labour, capital, technology, investment, consumption and money to explain growth. Then, Sarel (1996) found a non-linear relationship of growth and inflation that was not earlier mentioned in the theories. It is followed by the concept of threshold inflation and its effect on growth upon which the enormous empirical literature is present, but it lacks established theoretical

support. The present study used the important factors highlighted in the growth theories for model specification.

Empirical Literature

The extensive literature explores the relationship between threshold inflation and growth in cross countries and panel studies. Historically, the empirical literature has found all viable combinations of growth and inflation relationship: inflation with growth, inflation without growth, no inflation with growth and no inflation without growth (Shughofta, 2022). The cross-country studies dominate the literature exploring relationship of growth and threshold inflation. Ghosh and Phillips (1998) investigated annual data of 145 countries to find threshold inflation. At the low level of inflation, 2 to 3 percent annually, the study found positive relationship of inflation and growth. Finding threshold inflation level, Khan and Senhadji (2001) analysed unbalance panel consisting of 140 countries' data. The study found threshold inflation 3 and 12 percent for industrial and developing economies respectively in yearly data. Drukker et al., (2005) used 5 years averaged data on 138 countries from 1950 to 2000 to analyse relationship of inflation and growth. The study found 19.16 percent as threshold inflation level. Kremer et al., (2013) analysed threshold inflation level from data of 124 countries from 1950 to 2004. The study reported 17 percent as the threshold inflation level for non-industrialized countries. In both studies inflation remained insignificant below the threshold inflation level but negatively associated with growth after threshold inflation level. Similarly, Bick (2010) used data from 40 developing countries for analysing relationship of growth and inflation and found 12 percent as threshold inflation below which inflation was positive and significant and after which inflation lowered growth. Azam and Khan (2022) analysed 27 countries among which 16 were developing and 11 were developed countries. The study reported threshold inflation level was 12.23 and 5.36 percent in developing and developed countries respectively. After the threshold inflation level, inflation decreased growth of the economy. Shughofta (2022) empirically estimated relationship of growth and inflation from 86 countries from 1996 to 2020. The estimated threshold level was 1 to 2 percent for high income, 3 to 28 percent in case of middle income and 9 to 13 percent for low-income economies. Mahsud et al., (2022) examined threshold inflation in South Asian countries from 1980 to 2017. The study found 6 percent as the point after which inflation decreased growth.

Mubarik (2005) analysed Pakistan from 1973 to 2000 and concluded 9 percent as threshold inflation below which inflation spurs growth and after that inflation might harm growth of economy. The study found uni-directional causality indicating that inflation cause GDP growth but not otherwise. The same results of Granger causality were estimated by Hussain and Malik (2011) when the study explored the relationship of growth and inflation in Pakistan from 1960 to 2006. The study concluded that below 9 percent inflation remained helpful for growth, but after 9 percent inflation become detrimental for growth of Pakistan. Ayyoub et al., (2011) analysed Pakistan's data from 1972-73 to 2009-10. The study concluded 7 percent inflation as the threshold inflation level. Arby and Ali (2017) explored Pakistan economy's data from 1976 to 2017. The study used regression kink and quadratic model to identify the relationship. The threshold level estimated from quadratic model was 6.05 while the threshold level estimated from kink model was 5.67. Jacob et al., (2023) analysed Pakistan economy using data from 2000 to 2022. The study highlighted 8 percent as threshold inflation level after which inflation became harmful for GDP growth. The research on GDP growth in Pakistan, which do not include the threshold inflation, have also pointed that the high inflation increases unemployment and decreases the sectoral growth in the economy (Ajmair et al., 2020; Ahmad, 2025). Based on literature, the study has developed the hypotheses which will be tested empirically. There are two null hypotheses for each variable as the threshold

regression provides two coefficients for each variable, one below and the other above the threshold level of inflation.

H_{01}: Inflation does not affect GDP growth below its threshold level.
H_{11}: Inflation affects GDP growth significantly below its threshold level.

H_{02}: Inflation does not affect GDP growth above its threshold level.
H_{12}: Inflation affects GDP growth significantly above its threshold level.
The acceptance of null hypothesis in both cases will means that no threshold exists. If H_{02} is rejected and the coefficient has negative sign that will support the empirical literature that GDP growth decreases after inflation crosses its threshold level.

H_{03}: Investment does not affect GDP growth when inflation is less than its threshold.
H_{13}: Investment affects GDP growth significantly when inflation is less than its threshold.

H_{04}: Investment does not affect GDP growth when inflation exceeds its threshold.
H_{14}: Investment affects GDP growth significantly when inflation exceeds its threshold.
Classical and Keynesian theory indicate that the investment increases GDP growth that means if H_{03} is rejected, and the coefficient has positive sign then an increase in investment will increase GDP growth that conform to the Classical theory given that inflation is below its threshold level. Similarly, the theory will hold for inflation above the threshold level if H_{04} is rejected. If the results are in line with the theory, as in Mazher et al. (2025), then the study will suggest increasing the investment by establishing special economic zones (Hussain et al., 2021).

H_{05}: Labour force growth does not affect GDP growth when inflation is less than its threshold.
H_{15}: Labour force growth affects GDP growth significantly when inflation is less than its threshold.

H_{06}: Labour force growth does not affect GDP growth when inflation exceeds its threshold.
H_{16}: Labour force growth affects GDP growth significantly when inflation exceeds its threshold.
Classical theory emphasis that the labour force increases GDP. The Keynesian view attaches increase in the labour force increase the aggregate demand that raise GDP. Hence, both of theories hold if H_{05} and H_{06} are rejected, for inflation below its threshold level and above it respectively, and the coefficient has the positive sign. Trinh (2024) and Thanh et al., (2024) have found an increasing labour force increases growth.

H_{07}: Money supply does not affect GDP growth when inflation is less than its threshold.
H_{17}: Money supply affects GDP growth significantly when inflation is less than its threshold.

H_{08}: Money supply does not affect GDP growth when inflation exceeds its threshold.
H_{18}: Money supply affects GDP growth significantly when inflation exceeds its threshold.
The acceptance of null hypotheses, H_{07} and H_{08} means that money is neutral, and it will be in line with Monetarists' long run perspective. The rejection of null hypothesis indicate that money is not neutral and then it follows Keynesian perspective. Shughofta (2022) and Maher (2023) have also used broad money to their threshold inflation analysis.

H_{09}: Trade openness does not affect GDP growth when inflation is less than its threshold.
H_{19}: Trade openness affects GDP growth significantly when inflation is less than its threshold.

H_{010}: Trade openness does not affect GDP growth when inflation exceeds its threshold.
H_{110}: Trade openness has significant effect on GDP growth when inflation exceeds its threshold.
In Keynesian perspective, trade increases the income of the people that spurs aggregate demand and GDP. Therefore, the acceptance of H_{09} and H_{010} will contradict the Keynesian perspective. However, Trinh (2024) found negative and significant relationship between these variables while analyzing data from 32 countries of Asia.

Method

The relationship of growth and inflation has investigated using spline regression in much research including Khan and Senhadji (2001), Mubarik (2005), Singh (2010), Behera and Mishra (2017) and Mahsud et al., (2022). Then studies further used some econometric techniques, based on nature of data, like conditional least squares, non-linear least squares, fixed effects, random effects, etc. to get empirical results. However, threshold regression is more advanced technique to estimate the threshold level.

3.1. Threshold Regression Model

The threshold regression provides varying coefficients across regions that extends linear regression. The threshold value identifies the regions with above or below to the threshold level. The estimated model can provide multiple thresholds, or just the single threshold. The threshold regression models in economics are followed by Hansen (2000) and Hansen (2011). When there is single threshold γ then threshold regression with two regions can be stated as,

$$y_t = x_t\beta + z_t\delta_1 + \epsilon_t \qquad if \qquad -\infty < w_t \leq \gamma \qquad (1a)$$
$$y_t = x_t\beta + z_t\delta_2 + \epsilon_t \qquad if \qquad \gamma < w_t < \infty \qquad (1b)$$

where y_t is the dependent variable, x_t is a $1 \times k$ vector of covariates, β is a $k \times 1$ vector of region-invariant parameters, ϵ_t is an independent and identically distributed error with mean 0 and variance σ_2, z_t is a vector of exogenous variables with region-specific coefficient vectors δ_1 and δ_2, and w_t is a threshold variable. Region 1 indicates coefficients below γ (threshold value of w_t) and region 2 provides coefficients after threshold level γ. The threshold regression uses conditional least squares to estimate the parameters of the model; therefore, it is imperative that variables in the analysis be stationary at level. The present study forms the following threshold inflation model:

$$GDPgr_t = D_1 (\alpha_1 + \beta_1 Inv_t + \beta_2 Lfgr_t + \beta_3 M2_t + \beta_4 Td_t + \beta_5 Inf_t) + D_2(\alpha_2 + \gamma_1 Inv_t + \gamma_2 Lfgr_t + \gamma_3 M2_t + \gamma_4 Td_t + \gamma_5 Inf_t) + \epsilon_t \qquad (2)$$

where,
D_1=1 if inflation is on or below the threshold level
D_1=0 otherwise
D_2=1 if inflation is above the threshold level
D_2=0 otherwise

The dependent variable here is the growth rate of GDP ($GDPgr_t$). The threshold variable is inflation (Inf_t) calculated from consumer price index (InfCPI$_t$) or from wholesale price index (InfWPI$_t$); it is also included as regressor in the model. Inflation is computed as the logged difference of related price indices. D_1 provides the results for the region 1 where inflation is below its threshold level and D_2 indicates the coefficients for region 2 where inflation is above the threshold level. The region variant variables include Inf_t that is inflation, Inv_t that is investment (gross capital formation as percentage of GDP), $Lfgr_t$ is growth of labour force (the population

aged above 14 years) , $M2_t$ is the broad money (sum of currency, demand deposits, savings, foreign currency deposits, travellers' cheques and other securities of resident sectors other than the central government) as percentage of GDP and Td_t is the trade as percentage of GDP (the sum of exports and imports divided by GDP and then multiplied by 100). The ϵ_t is an independent and identically distributed error with mean 0 and variance σ_2. The empirical analysis is based on Pakistan over the period from 1973 to 2023. The data of all the variables is taken from the World Bank, the State Bank of Pakistan and various issues of Pakistan Economic Survey.

3.2. Regression Trees

Regression trees are simple ways to express graphically the problem at hand. This technique splits the values of independent variables and provide its impact on the dependent variables. These are formed with the series of splitting rules, where it starts at the top of tree. The top splits are called branches and the ending values on the bottom of tree are called the terminal nodes. The points along the tree where the predictor space is split are referred to as internal nodes. These nodes of trees divide the data into regions, or boxes, $R1\ R2, . . ., RJ$. The purpose is to make the regions that minimize the residual sum of squares given by,

$$\sum_{j=1}^{J} \sum_{i \epsilon R_j} (y_i - \hat{y}_{R_j})^2 \tag{3}$$

where $\hat{y}_{R_j}$ is the mean response for the observations within the jth box. However, considering every partition is not feasible so recursive binary splitting is used. The splitting continues where every new splitting is based on dividing the region into two parts until the stopping criterion is met. Although the process usually produces good predictions, it could overfit the data by making trees too complex with meaningless splits. The better strategy considered is to grow, at first, a very large tree then prunes it backwards to get a subtree. Intuitively, the goal is to select a subtree with the lowest test error rate that can be done using cross-validation. The cross-validation error for every tree is estimated, then the tree with smallest cross validation error is selected. The tree methodology used in analysis of this research is taken from James et al., (2017). The present study uses regression tree with the same variables that are used for threshold inflation estimation. The major benefit of using trees is that they highlight the important regressors in the model and check robustness of threshold estimation as well.

Results and Discussions

The study has included the data from Pakistan economy over the period from 1973 to 2023. The descriptive analysis of variables has reported below in table 1. The GDP growth rate provide average value of 4.7 percent, while it has been varied from -1.27 to 10.216 percent. It indicates that Pakistan has observed volatile GDP growth throughout its journey. The measures of inflation are closely related to each other.

Table 1

Descriptive Analysis

Variables	Mean	Standard Deviation	Minimum	Maximum
GDPgr	4.720	2.235	-1.274	10.216
InfCPI	8.992	5.234	0.226	26.217
InfWPI	9.752	6.171	-1.054	28.371
Lfgr	0.227	0.388	-0.613	0.900
M2	43.168	5.652	28.690	54.526
Inv	16.972	1.846	12.812	20.685
Td	31.146	4.167	21.460	38.499

The study has used Augmented Dickey Fuller test to explore stationarity of the variables; its results are provided in table 2. In the test null hypothesis is that the variable is non-stationary, and rejecting this hypothesis means the variables is stationary. Most of variables are stationary at 5 percent significance level. However, Lfgr and Td are stationary at 10 percent significance level; considering the 10 percent significance level it can be stated that all the variables of analyses are stationary.

Table 2

Results of Augmented Dickey Fuller Test

Variables	Test Statistic	P-value
GDPgr	-5.067 ***	0.000
Inf CPI	-3.175 **	0.022
Inf WPI	-3.232 **	0.018
Inv	-4.339 ***	0.003
Lfgr	-2.777*	0.062
M2	-3.127 **	0.025
Td	-2.706 *	0.073

Note: MacKinnon approximate p-value. *, ** and *** indicates significance at 10%, 5% and 1% respectively.

The threshold regression analyses results are reported in table 3. The results of study have found 9.3 and 9.6 percent threshold levels of inflation for InfCPI and InfWPI respectively. The coefficient of inflation before threshold level remained insignificant for both measures of inflation while both coefficients of inflation after the threshold level revealed negative and significant. It indicates that the increase in inflation after its threshold value results in decreasing GDP growth. This threshold result is in line with the Hussain and Malik (2011) and Mubarik (2005) that report 9 percent as the threshold inflation level for Pakistan. Besides inflation there is only one regressor that is the broad money which revealed negative and significant in all the equations after the threshold inflation level which is similar to Shughofta (2022). It is contradictory to, money neutrality, Monetarist theory that the increase of money supply create inflation in the long run but do not affect GDP growth when inflation exceeds its threshold. However, the coefficient of money supply remained insignificant before the threshold level of inflation that indicates money supply remained neutral before the threshold inflation that is in line with the Monetarist point of view. The coefficient of trade as percentage of GDP is significant in equation 1.2 only; the coefficient is negative before the threshold level and positive after threshold inflation. It indicates that before the threshold level of InfWPI an increase in the trade decreases growth that is in line with the findings of Trinh (2024) but is contradiction of Keynesian view. However, after the threshold level of InfWPI the increase in trade increases GDP growth that is in line with the Keynesian view which highlight that expanding trade accelerates the demand for goods that in turn increase growth. Therefore, the trade follows the Keynesian view of thought after reaching the threshold of InfWPI. The labour force growth rate has revealed negative and significant before the threshold inflation and positive and significant after the threshold inflation in equation 1.1. This result, after the threshold inflation, shows that growth of labour force spurs GDP growth after the threshold inflation that is similar with Thanh et al., (2024). The coefficients of investment remained insignificant and positive in all the equations that is contrary to the Classical perspective.

Table 3

Results of Threshold Regression

Variables	Equation 1.1 (InfCPI)	Equation 1.2 (InfWPI)
Threshold Inflation	**9.299**	**9.550**
Inflation (BT)	0.246	0.273
	(0.167)	(0.171)
Inflation (AT)	-0.260 **	-0.297 **
	(0.119)	(0.117)
Inv (BT)	0.133	0.361
	(0.296)	(0.395)
Inv (AT)	0.318	-0.551
	(0.340)	(0.373)
Lfgr (BT)	-1.899 *	-1.581
	(1.000)	(1.222)
Lfgr (AT)	2.777 **	1.069
	(1.245)	(1.526)
M2 (BT)	-0.020	0.046
	(0.064)	(0.071)
M2 (AT)	-0.428 ***	-0.377 ***
	(0.103)	(0.117)
Td (BT)	-0.102	-0.309 *
	(0.145)	(0.178)
Td (AT)	-0.079	0.378 **
	(0.163)	(0.186)
Constant (BT)	5.898	5.058
	(5.073)	(6.383)
Constant (AT)	22.414 **	21.561 **
	(9.181)	(9.887)
Time Period	1973-2023	1973-2023

Note: *, ** and *** indicates significance at 10%, 5% and 1% respectively. Standard errors are in parenthesis. "BT" stands for "before threshold" and "AT" stands for "After threshold".

Table 4

Test for Autocorrelation: Portman Test for White Noise

Lags		Equation 1.1 (InfCPI)	Equation 1.2 (InfWPI)
1	Q Stat	0.027	0.062
	(Prob.)	(0.869)	(0.803)
2	Q Stat	0.047	0.199
	(Prob.)	(0.977)	(0.905)
3	Q Stat	0.588	0.288
	(Prob.)	(0.899)	(0.962)
4	Q Stat	1.807	0.292
	(Prob.)	(0.771)	(0.990)

The next step, after estimating the model, is to test for autocorrelation. The study uses Portman test for white noise where the residuals of the equations are tested for the existence of serial correlation up to 4 lags; its results are shown in table 4. Here, the null hypothesis is that residuals of equations are not serially correlated, and the estimates do not reject it even at 10 percent significance level in any equation. Therefore, it can be concluded that equations do not suffer from autocorrelation.
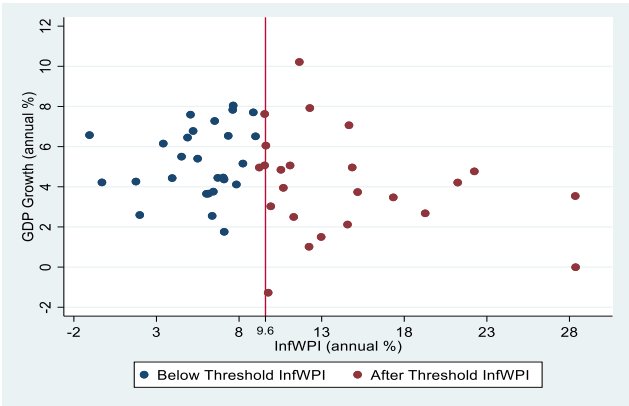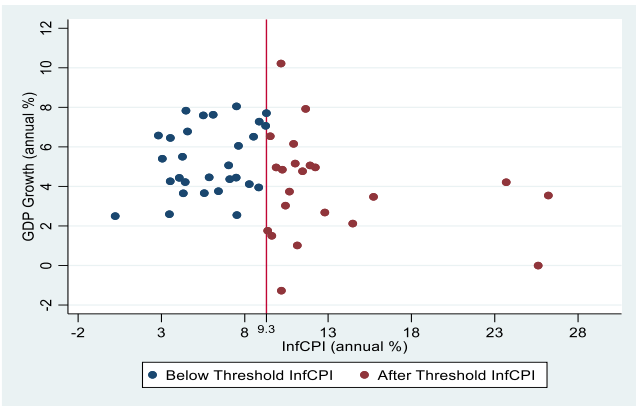
Figure 1.1: Scatter plot indicating the relationship of GDPgr and InfCPI by highlighting threshold value (estimated from equation 1.1) with red line (Author's

Figure 1.2: Scatter plot indicating the relationship of GDPgr and InfWPI by highlighting threshold value (estimated from equation 1.2) with red line (Author's calculation).

The estimated thresholds can be verified graphically by drawing the scatter diagram of the values of inflation and GDP growth of the country that are represented in figures 1.1 and 1.2 below. The red line indicates the threshold inflation level, the red coloured dots indicate the values of GDP growth above threshold inflation while blue coloured dots highlight the values of GDP growth below threshold inflation. The figures highlighted that GDP growth usually remain lower, less than 4 percent, when the inflation lies above threshold. The values of GDP growth are concentrated at high levels of growth, more than 5 percent, when the inflation level lies below its threshold level. Thus, highlighting the fact that the inflation above threshold level remains detrimental to GDP growth of economy.

After estimating the threshold inflation level, the study investigates implications of threshold inflation on GDP growth rate in Pakistan using the regression trees. This analysis is using the same variables as the independent variables that are used in the threshold regression model. The regression trees when built were the bushy trees that are pruned using the cross-validation criterion; the diagrams showing cross-validation are provided in figures 2.1 and 2.2 respectively. The number of leaves for which the cross-validation error is minimum is selected for the interpretation; hence, the tree includes only the most important factors that affect the economic growth of Pakistan. The regression trees results are reported in figures 3.1 and 3.2. Both regression trees use GDPgr as the dependent variable while inflation, M2, Lfgr, Inv and Td as the independent variables. The figures of tree further highlight the relationships of GDP growth and inflation. The figure 3.1 points out the InfCPI and figure 3.2 describes the InfWPI as the measures of inflation in the regression trees. The regression trees provide broad money as the most important variable in the study. The branches of tree highlight that broad money less than 42 percent of GDP results in providing GDP growth more than 5 percent which is above the average GDP growth of the whole sample. The tree in figure 3.1 second leaf indicates that broad money growth more than 39.95 and less than 42 percent of GDP results in 8 percent GDP growth. However, Ahmed and Hasnu (2009) have found positive relationship of financial development and growth in Pakistan that indicates the money supply could not be controlled otherwise it would hinder the growth of economy if not directly then through various channels. Moreover, in developing countries, broad money must increase for the purpose of investment. Therefore, lower level of broad money could not be a feasible solution for the economy. The right leaf of the inflation branches of trees indicates that when the broad money is

greater than 42 percent and the inflation (InfCPI) is above 9.3 percent (its threshold level) then GDP growth remained 2.7 percent only that is very low. In the inflation branch of the other tree, the figure 3.2, given the same level of broad money if the inflation (InfWPI) is above 9.69 percent GDP growth would be around 2.88 percent. Hence, the regression trees shown in 3.1 and 3.2 concludes that inflation above its threshold level results in very low growth that is less than 3 percent approximately, but inflation below its threshold generates high growth above 5 percent given the broad money is greater than the 42 percent of GDP.
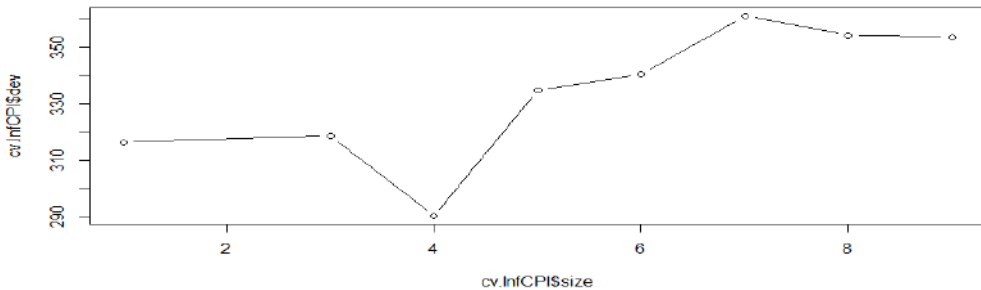
Figure 2.1: The plot of cross validation of figure 3.1
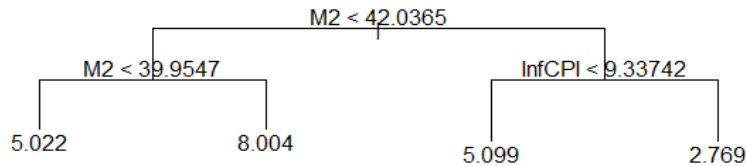
Figure 3.1: Regression tree based on InfCPI where terminal nodes indicate the level of GDP growth.
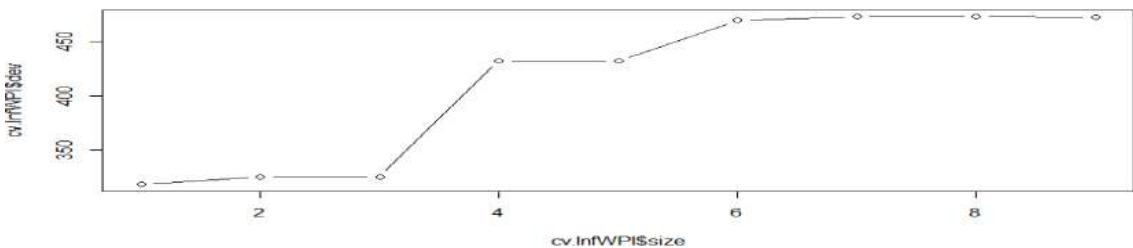
Figure 2.2: The plot of cross validation of figure 3.2
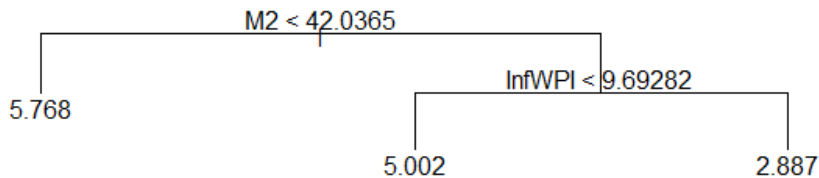
Figure 3.2: Regression tree based on InfWPI where terminal nodes indicate the level of GDP growth.

From the regression tree analysis, the present study found the most important variables in the determination of GDP growth. In order to investigate the impact of particular level of inflation and broad money, the study has constructed region plot in figure 4.1 and 4.2; the region plot of 4.1 and 4.2 are based on the tree findings from figure 3.1 and 3.2 respectively. The GDP growth is divided into three parts: low growth is the GDP growth level less from the first quartile that is 3.54 percent, high growth is the level of GDP growth above the third quartile that is 6.51 percent, and the middle growth is the GDP growth between the upper and lower quartile. In the figures 4.1 and

4.2 the R1 and R2 indicate the region where the inflation is above the threshold level. The R1 region contain a few points. The R2 contain many points indicating low level of GDP growth. The R3 and R4 are the regions below the threshold level. Many points of high growth lie on the region R3 and R4. The average growth points are more in the R4 region. The regional diagrams concludes that R3 and R4 are the suitable regions for the growth of economy where the inflation is below the threshold level.
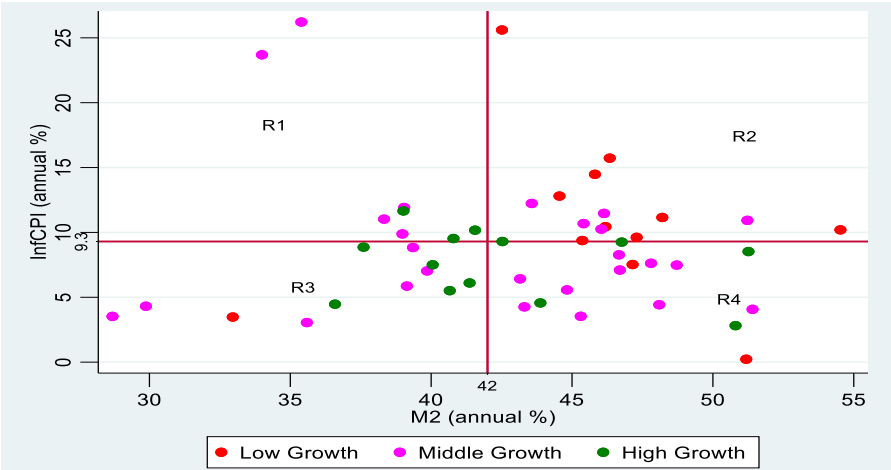
Figure 4.1: Region diagram of the regression tree reported in figure 3.1
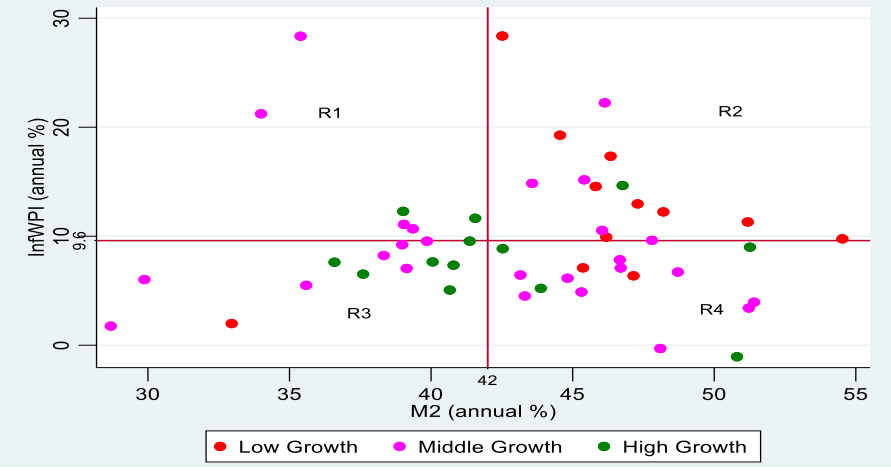
Figure 4.2: Region diagram of the regression tree reported in figure 3.2

Conclusion

The present study investigates the role of threshold level of inflation and various factors from growth theories on GDP growth of Pakistan from 1973 to 2023. The estimated threshold levels are 9.3 and 9.6 percent for inflation computed from CPI and WPI after which inflation becomes harmful to GDP growth. The estimates are robust and do not suffer from autocorrelation. The empirics indicate that increase in money supply after threshold inflation decreases the growth; however, before the threshold level the money supply is insignificant that indicates money neutrality. The empirics provide trade increases GDP growth after the threshold inflation that follows the Keynesian patterns; the labour force growth increases GDP growth after the threshold inflation that affirms the Classical theory of growth. The study further employed regression trees to interpret the implications of inflation exceeding its threshold and concludes that inflation level above the threshold corresponds to less than 3 percent GDP growth in the country. The regression trees highlight broad money, inflation computed from CPI and WPI as the most important factors

determining GDP growth of the country. The results revealed that broad money less than 42 percent of GDP increases growth; broad money higher than 42 percent of GDP results in high GDP growth only when inflation is below its threshold. The region diagrams also suggest that inflation must be kept below its threshold for obtaining sustainable growth in Pakistan. The present research has empirically used data from Pakistan economy, so its results are applicable to the country and the other developing countries sharing similar economic structure intuitively. The future researchers can include any specific country or use other important factors highlighted in the growth theories like technology, knowledge and expenditures to check if these factors act according to theory when inflation is above its threshold level or below it.

Reference

Ahmad, N. R. (2025). Monetary Policy, Inflation and Unemployment: The Interactions and their Economic Impacts in Pakistan. *Journal of Business and Management Research, 4*(1), 954-970.

Ahmed, Z., & Hasnu, S. A. F. (2009). Impact of Financial Development on Economic Growth in Pakistan (1974-2007). *FWU Journal of Social Sciences, 3*(2), 45-68.

Ajmair, M., Hussain, K., & Bhutta, Z. M. (2020). Determinants of Sectoral Growth in Pakistan: A Kalman Filter Based Time Varying Parametric Approach. *FWU Journal of Social Sciences, 14*(3), 27-40.

Arby, M. F., & Ali, A. (2017). Threshold Inflation in Pakistan. *State Bank of Pakistan Research Bulletin, 13*(1), 1-19.

Ayyoub, M., Chaudhry, I. S., & Farooq, F. (2011). Does Inflation Affect Economic Growth? The Case of Pakistan. *Pakistan Journal of Social Sciences, 31*(1), 51-64.

Azam, M., & Khan, S. (2022). Threshold Effects in the Relationship between Inflation and Economic Growth: Further Empirical Evidence from the Developed and Developing World. *International Journal of Finance and Economics*, *27*(4), 4224-4243.

Behera, J., & Mishra, A. K. (2017). The Recent Inflation Crisis and Long-run Economic Growth in India: An Empirical Survey of Threshold Level of Inflation. *South Asian Journal of Macroeconomics and Public Finance*, *6*(1), 105-132.

Bhoi, B. K., & Tabasum, G. (2024). Inflation-Growth Relationship: New Evidence for India. *Journal of Quantitative Economics*, *22*(1), 223-239.

Bick, A. (2010). Threshold Effects of Inflation on Economic Growth in Developing Countries. *Economics Letters*, *108*(2), 126-129.

Drukker, D., Porqueras, P. G. & Verme, P. H. (2005). Threshold Effects in the Relationship between Inflation and Growth: A New Panel-data Approach, *Proceedings of the 11th International Conference on Panel Data, 9 February*.

Friedman, M. (1968). The Role of Monetary Policy. *The American Economic Review, 58*(1), 1-17.

Ghosh, A., & Phillips, S. (1998). Warning: Inflation may be Harmful to Your Growth. *Staff Papers (International Monetary Fund), 45*(4), 672-710.

Hansen, B. E. (2000). Sample Splitting and Threshold Estimation. *Econometrica*, *68*(3), 575-603.

Hansen, B. E. (2011). Threshold Autoregression in Economics. *Statistics and Its Interface*, *4*(2), 123-127.

Hussain, S., Khan, F., & Ayaz, M. (2021). Politico-Economic Implications of CPEC on Pakistan. *FWU Journal of Social Sciences, 15*(4), 147-162.

Hussain, S., & Malik, S. (2011). Inflation and Economic Growth: Evidence from Pakistan. *International Journal of Economics and Finance*, *3*(5), 262-276.

Jacob, T., Rincy, R., & Ajina, V. S. (2023). Effect of Inflation on the Growth and Development of the Pakistan Economy: An Empirical Analysis. *Theoretical and Applied Economics*, *30*(2), 239-250.

James, G., Witten, D., Hastie, T., & Tibshirani, R. (2017). *An Introduction to Statistical Learning with Applications in R*. Springer, New York, New York, USA.

Khan, I., Ul-Haq, Z., Iqbal, J., & Ullah, Z., (2019). Growth – Environment Nexus: Testing the Validity of the Environmental Kuznets Curve for the South Asian Economies. *FWU Journal of Social Sciences, 13*(1), 155-166.

Khan, M. S., & Senhadji, A. S. (2001). Threshold Effects in the Relationship between Inflation and Growth. *Staff Papers (International Monetary Fund), 48*(1), 1-21.

Kremer, S., Bick, A., & Nautz, D. (2013). Inflation and Growth: New Evidence from a Dynamic Panel Threshold Analysis. *Empirical Economics*, *44*(2), 861-878.

Maher, M. (2023). Inflation Threshold in the Context of Structural Breaks. *Journal of Economic Integration*, *38*(3), 496-528.

Mahsud, Q. J., Aarif, K., & Khan, A. (2022). The Threshold Effect of Inflation on Growth Performance in South Asian Economies. *International Journal of Social Sciences and Sustainability*, *2*(1).

Mankiw, N. G. (2016). *Principles of Economics* (7th ed.). Cengage Learning.

Mubarik, Y. A. (2005). Inflation and Growth: An Estimate of the Threshold Level of Inflation in Pakistan. *State Bank of Pakistan Research Bulletin*, *1*(1), 35-44.

Mazher, M. A., Nizami, M. A., & Tramankuti, Y. N. (2025). Growth Mechanisms: Dissecting the Economic Determinants of Pakistan's GDP. *Malaysian Journal of Business, Economics and Management*, 16-22.

Romer, P. M. (1990). Endogenous Technological Change. *Journal of Political Economy, 98*(5), S71-S102.

Sarel, M. (1996). Nonlinear Effects of Inflation on Economic Growth. *IMF Staff Papers*, *43*(1), 199-215.

Shughofta, G. (2022). Threshold Effect in the Relationship between Inflation and Economic Growth. *Pakistan Institute of Development Economics (PIDE) School of Economics* (M. Phil Thesis).

Singh, P. (2010). Searching Threshold Inflation for India. *Economics Bulletin*, *30*(4), 3209-3220.

Solow, R. M. (1956). A Contribution to the Theory of Economic Growth. *The Quarterly Journal of Economics, 70*(1), 65-94.

Thanh, H. N., Thu, T. T. T., & Thanh, L. H. (2024). Inflationary Threshold Effect on the Nexus between Economic Growth and Public Debt: The Case of Asian countries. *Asian Economic and Financial Review*, *14*(6), 470-481.

Trinh, L. D. (2024). Determinants of Economic Growth in Asian Countries. *Journal of International Studies*, *17*(4), 44-55.

Unveiling Islamic Educational Values in *Tembang Sorong Serah Aji Krame*: A Cultural and Religious Perspective

Zulkarnain
STIS Darul Falah Pagutan Mataram NTB, Indonesia

Lalu Nasrulloh and Nur Kholis
UIN Sunan Ampel Surabaya**,** Indonesia

The Sorong Serah Aji Krame tradition represents a significant matrimonial custom within Lombok's Sasak community that embodies the synergistic relationship between Islamic values and indigenous cultural practices. This ethnographic study investigates how this traditional ceremony functions as an informal medium for Islamic moral education by transmitting embedded ethical values in its poetic form, Tembang Sorong Serah. Through extensive fieldwork conducted over four months in Montong Baan Selatan Village, data were collected from multiple sources, including in-depth interviews with eleven key informants, participant observation of five ceremonial events, and document analysis. Data were analyzed using constructivist grounded theory methodology for coding and analysis. The study identifies nine core Islamic educational values transmitted through the tembang: hospitality, humility, courtesy, gratitude, deliberation, tolerance, cooperation, moral conduct, and religious piety. Findings demonstrate that oral tradition is a culturally contextualized vehicle for Islamic character formation, exemplifying the historical convergence between custom and shariah in Indonesian Muslim societies. The study contributes to understanding how indigenous pedagogy complements formal religious instruction and offers specific recommendations for cultural preservation, educational integration, and community engagement strategies. This research advances theoretical frameworks on situated learning within Islamic contexts and demonstrates how traditional rituals can effectively transmit moral values across generations despite modernization challenges .
Keywords: Islamic education values, Sasak traditional marriage, *Tembang Sorong Serah*

Marriage, as a socio-cultural institution, represents a fundamental aspect of community life, particularly within Islamic culture. It serves multiple purposes, including establishing marital ties that encompass moral, spiritual, and legal dimensions (Akhtar, 2018). In the Islamic framework, marriage, or *nikah*, is revered as not merely a contractual agreement but a sacred covenant that offers spiritual fulfillment and social legitimacy. The Quran extols the virtues of marriage, which are understood as the foundation of family life and societal structure. This viewpoint anchors itself in the principles of unity and harmony integral to Islamic teachings (Woodward, 2022).

The interplay between religious precepts and cultural practices in Muslim societies has produced rich variations in how Islamic principles are interpreted and enacted. This practice is

---

Correspondence concerning this article should be addressed to Zulkarnain, STIS Darul Falah Pagutan Mataram NTB, Indonesia, Email: karnaenzul1990@gmail.com

particularly evident in Indonesia, where the historical relationship between *adat* (customary law) and *Shariah* (Islamic law) has evolved over centuries. Since Islam arrived in the archipelago around the 13th century, a gradual process of accommodation and synthesis between local practices and Islamic teachings has occurred, resulting in what scholars term "cultural Islam" (Azra, 2004; Ricklefs, 2006). In Lombok specifically, this syncretic relationship is manifested in transforming pre-Islamic Sasak rituals through Islamic interpretative frameworks, creating traditions that simultaneously honor indigenous cultural heritage while affirming Islamic moral values (Ryan, 1999).

In Muslim-majority regions such as Indonesia, the integration of traditional practices with Islamic principles has led to rich and diverse marital customs (Ali et al., 2020; Auni et al., 2022; Nasution, 2022; Singal et al., 2022). The Sasak community in Lombok exemplifies this fusion through its unique marriage ritual known as Merariq, characterized by the groom's elopement with the bride prior to formal negotiations with her family (Azwar et al., 2024). Contrary to conventional interpretations of elopement as rebellious, this cultural practice is instead seen as a sanctioned expression of male valor and ensures familial acknowledgment of the union. The act is steeped in tradition and reflects the community's values surrounding masculinity, family negotiation, and social endorsement (Suyatno et al., 2020).

The formal marriage ceremony in the Sasak community culminates in the Sorong Serah Aji Krame, where elders recite Tembang Sorong Serah—poetic verses enshrined with moral teachings and religious connotations. These verses, composed in the refined Sasak language or Bahasa Kawi, not only reify the marital bond but impart crucial Islamic values such as hospitality, humility, gratitude, and prudence (Miglietta et al., 2024; Yazid et al., 2024). Their form heightens the significance of these teachings; poetry serves as a vehicle for cultural transmission, allowing complex Islamic concepts to be conveyed through metaphorical language and ritual symbolism. This notion mirrors a well-established objective within Islamic education that prioritizes the internalization of virtues as key to nurturing worldly and spiritual responsibilities (Alrubaishi et al., 2021; Jayadi & Kamarudin, 2021).

The essence of Islamic education transcends mere knowledge acquisition, placing a heavy emphasis on ethical practice and the formation of character (*tahdhib al-nafs*) through divine consciousness (Muvid & Kholis, 2024). Within this context, the Tembang Sorong Serah holds immense pedagogical potential, functioning as a celebratory event and a medium for informal religious education and moral discourse that reinforces community values. Despite growing academic interest in Indonesian marriage ethnography, a literature review reveals significant gaps in understanding how cultural performances function as vehicles for religious education.

Previous studies on Sasak marriage have focused on cultural aspects where the practice of *merariq* (elopement marriage) among the Sasak people represents a negotiation between local tradition and Islamic social norms (Zuhdi, 2012) and gender dynamics, in which the Sasak marriage process reflects the symbolic power of women in determining, negotiating, and legitimizing marriage (Smith, 2009; Wisudawati & Yusra, 2022). Furthermore, Zohiro et al. (2024) documented that *Merariq* practices are a social mechanism to prevent conflict and maintain harmony between families in the modern era through customary consensus-based resolution. In addition, Ahyar and Abdullah (2019) examined symbolic meanings in Sorong Serah Aji Krama in Sasak marriage acts as a medium for preserving Islamic cultural values, integrating customary practices with religious teachings through ritual symbolism that reinforces the community's Islamic identity. All of these studies did not explore their educational significance and even neglected the pedagogical dimensions of Sorong

Serah Aji Krama in Sasak marriage. This gap is particularly noteworthy given the rich potential of these rituals as sites of moral instruction and cultural preservation.

Thus, this study explores how Islamic education values are instilled via the Sasak wedding traditions. The analysis is informed by two key theoretical frameworks: (1) Cultural Transmission Theory developed by Cavalli-Sforza & Feldman (1981), which examines how cultural knowledge and practices are passed between generations through processes of enculturation and social learning, and (2) Islamic Pedagogical Frameworks, particularly Al-Attas' (1979) concept of *ta'dib*, which emphasizes holistic character formation and the cultivation of Islamic values through both formal and informal educational methods.` Together, these frameworks provide analytical tools for understanding how community relationships and customary practices shape the expression and internalization of religious values. This study broadens the discourse around non-formal educational practices, presenting them as valuable supplements to institutional religious instruction.

Literature Review
Islamic Education and Moral Development

Islamic education (*tarbiyah Islamiyyah*) is a comprehensive system aimed at nurturing a holistic individual, insan kamil, who embodies moral and spiritual values in alignment with divine guidance. This pedagogy transcends mere knowledge transmission by emphasizing the internalization of ethical principles essential for individual and communal piety (Ball & Smith, 2022). The underlying objective of Islamic education is firmly rooted in the concept of tahdhib al-nafs, which refers to the purification of the soul (Muvid & Kholis, 2024). This approach fosters moral development through habituation, reflexivity, and practice, ensuring learners acquire knowledge and embody the virtues espoused (Chaudhary, 2022; McGowan, 2019).

Islamic educational philosophy distinguishes itself through several key principles. First is the notion of tawhid (divine unity), which provides a unifying epistemological foundation for all knowledge acquisition (Al-Attas, 1979). Second, there is an emphasis on *adab*, encompassing moral refinement and ethical conduct as essential educational outcomes rather than mere supplements to intellectual development (Halstead, 2007). Third is the holistic integration of spiritual and worldly knowledge, rejecting compartmentalization in favor of a unified approach to understanding reality (Alfaruqi, 1982). Finally, Islamic pedagogy emphasizes the role of the community (*ummah*) in education, recognizing that moral formation occurs within social contexts rather than in isolation (Daud, 2010).

The framework of Islamic moral education comprises three critical elements: the integration of knowledge and action, the central importance of divine law (shariah), and the emphasis on collective responsibilities alongside individual obligations. Consequently, moral education is woven into the fabric of daily life rather than confined solely to formal educational institutions. This nuanced understanding of pedagogy illuminates the importance of exploring informal or culturally embedded education methods, such as those found within the Sasak traditions of Lombok (Chaudhary, 2022).

Recent studies have further emphasized the significance of Islamic education in shaping moral character. For instance, Ibrahim et al., (2024) conducted an in-depth study examining how Islamic education addresses contemporary ethical and moral issues, including social justice and environmental ethics. Their research demonstrates the unique contributions of Islamic teachings to ethical awareness and social responsibility through concrete case analysis across various Muslim communities. A key finding of this study shows that Islamic values can be integrated into modern life

without losing their traditional essence, providing a flexible yet robust moral framework for addressing contemporary challenges. Meanwhile, Maisyanah et al., (2024) elaborated on moral development in light of the Qur'an and Sunnah, explicitly focusing on balancing character growth and societal well-being. Their research found that character education in Islam focuses on individual development and how individuals contribute to broader social harmony. These researchers identified specific methodologies from the Islamic tradition for building character, including using narratives, exemplars, and ritual practices that share similarities with the function of Tembang Sorong Serah in Sasak society.

Indigenous Pedagogy and Cultural Transmission

Cultural transmission theory, first systematically developed by Cavalli-Sforza and Feldman (1981), provides a framework for understanding how cultural knowledge, values, and practices are transferred across generations. This theory distinguishes between vertical transmission (parent to child), horizontal transmission (peer to peer), and oblique transmission (from non-parental adults to younger generations). In indigenous societies, oblique transmission through elders, traditional authorities, and communal rituals often plays a particularly significant role in preserving cultural continuity (Hewlett & Cavalli-Sforza, 1986). The Tembang Sorong Serah represents a classic example of oblique cultural transmission, where community elders (the *Pembayun*) convey moral values and cultural knowledge to younger generations through ritual performance.

Cultural transmission, the process through which values, beliefs, and practices are passed down from generation to generation, fundamentally influences indigenous societies (Chaudhary, 2022; Nesterova, 2019). Informal channels such as storytelling, ritual practices, and performance often surpass formal schooling in their effectiveness at instilling moral and ethical norms. The "cultural apprenticeship" notion suggests that learning occurs through guided participation in communal practices (Rogoff, 2003). This concept resonates deeply within the context of Tembang Sorong Serah. Here, younger members of the Sasak community internalize Islamic values by observing and actively participating in traditional ceremonies.

Moreover, the discourse surrounding situated learning emphasizes the importance of understanding knowledge and values within the context of lived cultural experiences (Battiste, 2002). Indigenous pedagogy relies on oral performance, collective memory, and symbolic expression, with elements such as poetry, proverbs, and ritual language playing central roles as both artistic expression and moral instruction. Within this framework, Tembang Sorong Serah emerges as a mode of ethical communication and character education, enabling participants to connect deeply with their community's rich cultural heritage while aligning with broader Islamic moral teachings (Ball & Smith, 2022).

Marriage Rituals and Value Internalization

The process of Islamic moral education is also evident in the marriage rituals of the Sasak community. These rituals are not merely performances; they hold pedagogical significance as they publicly affirm and enact moral values, social roles, and religious obligations. Rituals, functioning as "models of" and "models for" reality, shape and represent the moral order within Islamic traditions. The role of the Pembayun, serving as a cultural intermediary during events like the Sorong Serah, is crucial; using metaphor-laden language, the Pembayun imparts moral lessons rooted in Islamic teachings to the bride, groom and their families (Azwar et al., 2024).

Research in anthropology confirms that rituals facilitate the internalization of values, with each segment of the *tembang*—opening, core, and closing—performing specific instructional roles (Anastasya, 2024). For instance, the opening sets a tone of humility and gratitude, the core delineates ethical expectations, and the closing reinforces communal harmony and divine invocation (Pratama et al., 2024). This tripartite structure aligns with traditional pedagogical models in Islamic preaching and effectively transmits communal values (Mahadika & Satria, 2021; Yazid et al., 2024).

There is a compelling need to integrate these indigenous forms of knowledge with contemporary educational frameworks. Efforts to document, translate, and analyze these traditions, such as the present study, are essential for cultural preservation and enrichment of Islamic education with contextually meaningful content. This endeavor calls attention to the urgent task of revitalizing pedagogical approaches that embrace indigenous practices' cultural richness and ethical depth while addressing the realities of rapid societal changes (Chaudhary, 2022; Pratama et al., 2024).

Method

Research Design
This study employed a qualitative research design grounded in descriptive ethnography to explore the transmission of Islamic educational values embedded in the *Tembang Sorong Serah Aji Krame* tradition of the Sasak community in Lombok, Indonesia. The ethnographic methodology is particularly effective for exploring meaning-making practices, rituals, and values within a cultural group, especially where oral tradition and performativity are central (Ignatow & Mihalcea, 2022; Lim, 2025).

The ethnographic fieldwork spanned four months (January to April 2025), allowing for immersion in the community and observation of multiple ceremonies. This extended engagement followed Hammersley and Atkinson's (2019) guidelines for ethnographic rigor, enabling the researcher to move beyond surface-level observations to gain deeper cultural insights. The researcher participated in five complete Sorong Serah Aji Krame ceremonies during this period, documenting the sequence of ritual events, variations in performance styles, audience responses, and contextual factors. Field notes were recorded using a structured observation protocol focusing on (1) performance elements (language, gestures, tone), (2) participant interactions, (3) symbolic objects and their uses, and (4) emotional responses of community members. These observations provided crucial contextual data that informed the subsequent coding and thematic analysis process by grounding interpretations in observed behaviors rather than reported actions alone.

Research Site
Fieldwork was conducted in Montong Baan Selatan Village, Sikur Sub-District, East Lombok. This community was selected for its continued observance of traditional Islamic rituals and the central role of elders in sustaining Sasak ceremonial practices. The setting offered a living context for examining the interplay between *adat* (custom) and *Syariah* (Islamic law), the key to understanding religious value transmission in local practice (Anastasya, 2024; Yulianti & Hadi, 2024).

Fieldwork was conducted in Montong Baan Selatan Village, Sikur Sub-District, East Lombok. This site was selected after preliminary visits to three potential locations (Montong Baan Selatan, Selong, and Masbagik) through a comparative assessment based on four criteria: (1) frequency of traditional ceremonies; (2) presence of knowledgeable elders; (3) community receptiveness to research; and (4) relative isolation from tourist influences. Montong Baan Selatan emerged as optimal due to its monthly performance of traditional ceremonies, preservation of the complete Sorong Serah

ritual sequence, and the presence of five recognized Pembayun (ritual orators) who maintain the oral tradition in its most comprehensive form.

This community was selected for its continued observance of traditional Islamic rituals and the central role of elders in sustaining Sasak ceremonial practices. The setting offered a living context for examining the interplay between *adat* (custom) and *Syariah* (Islamic law), the key to understanding religious value transmission in local practice (Anastasya, 2024; Yulianti & Hadi, 2024).

Informants Selection

Informants were selected through purposive sampling, focusing on individuals with cultural authority and deep engagement in the Sorong Serah ceremony. Eleven key informants were recruited, comprising a traditional Sasak leader (Pemban), two Islamic preachers and customary advisors, *a doa pembuka* (ritual prayer leader), the chancellor of the Sasak Supreme Council, two community heads, and five community members who regularly participate in the ceremonies (including two newlywed couples). The sample size in qualitative studies typically reaches saturation between 9-12 participants when examining cultural phenomena with clear boundaries and when participants share expertise on a specific practice (Hennink & Kaiser, 2022). Data saturation was assessed using Francis et al.,(2010) method, whereby initial analysis was conducted after eight interviews, followed by subsequent interviews until three consecutive sessions yielded no new thematic elements. The sample was aligned with the principles of information-rich case selection and thematic saturation in qualitative research (Ahmed, 2025).

These informants functioned as cultural stewards and moral educators and were selected based on the predetermined criteria. First, religious leaders are individuals with a deep understanding of Islamic values and a role in integrating these values into cultural practices. Second, traditional leaders are defined as individuals with authority in conducting rituals and a profound understanding of Sasak traditions. Third, community members are residents who actively participate in ceremonies and can provide perspectives on the impact of rituals on social and personal life. Finally, Lombok residents have long resided in the area and have direct experience with the Sorong Serah Aji Krame tradition.

Ethical considerations were implemented following institutional review board guidelines (#IRB2025-045). All participants provided written informed consent after being briefed on the study's purpose, potential benefits and risks, data management procedures, and their right to withdraw. Interviews were conducted in locations chosen by participants to ensure comfort and privacy. Ceremonial observations were conducted only with prior community permission, and photography followed local protocols regarding sacred elements to respect cultural sensitivities. All data were anonymized during transcription, and participants were allowed to review and validate interview transcripts and interpretations. The researcher maintained a reflexive journal to document potential biases and their mitigation.

Data Collection Procedures

Data collection consisted of three main strategies: semi-structured interviews, participant observation, and document analysis. Interview guides were researcher-developed and validated through a three-stage process: (1) initial development based on literature review and preliminary field observations; (2) expert review by two cultural anthropologists and one Islamic education scholar; and (3) pilot testing with three Sasak individuals not included in the final sample. Reliability was enhanced through consistent application of the finalized protocol containing 32 open-ended questions

exploring ethical, symbolic, and pedagogical dimensions of *tembang*. Following narrative inquiry protocols (Daiute, 2021), participants engaged in three interview sessions, each lasting 45–60 minutes. Interviews were recorded, transcribed, and supplemented by field notes, photographs, and ritual transcripts, providing rich ethnographic data (Creswell & Poth, 2023).

Data Analysis

Data analysis followed a constructivist grounded theory approach as elaborated by Charmaz (2021), employing initial, focused, and theoretical coding phases. This approach was selected for its emphasis on the co-construction of meaning between the researcher and participants, which aligns with the study's aim to understand the cultural interpretation of values. The analysis proceeded as follows:

First, initial coding involves line-by-line analysis of transcripts, assigning descriptive labels to meaningful segments, and keeping codes active and closely tied to data. *Second*, focused coding includes synthesizing the most significant initial codes into conceptual categories based on frequency and salience. *Finally*, theoretical coding establishes relationships between focused codes to develop an integrated analytical framework. Table 1 depicts examples of the coding process used in this study.

Unlike Strauss and Corbin's grounded theory version, which emphasizes axial coding, this study's analysis maintained Charmaz's more flexible approach to establishing relationships between categories through memo writing and constant comparison. This methodological choice allowed emerging themes to remain grounded in participants' perspectives rather than being fitted into predetermined coding paradigms. Member-checking enhanced credibility (Lim, 2025), where informants reviewed and validated interpretive summaries.

Table 1

Examples of Coding Processes

Raw Data (Translated)	Initial Codes	Focused Codes	Theoretical Category
"When the Pembayun says 'Ida dane sareng sami' (Ladies and gentlemen), he respects everyone present, regardless of status."	Greeting all present Showing equal respect Status-blind interaction	Social recognition	Hospitality (*Karamah*)
"The phrase 'Ampure siu ping slaksa' (A thousand apologies) teaches us that even when you are right, you should approach others humbly."	Preemptive apology Humility in approach Lowering oneself	Strategic humility	*Tawadhu'* (Humility)
"Saying 'Bersyukur Alhamdulillah' reminds the couple that their union is a blessing from Allah that requires gratitude."	Acknowledging divine favor Marriage as blessing Required thankfulness	Religious gratitude	*Shukr* (Gratitude)

Results

Sorong Serah Aji Krame Tradition in Sasak Tribal Community

The Sasak community of Lombok uses two language forms: the refined *basa alus* for nobles and elders and *Jamaq* for daily speech. Socially, they are divided into nobles (*Permenak*) and commoners (*Jajar Karang/Kaula*), a distinction reflected in traditional weddings like *Sorong Serah Aji Krame*. This ceremony, more elaborate for noble families, symbolizes adherence to custom and marks the transfer of marriage property. While modernization has softened class distinctions, the ritual remains culturally significant (Ahyar & Abdullah, 2019).

Sorong Serah Aji Krame (see Figure 1, photographed in January 2025) is one of the local traditions that the Sasak community still preserves. One of the components of *Sorong Serah Aji Krame* is the *Tembang Sorong Serah*, a form of speech delivered with polite language by the head of

the group, called *Pembayun*, addressing the bride's family. This song, or *Tembang*, is a crafted piece that requires learning. According to Ratmaja (2012), *Tembang* is an expressive form with rhythmic elements, such as variations in sound length and tone intensity spoken in specific parts of a poem or sentence. The *Tembang* in *Sorong Serah Aji Krame* carries messages, particularly to the bride, regarding proper behavior and using kind words, as marriage signifies a new milestone in establishing a legal bond. The *Tembang* contains educational messages for the bride and groom, emphasizing maintaining a household with religious guidance, customs, and norms.

Figure 1: Sasak Tradition (Sorong Serah Aji Krame Event) Taken in 2025

The fundamental message conveyed in the *Tembang* revolves around the understanding and practice of the five pillars of Islam: shahada (testimony of faith), prayer, fasting, *zakat* (charity), and *hajj* (pilgrimage). Prayer is essential, a pillar of one's life, and should be carried out with utmost sincerity, incorporating thirteen specific elements. The significance of prayer begins with intention and concludes with a greeting that encapsulates messages for domestic life. Similarly, marriage leads to salvation in this world and the hereafter when initiated with good intentions. The bride and groom are expected to harmonize the pillars of prayer with the twenty attributes of Allah SWT in their married life. These attributes, such as compassion, acceptance, and love, can be exemplified in the household. When combined with the pillars of prayer, the total count reaches thirty-three. The couple must embody Allah SWT's attributes alongside the pillars of prayer in their domestic life (Ahyar & Abdullah, 2019).

As the journey progresses, the bride and groom must manifest these attributes and pillars within their household and extend their application to a broader social context. In this context, they bear a greater responsibility to actualize the pillars of prayer and the attributes of Allah SWT, resulting in a total count of sixty-six. Finally, the couple is encouraged to implement the pillars and attributes and recite the ninety names of Allah SWT, supplementing them with their names to reach a total count of one hundred. This attribute represents the highest level the bride and groom should aspire to attain (Ahyar & Abdullah, 2019).

Islamic Education Values in Tembang Sorong Serah Aji Krame

Tembang Sorong Serah Aji Krame is in the form of poetry and free verse. The number of lines in one stanza is irregular or not the same as in poem writing, where the number of lines in one stanza is four (Paridi et al., 2022). *Tembang Sorong Serah Aji Krame*'s writing form is similar to poetry. The difference is that poetry is only an expression or outpouring of the heart, while *tembang* is a poem that contains advice or cultural values. The language used in *Tembang Sorong Serah Aji Krama* is

kawi language or Sasak subtle language. Pembayun, *Pembayun Penampi* is responsible for developing the song, while *Pembayun Penyorong* is the song reader.

In the *Sorong Serah* procession, the song developed by the *Pembayun* is divided into three forms: the opening, the core, and the closing. The forms of the three songs are both in the form of poetry and free verse. Each of these songs has Islamic Education values that are indirectly trying to be instilled in the lives of the people of Lombok from generation to generation. Table 2 describes the Islamic education values in Tembang Sorong Serah Aji Krame, which emerged from interviews.

Table 2
Islamic Education Values in the Tembang Sorong Serah Aji Krame

Forms	Songs	Meaning	Islamic Education Value
Opening	*Pembayun Penyorong:*	Ladies and gentlemen	The value of hospitality,
	Ida dane sareng sami	A thousand apologies	Apologizing, humility
	Ampura siu ping slaksa	My feelings are stunned.	
	Manah kula kadi angob	Do not understand the rules	
	Durung tatas titi tata	I am the delegate	
	Kula amung utusan	Bringing a big speaker	
	Hangrebat brana agung	Living up to religious customs	
	Hanglampahi adat gama		
	Pembayun Penampi:	Dear newly arrived guests	The value of courtesy and gratitude
	Tamu hanyar wau prapti	Please take your seats.	
	Daweq manjing ring paseban	I have been waiting for a long time	
	Kula samadiya ngatos	Envoys from the land of Gora	
	Duta saiking sora negara	Who brings treasures	
	Hangrebat aji suka	Gratitude in my heart	
	Suka sukur mana ingsun	It is destiny from the divine	
	Mula takdir saking Allah	Like someone who reads mantras	
	Mandin puji mantra	There is no definite meaning	
	Ndra' guna mule pasti		
	Pembayun Penyorong:	Love the gratitude of my heart	The value of gratitude
	Suka sukur manah kaji	Accepted the talk	
	Si'terima pengandika	Like a *podong* horse	
	Mara' misal jaran pondong	Lowered the burden so light	
	Pan banda tepalu' ringan	If God wills	
	Lamun Allah pekayunan	There is nothing in the field	
	De'nara'ape le' rau	Thank God	
	Bersyukur Allhamdulillah		
Core	*Pembayun Penyorong:*	Great guests coming from Lombok	Values of deliberation, tolerance,
	Tamu hanyar saking gora gumi	Please start the conversation	and cooperation
	Daweg runtuhang pengandika	To arrive	
	Ade'na sibau sampe	The conversation will be finished quickly	
	Mangda gelis rampung	Aji Krama is quickly accepted	
	Aji suci gelis ketampi	Between girl and boy	
	Den dara lan den teruna	Maybe he is still confused	
	Sang na masih bingung	To meet quickly	
	Gelis pada besepukan	So that it is not like today	
	Ende'na mara' turah lan zaman mangkin	Called cohabitation	
	Teparan kumpul kandang	One heart, one action	
	Mun ne berat bareng lembah	If the exact weight is carried	
	Selapuq'na pade sukur	Everyone is grateful	
	Bareng maik bareng lelah	Equally good, equally tired	
	Pembayun Penampi:	Presenting all my treasures	Moral values
	Katur sagung Arte Brane	As a symbol of sacred value	
	Kang menongke prelambang Aji Suci	Beautiful in color	
	Peri-peri warnipun	The name is aji krama	
	Kangaranan Aji Krame	There is Sirah, who looks weak and	
	Worten sirah nampah lemah malihipun	Connecting and separating	
	Olen-olen serta pemegat	There is still something else	
	Hane lian malih	Which is carried behind	
	Kang rinebat ring pungkur hiki	Everything is ready to be presented	
	Sedayane sadye katur	To all of you	
	Maring raganda samye	We apologize if there are any shortcomings	
	Gung ampure yenne hane kirang banjur	We had better explain	
	Ragande becik ngandika	So that immediately / we complete	
	Den gelis titiang nahuri		
Closing	*Pembayun Penyorong:*	Let us pray	The value of gratitude, apologizing
	Ngiring puji syukur	Praise be to God	
	maring gusti Allah	Because at this moment	
	deweq titiang kependidikayang	We are the messengers of the family	
	antuq linggih. Kerame	Will complete the series of customs	
	jagi penggel puput tali jinah.	And break the rope of jinah	
	Aji krame lambang adat	Aji krama	

Forms	Songs	Meaning	Islamic Education Value
	Kalihpenganten. Anyar puniki	The sacred symbol of bridal customs	
	lan ucapan Bismillahirrohmanirrohim	By reading	
	Yen sampun ke puput	Bismillahirrahmanirrahin	
	tali jinah aji krame	Thus it has been broken	
	puniki tanonang	The rope of jinah aji krama.	
	tan yugiye hamangun wicare	And there is no talk	
	malih. Yen wonten	And debate	
	kesisipan iwan lempir	In the sense that it's all finished	
	Tindak tanduk titi adat tartib tapsile	Please apologize if there are	
	Wahyat lan jatmike	Words and behavior	
	denek nuwun Agung agung	Which is less pleasing	
	rene sinam pure.		

The first value is friendliness. *Sasak* society teaches good moral values and is applied in everyday life, including when meeting anyone. Greeting each other in a friendly manner will create a sense of mutual respect for older people and those of the same age (Qiong, 2017). As social creatures, humans must be friendly toward anyone, especially as an Easterner who highly values hospitality. *Tindih-tertib tapsile* is known in the Sasak language, which means the tradition of behaving politely towards anyone. *Tindih* is also a way of life for the Sasak people.

Furthermore, it is internalized into the form of *tapsile* order. This *tapsile* order is a guideline for forming tradition as a civilization of the Sasak people. These customs serve as guidelines in society that give birth to a philosophy of life, such as this *"tindih.*"

Apologizing is the second value in the song. In community life, misunderstandings often lead to problems that create disharmony between people. Therefore, the humility of apologizing does not make someone look arrogant. Resolving problems with apologies will create harmony between citizens (Limberg, 2015). The third value is being humble. A humble attitude shows good character (Krumrei-Mancuso, 2017) in social life, and an arrogant attitude will cause disputes and a person's discomfort when socializing. In this traditional process, the *Pembayun* or traditional leaders show a humble attitude to create a comfortable and warm atmosphere for the traditional procession.

Politeness is the fourth value. Parents have instilled polite and courteous attitudes in individuals since childhood, especially when receiving guests (Baan et al., 2022). An exemplary procedure for receiving guests is to invite guests to enter the place provided and sit down. A courteous attitude will make visitors feel happy and appreciated. Lombok people apply a polite attitude when receiving guests to strengthen mutual respect and a sense of comfort in socializing with others, making the visitors not feel reluctant to return.

Gratitude is the fifth value. Gratitude is a way of expressing thankfulness to the almighty, and every individual is grateful for everything given by his God, including in traditional events (Al-Seheel & Noor, 2016). In every opening song of *Sorong Serah Aji Krama*, both Pembayun Penyorong and Pembayun Penampi always express gratitude. Gratitude is an attitude of appreciation and acceptance of all God's favors. It is related to *Sorong Serah Aji Krama,* where the *Penyorong* party feels that his burdens are lightened because the Penampi party accepts his arrival. Likewise, the *Penampi* party felt relieved because it turned out that the boy was serious about proposing to the girl. *Sasak* society highly upholds the culture of gratitude, as seen from almost all Sorong Serah Aji Krama songs mentioning this issue.

The sixth value is deliberation. It is an activity in which the team discusses a problem together to get a good solution per mutual agreement (Englund, 2016). The people of Lombok still hold deliberations when there is an event to listen to each other's opinions and find a mutually agreed-upon solution. Deliberation can also strengthen the relationship between families and communities.

Tolerance or mutual respect is the seventh value. It is commendable because it indicates a harmonious generation relationship (Nugroho, 2019). The younger group will feel cared for so that there is respect from the younger group towards the older group. In the *tembang* Sorong Serah above, there is a quote that shows *Penampi*'s request to hasten the event so that the two brides can sit on the aisle as soon as possible. Pembayun understands the feelings of the bride and groom, who are still very confused about how to meet each other immediately because they cannot wait to be together.

The eighth value is religiosity and customs. These two values are still firmly held by the people of Lombok. The younger generation is taught to keep themselves from things prohibited by religion, such as adultery. By instilling good moral values, it is hoped that the younger generation, especially in the village of Praya, will stay away from this act and maintain relationships (Baharun, 2017).

The final value is cooperation. Relationships with fellow humans are essential. Cooperation is the principle of helping each other for the common good. The nature of kinship and cooperation has become the nation's customs (Kholis, 2022). The principle makes other people in society a family so that they finish together every significant event that requires the labor of many people. Similarly, marriage involves two families and requires community cooperation to carry out village customs. The Lombok community still helps each other at some traditional events. Without being invited, people still come to help maintain community harmony voluntarily.

Internalization of Moral Value of *Tembang Sorong Serah Aji Krame*
This research identified several concrete indicators showing that the values in *Tembang Sorong Serah Aji Krame* contribute to the cultural strength of the community following religious principles. The first indicator is daily practices. The interviewed Sasak community members demonstrated that values such as hospitality, courtesy, and gratitude contained in the tembang have become part of their attitude in everyday social life. For example, residents who participate in this ritual consistently practice greeting each other politely and showing gratitude on various social occasions.

The next indicator is conflict resolution. The value of deliberation taught in the tembang serves as a guide in resolving conflicts in the community. One informant gave an example of how the principle of "*sopo' ate sopok tindak*" (one heart, one action) is often referenced when disputes occur among residents, encouraging dialogue and mutual agreement. Cultural resilience is the third indicator. The preservation of the Sorong Serah Aji Krame tradition over several generations, even amid modernization currents, proves the strength of its values. Several young couples who have undergone this ritual acknowledged that they gained a deeper understanding of marriage responsibilities from the messages conveyed in the tembang. The final indicator is strengthening religious identity. The informants mentioned that Islamic values woven into the tembang strengthen their identity as Sasak Muslims. This notion is evident from how they quote parts of the tembang containing Islamic teachings when discussing good behavior according to religion.

Regarding the interaction between local traditions and Islamic values, this research found concrete patterns showing how these elements reinforce each other. First is linguistic adaptation. The use of refined Sasak language mixed with Arabic and Kawi terms in the tembang reflects the blend between local tradition and Islamic values. The choice of words such as "Alhamdulillah" and "Bismillahirrahmanirrahim" among Sasak words shows how Islam has been integrated into local cultural expressions. The second is ritual transformation. Some pre-Islamic ritual elements in

marriage ceremonies have been modified to reflect Islamic values, such as adding Islamic prayers and emphasizing marriage as worship while maintaining the traditional ceremony structure.

The third is symbol reinterpretation. Symbols in the Sorong Serah ritual, such as Aji Krame, have undergone reinterpretation to reflect Islamic values. For example, the symbolic numbers (33, 66, 99) mentioned in the tembang are associated with the number of *tasbih* or *asmaul husna* in Islamic tradition. The last is mutual legitimacy. The interviews with religious figures and traditional leaders revealed that they provide mutual legitimacy. Religious leaders support the preservation of customs that align with Islamic values, while traditional leaders integrate Islamic elements into traditional practices.

Local communities, such as the Sasak tribe, cannot avoid the impact of modernity. This negative impact will increase if people do not fortify with cultural principles. The cultural principles are local values that can be used as a guide to life. However, some regional communities are ignorant of this, even though the power contained in a tradition or culture is very complex (Yondri et al., 2016)ᴵ mainly to the point that local traditions should not be mixed with religious law. This mindset must be radically eliminated.

The traditions that develop in a society are born from the beliefs held by that society. Thus, local traditions must be preserved (Noyes, 2011) as they were born from long contemplation and process. Producing a noble tradition full of values, such as the *Sorong Serah Aji Krame* tradition, is not easy, as it is firmly embedded in religious nuances, namely Islam. Moral values, such as politeness, tolerance, and cooperation, are teachings contained in religion. So, in Islamic education, the younger generation receiving education must be equipped with the principles or philosophies of their respective regional cultures so that they do not lose their way or become extinct due to the impact of modernity.

The moral values in the song *Sorong Serah Aji Kerame* reflect genuine Islamic education. Islam teaches us to behave politely and to care for others (Shafiq, 2021). For Muslims, morality is a guideline, responsibility, and obligation that its adherents must apply (Udin & Dananjoyo, 2023). Moral values applied in society cannot be separated from a tradition born in that society, even though the Qur'an and Hadith authorize moral values (Burns & Tomita, 2015).

Discussion

Sasak Tradition and Linguistic Pedagogy

In the context of the Sasak community, Tembang Sorong Serah offers an invaluable site for exploring the transmission of Islamic moral values. The findings of this research reinforce and expand upon the results of Ibrahim et al., (2024), who found that Islamic values can be integrated into modern cultural contexts without losing their traditional essence. In the case of Tembang Sorong Serah, we see how values such as hospitality, deliberation, and gratitude are conveyed through poetic forms that have existed for centuries yet remain relevant in contemporary society.

Through engaging with the community's oral traditions, learners build a deeper understanding of their cultural heritage and appreciate the nuances of Islamic ethical teachings that inform their communal identity (Nasri, 2024). As this study elucidates, the linguistic features of Tembang Sorong Serah further amplify its pedagogical efficacy, transforming language into a medium of ethical formation (Ratmaja, 2012). The relationship between individual character development and societal well-being found by Maisyanah et al. (2024) is also clearly visible in Tembang Sorong Serah, where

the values instilled focus not only on individual formation but also on how individuals contribute to broader social harmony.

Incorporating refined Sasak (*basa alus*), interspersed with Old Javanese (Kawi) elements, elevates the ritual language, imbuing it with significant religious resonance. The rhythm, metaphor, and repetition characteristic of tembang promotes memorization and emotional engagement, serving as critical components in the moral instruction process (Syamsurrijal et al., 2019). This profound interweaving of language and ethics illustrates that educational traditions in the Sasak community are not merely vehicles for content delivery but vital conduits for character formation and moral discourse.

The Ritual as a Medium of Moral Pedagogy
The findings of this study underscore the significant pedagogical role of Tembang Sorong Serah Aji Krame in the Sasak community. The ceremony is a form of moral pedagogy, reinforcing Islamic ethical principles through embodied, communal participation. It is consistent with Geertz's (2014)concept of rituals as "models of and for reality," where the performance reflects social order and actively contributes to its formation and maintenance. In the case of Tembang Sorong Serah, the verses are more than poetic embellishments; they act as moral texts, communicating values such as humility, deliberation, gratitude, and cooperation. This performative form of education aligns with Rogoff's (2003) cultural apprenticeship model, where learning is embedded in active community participation and interpersonal interactions rather than isolated classroom settings. It also resonates with the Islamic educational theory of *tahdhib al-nafs* (purification of the soul), emphasizing character formation through practice and exposure to moral exemplars (Halstead, 2004; Muvid & Kholis, 2024). Unlike formal Islamic education that often relies on text-based curricula, the tembang offers a situated, embodied form of learning where moral values are enacted rather than abstracted, reinforcing the idea that informal, cultural rituals can be powerful tools for transmitting ethical norms (Daiute, 2021).

Embedding Islamic Values in Local Cultural Forms
This study contributes to understanding how Islamic values are integrated into local cultural practices. The *tembang* acts as a fusion of Islamic ethics with Indigenous Sasak traditions, communicating values such as *adab* (etiquette), *shukr* (gratitude), *musyawarah* (deliberation), and *ta'awun* (cooperation)—all central to Islamic ethical teachings. This finding aligns with Azra's (2004) and Ricklefs's (2006) work, which demonstrated how Islamization in Southeast Asia did not erase local traditions but reinterpret them through Islamic lenses. The Sasak case highlights that cultural Islam is not a dilution of Islamic principles but a contextually grounded expression of those principles. It supports the notion that *syariah* (divine law) and *adat* (custom) can coexist and complement each other rather than being in opposition (Yulianti & Hadi, 2024). As Daud (2010) suggests, culturally rooted practices can reinforce Islamic educational goals, especially when they incorporate ethical substance. The *tembang* thus remains a living form of pedagogy that bridges Islamic law and custom, demonstrating the ongoing relevance of such practices in contemporary educational and cultural settings.

Reinforcing Islamic Educational Goals through Ritual
The values embedded in *Tembang Sorong Serah* align closely with the core goals of Islamic education, including the cultivation of *akhlaq* (moral character), *iman* (faith), and *amal* (righteous action). Unlike formal educational methods that often compartmentalize moral values, the *tembang* integrates these principles into a life-cycle event like marriage, reinforcing their relevance in

everyday life. For instance, the theme of *musyawarah* (deliberation) mirrors Qur'anic teachings that promote mutual consultation (Qur'an 42:38), while the recurrent expressions of gratitude (*shukr*) echo the Qur'anic exhortation to thankfulness (Qur'an 14:7). By embedding these ethical lessons within a culturally resonant framework, the ritual reinforces the holistic nature of Islamic education, emphasizing that moral education is not separate from lived experience but is embedded in it (Daud, 2010; Miglietta et al., 2024; Pratama et al., 2024). This model contrasts with more compartmentalized educational approaches, where values are often confined to separate lessons or subjects, suggesting that *Tembang Sorong Serah* provides a model of moral instruction that is deeply integrated into the cultural and social fabric of the community.

This research provides deep insights into how Islamic educational values are embedded in the Tembang Sorong Serah Aji Krame tradition and how this ritual functions as a medium of cultural and religious transmission in Sasak society. This section will discuss these findings concerning previous research and relevant theories to provide a more comprehensive understanding.

Conclusion and Recommendation

This study explores *Tembang Sorong Serah Aji Krame*, a traditional Sasak poetic ritual performed during marriage ceremonies, as a powerful medium for transmitting Islamic educational values. Through ethnographic fieldwork and qualitative analysis, it reveals how this oral tradition encodes core Islamic moral teachings—such as *karamah* (hospitality), *tawadhu'* (humility), *shukr* (gratitude), *musyawarah* (deliberation), *tasamuh* (tolerance), *ta'awun* (cooperation), and *akhlaq* (moral conduct). The structured poetic performance mirrors pedagogical models in Islamic and indigenous education, transforming the ritual into a communal learning experience. Education here is not didactic but embodied—transmitted through symbolic language, emotional resonance, and intergenerational participation. The *Pembayun*, as a ritual orator and moral guide, exemplifies the integration of traditional authority and religious instruction. The findings challenge the dichotomy between *syariah* and *adat*, showing that Islamic ethics are compatible with local customs and actively reinforced through them. This study contributes to theories of situated learning and cultural apprenticeship, highlighting the significance of non-formal, community-rooted education.

Several specific recommendations can be made. Developing a dedicated curriculum module on Tembang Sorong Serah for Islamic schools in Lombok, including audio recordings, transcriptions, and pedagogical guides, is essential for educational integration. Creating teacher training programs integrating traditional cultural expressions into Islamic education would strengthen this approach. Establishing annual student competitions for tembang recitation and interpretation would further promote youth engagement with this cultural heritage.

Creating a comprehensive digital archive of tembang performances, including high-quality audio/video recordings, transcriptions, and translations, is crucial for documentation and preservation. Developing a searchable database cataloging variations in performance styles across different regions of Lombok would aid scholarly research and cultural understanding. Publishing bilingual editions of key tembang texts with interpretive commentaries would make these materials more accessible for educational use.

Community engagement could be enhanced by establishing regular community workshops where elders can teach tembang performance to younger generations. Creating mentorship programs pairing experienced Pembayun with apprentices would ensure the transmission of the oral tradition.

Organizing quarterly community forums to discuss the relevance of tembang values to contemporary social challenges would maintain the tradition's relevance.

For research initiatives, conducting comparative studies of similar traditions in neighboring islands would help understand regional variations and influences. Investigating gender dimensions of value transmission, particularly how women interpret and apply the teachings of the predominantly male-performed tembang, would provide valuable insights. Exploring applications of digital technology for preserving and transmitting this tradition in formats accessible to younger generations would bridge traditional and contemporary approaches.

Regarding policy development, advocating for official recognition of Tembang Sorong Serah as an intangible cultural heritage at provincial and national levels would provide institutional support. Developing community-based cultural tourism initiatives that showcase the tradition while respecting its sacred dimensions could provide economic benefits. Creating incentives for villages that maintain comprehensive versions of traditional ceremonies, including the complete tembang sequence, would help preserve the most authentic expressions of this cultural practice.

Acknowledgment

References

Ahmed, S. K. (2025). Sample size for saturation in qualitative research: Debates, definitions, and strategies. *Journal of Medicine, Surgery, and Public Health*, *5*, 100171. https://doi.org/10.1016/j.glmedi.2024.100171

Ahyar, A., & Abdullah, S. (2019). Sorong Serah Aji Krama Tradition of Lombok Sasak Marriage to Revive Islamic Culture. *EL HARAKAH*, *21*(2), 255. https://doi.org/10.18860/el.v21i2.6961

Akhtar, R. C. (2018). Modern Traditions in Muslim Marriage Practices, Exploring English Narratives. *Oxf. J. Law Relig.*, *7*(3), 427–454. https://doi.org/10.1093/ojlr/rwy030

Al-Attas, M. N. (1979). *Aims and Objectives of Islamic Education*. Hodder and Stoughton.

Alfaruqi, I. (1982). *Islamization of Knowledge: General Principles and Work Plan*. International Institute of Islamic Thought.

Ali, B., Weni, I. M., & Wiyani, W. (2020). The Peusijuek Tradition as a Social Communication Media in the People of Aceh, Indonesia. *International Journal of Advances in Scientific Research and Engineering*, *06*(06), 07–19. https://doi.org/10.31695/IJASRE.2020.33829

Alrubaishi, D., McAdam, M., & Harrison, R. (2021). Culture, convention, and continuity: Islam and family firm ethical behavior. *Business Ethics Env & Resp*, *30*(2), 202–215. https://doi.org/10.1111/beer.12328

Al-Seheel, A. Y., & Noor, N. M. (2016). Effects of an Islamic-based gratitude strategy on Muslim students' level of happiness. *Mental Health, Religion & Culture*, *19*(7), 686–703. https://doi.org/10.1080/13674676.2016.1229287

Anastasya, A. (2024). Integration of Islamic values and modernization in Sasak wedding traditions: A structural anthropological perspective. *Journal of Islamic Studies and Humanities*, *7*(3), 450–461. https://journal.unhas.ac.id/index.php/jish/article/view/36654

Auni, L., Manan, A., & Abubakar, A. Y. (2022). Factors Changing the Gayo Ethnic's Traditional Marriage Procession in Lut Tawar Sub-District of Takengon, Central Aceh, Indonesia.

Samarah: Jurnal Hukum Keluarga Dan Hukum Islam, *6*(2), 703. http://dx.doi.org/10.22373/sjhk.v6i2.14888

Azra, A. (2004). *The Origins of Islamic Reformism in Southeast Asia: Networks of Malay-Indonesian and Middle Eastern "Ulama" in the Seventeenth and Eighteenth Centuries*. Allen & Unwin.

Azwar, W., Mayasari, D., Winata, A., Garba, M. M., & Isnaini. (2024). Exploration of the Merariq Tradition in Sasak Lombok, Indonesia: Analysis in Islamic Law and Socio-Cultural Dynamics Perspectives. *IBDA`: Jurnal Kajian Islam Dan Budaya*, *22*(1), 23–38. https://doi.org/10.24090/ibda.v22i1.10766

Baan, A., Girik Allo, M. D., & Patak, A. A. (2022). The cultural attitudes of a funeral ritual discourse in the indigenous Torajan, Indonesia. *Heliyon*, *8*(2), e08925. https://doi.org/10.1016/j.heliyon.2022.e08925

Baharun, H. (2017). Total Moral Quality: A New Approach for Character Education in Pesantren. *Ulumuna*, *21*(1), 57–80. https://doi.org/10.20414/ujis.v21i1.1167

Ball, J., & Smith, M. (2022). A More-Than-Language Approach to Inclusion and Success of Indigenous Children in Education: Reflections on Cambodia's Multilingual Education Plane Found. *Educational Role of Language Journal*, *2*(8), 6–21. https://doi.org/10.36534/erlj.2022.02.01

Battiste, M. (2002). *Indigenous Knowledge and Pedagogy in First Nations Education: A Literature Review with Recommendations*. National Working Group on Education.

Burns, J. K., & Tomita, A. (2015). Traditional and religious healers in the pathway to care for people with mental disorders in Africa: A systematic review and meta-analysis. *Social Psychiatry and Psychiatric Epidemiology*, *50*(6), 867–877. https://doi.org/10.1007/s00127-014-0989-7

Cavalli-Sforza, L. L., & Feldman, M. W. (1981). *Cultural Transmission and Evolution: A Quantitative Approach*. Princeton University Press.

Charmaz, K. (2021). The power of constructivist grounded theory for critical inquiry. *Qualitative Inquiry*, *27*(2), 161–176. https://doi.org/10.1177/1077800416657105

Chaudhary, N. (2022). Quest for an Indigenous Pedagogy: Learning from Tharu Festivals of Western Nepal. *Journal of Tikapur Multiple Campus*, 109–127. https://doi.org/10.3126/jotmc.v5i1.46520

Creswell, J. W., & Poth, C. N. (2023). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (5th ed.). SAGE Publications.

Daiute, C. (2021). *Narrative Inquiry: A Dynamic Approach*. SAGE Publications.

Daud, M. N. (with International Institute of Islamic Thought and Civilization (Kuala Lumpur, Malaysia)). (2010). *The Educational Philosophy and Practice of Syed Muhammad Naquib Al-Attas: An Exposition of the Original Concept of Islamization*. International Institute of Islamic Thought and Civilization.

Englund, T. (2016). On moral education through deliberative communication. *Journal of Curriculum Studies*, *48*(1), 58–76. https://doi.org/10.1080/00220272.2015.1051119

Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., & Grimshaw, J. M. (2010). What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology & Health*, *25*(10), 1229–1245. https://doi.org/10.1080/08870440903194015

Geertz, C. (2014). *Agama Jawa: Abangan, Santri, Priyayi Dalam Kebudayaan Jawa*. Komunitas Bambu.

Halstead, J. M. (2007). Islamic values: A distinctive framework for moral education? *Journal of Moral Education*, *36*(3), 283–296. https://doi.org/10.1080/03057240701643056

Halstead, M. (2004). An Islamic concept of education. *Comparative Education*, *40*(4), 517–529. https://doi.org/10.1080/0305006042000284510

Hammersley, M., & Atkinson, P. (2019). *Ethnography: Principles in practice* (Fourth edition). Routledge.

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Hewlett, B. S., & Cavalli-Sforza, L. L. (1986). Cultural Transmission Among Aka Pygmies. *American Anthropologist*, *88*(4), 922–934. https://doi.org/10.1525/aa.1986.88.4.02a00100

Ibrahim, M., Islam, S., Zohriah, O., & Azid, M. (2024). Addressing Contemporary Ethical and Moral Issues Through Islamic Education. *Journal on Islamic Studies*, *1*(1), 36–51. https://doi.org/10.35335/kbbzar83

Ignatow, G., & Mihalcea, R. (2022). *An Introduction to Text Mining: Research Design, Data Collection, and Analysis*. SAGE Publications.

Jayadi, U., & Kamarudin, L. (2021). Budaya Bereqe Sasak Lombok Sebagai Upaya Melestarikan Nilai Religius Dan Jati Diri Masyarakat Montong Baan Kecamatan Sikur Lombok Timur. *Berajah Journal*, *1*(1), 43–49. https://doi.org/10.47353/bj.v1i1.4

Kholis, N. (2022). The Legacy of a School: Developing Better Schools Based on Mutual Cooperation. *Journal of Social Studies Education Research*, *13*(1), 104–124.

Krumrei-Mancuso, E. J. (2017). Intellectual humility and prosocial values: Direct and mediated effects. *The Journal of Positive Psychology*, *12*(1), 13–28. https://doi.org/10.1080/17439760.2016.1167938

Lim, W. M. (2025). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, *33*(2), 199–229. https://doi.org/10.1177/14413582241264619

Limberg, H. (2015). Principles for pragmatics teaching: Apologies in the EFL classroom. *ELT Journal*, *69*(3), 275–285. https://doi.org/10.1093/elt/ccv012

Mahadika, A., & Satria, V. R. (2021). The Traditions of Sasak Tribe in Sade Village, Central Lombok, Indonesia. *International Journal of Social Science and Religion (IJSSR)*, 285–296. https://doi.org/10.53639/ijssr.v2i3.52

Maisyanah, Rahman, A., Kholis, N., Bakar, M. Y. A., & Hasan, A. A. A. (2024). Living Qur'an Approach to Improve Critical Thinking Skills in Islamic Religious Education Learning. *Al-Hayat: Journal of Islamic Education*, *8*(4), 1383–1398. https://doi.org/10.35723/ajie.v8i4.7

McGowan, K. (2019). An Innovative Opportunity? Social Innovation, Entrepreneurship, and the Pedagogical Possibilities for Indigenous Learners. *Canadian Journal of Nonprofit and Social Economy Research*, *9*(2). https://doi.org/10.22230/cjnser.2018v9n2a268

Miglietta, A., El Brashy, D., & Ricucci, R. (2024). Religious transmission and cultural negotiation in first-generation Muslim migrant parents in Italy: A qualitative study. *Journal of Community & Applied Social Psychology*, *34*(3), e2792. https://doi.org/10.1002/casp.2792

Muvid, M. B., & Kholis, N. (2024). Contribution of Sufism Trilogy in the Formation of Religious Behavior: A Proposed Model. *Cogito*, *16*(1), 29–53. http://cogito.ucdc.ro/en/numar-curent.html

Nasri, U. (2024). Sasak Language in Rituals and Traditions: An Anthropological Analysis of Communication in the Lombok Community. *Sabda: Jurnal Kajian Kebudayaan*, *19*(2), 89–99. https://doi.org/10.14710/sabda.19.2.89-99

Nasution, J. (2022). Ethnozoology in Traditional Marriage Ceremony of Mandailing Tribe in North Sumatra. *J Trop Etnobiol*, *5*(1), 30–35. https://doi.org/10.46359/jte.v5i1.105

Nesterova, Y. (2019). Teaching Indigenous children in Taiwan: Tensions, complexities and opportunities. *Global Studies of Childhood*, *9*(2), 156–166. https://doi.org/10.1177/2043610619846349

Noyes, D. (2011). Traditional Culture: How Does it Work? *Museum Anthropology Review*, *5*(1–2), 39–47.

Nugroho, P. (2019). Internalization of Tolerance Values in Islamic Education. *Nadwa: Jurnal Pendidikan Islam*, *12*(2), 197–228. https://doi.org/10.21580/nw.2018.12.2.2397

Paridi, K., Sudika, I. N., Syahbuddin, S., Murahim, M., & Ashriany, R. Y. (2022). Basic materials of literature genre text in Sasak language. *International Journal of Linguistics, Literature and Culture*, *8*(2), 51–60. https://doi.org/10.21744/ijllc.v8n2.2062

Pratama, M. M. K., Mustari, M., & Karim, A. (2024). Integration of Islamic Values and Modernization in Sasak Wedding Traditions in Lombok. *ELS-JISH*, *7*(3), 450–461. https://journal.unhas.ac.id/index.php/jish/article/view/36654

Qiong, O. U. (2017). A Brief Introduction to Perception. *Studies in Literature and Language*, *15*(4), 18–28. https://doi.org/10.3968/10055

Ratmaja, L. (2012). *Belajar Jadi Pembayun (Sorong Serah Ajikrama Adat Masyarakat Suku Sasak)*. KSU Primaguna.

Ricklefs, M. C. (2006). Mystic Synthesis in Java: A History of Islamization from the Fourteenth to the Early Nineteenth Centuries. *EastBridge*.

Rogoff, B. (2003). *The Cultural Nature of Human Development*. Oxford University Press.

Ryan, B. J. (1999). *Alif Lam Mim: Reconciling Islam, Modernity, and Tradition in an Indonesian Kampung*. Harvard University.

Shafiq, M. (2021). Conceptualizing Islamic Scholars Perspective on Corporal Punishment of Children in Pakistan. *FWU Journal of Social Sciences*, 65–75. https://doi.org/10.51709/19951272/Summer-2/4

Singal, Z. H., Hasrin, A., Sidik, S., & Mokoginta, D. (2022). Tradition of Marriage Ceremony (Mogama) in Bolaang Mongondow. *SHS Web Conf.*, *149*, 02050. https://doi.org/10.1051/shsconf/202214902050

Smith, B. J. (2009). Stealing Women, Stealing Men: Co-creating Cultures of Polygamy in a Pesantren Community in Eastern Indonesia. *Journal of International Women's Studies*, *15*(1), 189–207.

Suyatno, S., Hayati, F. N., & Wantini, W. (2020). Transmission of Islamic values in public school: A study at state senior high school 5 Yogyakarta. *Anal. J. Soc. Sci. Relig.*, *5*(01), 15–29. https://doi.org/10.18784/analisa.v5i1.1039

Syamsurrijal, A., Burhanuddin, M., & Mustafa, R. (2019). Indirect Meaning of Tembang Dangdang Gule Saking Sunan Bonang in Sasak Wedding Ceremony. *International Journal of Science and Research (IJSR)*, *8*(10), 954–959. https://doi.org/10.21275/ART20201997

Udin, U., & Dananjoyo, R. (2023). Prophetic Leadership: Lessons from the Greatest Leader of Prophet Muhammad. *FWU Journal of Social Sciences*, *17*(4), 88–97. https://doi.org/10.51709/19951272/Winter2023/7

Wisudawati, S., & Yusra, K. (2022). *Symbolic Power of Sasak Women as Reflected in the Sasak Marriage Processes*. 303–313. https://doi.org/10.2991/978-2-494069-21-3_33

Woodward, A. (2022). "It is like second nature": Informal giving among Pakistani Muslims in an English city. *Volunt. Sect. Rev.*, *13*(3), 355–375. https://doi.org/10.1332/204080521X16602651609817

Yazid, A., Sugitanata, A., Hasan, F., Ulirrahmi, F., & Sholikhah, S. K. (2024). The Role of Bales Nae Tradition in Strengthening Family Harmony and Social Cohesion in the Sasak Community of Lombok, Indonesia. *Jurnal Ilmiah Al-Syir'ah*, *22*(1), 79. https://doi.org/10.30984/jis.v22i1.2876

Yondri, L., Lubis, N. H., & Mundardjito. (2016). Menggali Nilai-Nilai Luhur Masyarakat Masa Lalu Dari Tinggalan Budaya Materi. *Patanjala*, *8*, 139–154.

Yulianti, N., & Hadi, A. (2024). Embedding Traditions and Values of Sasak Culture in School Environments to Promote Tolerance. *International Journal of Multicultural and Multireligious Understanding*, *11*(2), 123–135.

Zohiro, M. Q. A. B., Harian, P. J., Hazami, K. N., Santiani, S., & Wahidah, A. (2024). Sasak Traditional Marriage System in Avoiding Conflict and Preventing Disharmony Between Families in the Modern Era. *Journal of Etika Demokrasi*, *9*(1). https://doi.org/10.26618/jed.v9i1.13074

Zuhdi, M. H. (2012). *Praktik merariq: Wajah sosial orang Sasak*. Lembaga Pengkajian-Publikasi Islam & Masyarakat (LEPPPIM) IAIN Mataram.

Undergraduate Students' Perceptions of Technology for Sustainable Education: A Qualitative Study in Pakistan

Maham Muzamil
Kinnaird College for Women, Lahore, Pakistan

Gulzar Shah
Jiann-Ping Hsu College of Public Health, Georgia Southern University, Statesboro, USA

This study aims to investigate undergraduate students' perceptions of the use of technology in education, focusing on accessibility, sustainability, usefulness, and the challenges it presents. Semi-structured interviews were conducted with 12 students from universities in Lahore, Pakistan, until data saturation was reached. The thematic analysis was conducted with NVivo software. The results showed that technology increases accessibility, engagement, and sustainability; however, digital inequities and overreliance on technology remain significant problems. Students know the benefits that can be gained through digital tools such as Google Workspace, Microsoft Teams, and other AI-driven platforms for collaborative and personalized learning. However, there are also perceived challenges, such as the disparity in high-speed internet and high-standard device accessibility, the availability of digital distractions, and the fear of technological servility that can prevent interaction with others and hinder critical thinking. Students recommended policies that promote equitable access, educator training, and piloting innovative tools to improve integration. These findings underscore the importance of adopting balanced approaches to technology use, which capitalize on its benefits while addressing challenges and fostering a more inclusive and effective educational practice program .

Keywords: technology integration, sustainable education, qualitative study, undergraduate students, Pakistan

The progress of any country depends highly on innovation in education, which has become especially significant today, given the role of technology in improving the quality of education (Abulibdeh et al., 2024). Recently, there has been much interest in using technology in education, particularly in higher education settings. The integration of various technological tools has been shown to enhance student engagement and learning outcomes (Selwyn, 2020). Innovative technology is essential for building students' access, engagement, and learning outcomes to support sustainable education (Lee & Hwang, 2022). It ensures equal access to education using technological tools that bridge geographical and socio-economic gaps (Yazdani et al., 2023). The technological interventions enable marginalized communities to access quality education, which serves as a social equity advocacy (Deng & Yu, 2023). Innovative technology

Correspondence concerning this article should be addressed to Maham Muzamil, ªDepartment of Education, Kinnaird College for Women, Lahore, Pakistan,Email: : maham.muzamil@kinnaird.edu.pk

and sustainable education are integral to making a difference in enhancing learning opportunities, ensuring equity, and preparing students for their future challenges (Selwyn, 2024).

Studies have shown that technological access can bridge the gaps between geospatial and socioecological contexts, enabling marginalized communities to participate in educational activities (Podder, 2022; Okada & Gray, 2023). Platforms like Coursera and Khan Academy have democratized education, allowing students worldwide to access high-quality free online courses (Wilson, 2024). Acut et al. (2025) emphasized that equity in digital tools and resources benefits students from diverse backgrounds by enabling them to access learning opportunities that were previously unavailable. In this context, internet connectivity is increasing worldwide, making access to education easier by just connecting with the internet. However, inequalities persist in several developing countries regarding infrastructure distribution, and, more specifically, regions characterized by lower income are disproportionately affected by these inequalities (Akbar et al., 2024; Charina et al., 2022).

Das et al. (2024) noted that technological advancements have made today's classrooms more interactive, utilizing whiteboards, virtual boards, and gamified platforms that facilitate active learning and contribute to knowledge retention. For example, learning management systems (LMS), such as Moodle, enable students to interact globally and pursue their desired education in a personalized manner, anytime, anywhere (Kamruzzaman, 2023). Furthermore, technological tools that enable advances such as virtual reality (VR), augmented reality (AR), and artificial intelligence (AI) have become revolutionary in the education field by bringing purpose to experiences that are more immersive and personalized (Phulpoto et al., 2024). AR and VR bridge the experiential gap, bringing abstract concepts to a tangible form. AI-powered platforms provide personalized feedback that enhances critical thinking and problem-solving skills (Angelaki et al., 2024). Integrating technology into learning environments has significantly enhanced creative thinking skills. Research on the Technological-Project-based Learning (TPBL) Module highlights its effectiveness in fostering innovation and problem-solving through interactive, tech-driven projects, encouraging collaboration and decision-making (Ghazali et al., 2025).

The literature on innovation for sustainable education has highlighted that technology is vital in creating sustainability that seeks environmental, social, and economic goals (Afiyah, 2025; Lin et al., 2023). Utilizing digital resources, such as e-books and virtual libraries, is a more sustainable approach to using physical materials, thereby reducing waste and promoting environmental sustainability (Shwedeh et al., 2024). Virtual meetings and conferences significantly reduce the carbon emissions associated with travel. Technology saves marginalized groups from silent discrimination by utilizing screen readers and speech-to-text software, eliminating the digital divide (Edwards-Fapohunda et al., 2024). Open educational resources (OER) help improve economic accessibility, as open educational content is available for free and of high quality (Albert & Uhlig, 2022). In contrast, Bortoló's (2023) study reveals that challenges such as free access to the internet and device affordability persist as barriers for disadvantaged countries.

Studies examining predictors for sustainable education have found that technology integration in the classroom enhances students' learning outcomes, improves critical thinking, and enables personalized learning (Shishakly et al., 2024; Valverde-Berrocoso et al., 2021). Research has shown that students are increasingly motivated to participate actively through gamified

platforms, such as Kahoot and Quizlet, and virtual labs that enable hands-on activities, making learning more engaging (Jamil et al., 2024). Furthermore, Ali et al. (2024) argued that technology-driven education motivates students to analyze, evaluate, and solve problems, sharpening their critical thinking skills. For example, DreamBox and Knewton are AI-adaptive learning systems that monitor student progress and adapt content to support student learning uniquely, irrespective of learning styles and pacing differences.

Although several research studies on technology in education exist, this study aims to illuminate undergraduate students' perceptions of the role of technology in sustaining quality education, emphasizing both the perceived benefits and challenges. However, despite the growing body of literature on the topic, research on technology-enhanced learning remains fragmented regarding classification and theoretical underpinnings. The current study attempts to bridge this gap by providing a methodical analysis of the many types of technology used in undergraduate education and evaluating their effectiveness. Few research studies have investigated how these technological tools promote education for sustainability, specifically environmental, social, and economic sustainability, among undergraduate students (Khurshid, 2024; Akram et al., 2023). Despite this, these studies do not consider the nuanced descriptions of undergraduate students' experiences with these technological tools. Therefore, students' insights into technological change are essential to investigate the depth of technological advancement in real-world applications and its contribution to sustainable education.

Theoretical Framework

This study uses the Transformative Learning Theory (Mezirow, 1991; Cranton, 2006) and the Technology Acceptance Model (TAM) (Davis, 1989; Venkatesh & Davis, 2000). The Technology Acceptance Model explains how students' perceptions of the usefulness and usability of educational technologies impact their adoption. Transformative Learning Theory, which links pedagogy with broader sustainability goals, highlights how digital tools can be utilized to create experiences that challenge stereotypes and foster meaningful learning. These frameworks enable examining students' technology use and how those interactions support long-term learning outcomes.

Methods

Research Paradigm

The constructivist paradigm informed the current study, which focuses on documenting the individual's subjective experience of constructing meaning through an interaction with reality (Creswell, 2008). The constructivist perspective acknowledges that personal and social processes influence knowledge and that truth is the product of the interaction between individual cognition and practical experiences (Andrew, Pedersen, & McEvoy, 2011). The study examines undergraduate students' perceptions of technology in education and its potential contribution to sustainable educational practices.

This paradigm aligns with the study's objectives, which aim to understand how students' experiences with educational technology are both socially and individually created. A constructivist qualitative approach is appropriate because it allows for examining diverse student perspectives impacted by institutional, societal, and individual settings (Lincoln & Guba, 1985). As a result, the paradigm affected all phases of the research design, including sampling, data collection, and theme analysis.

Research Design and Sampling

This qualitative study employed a constructivist approach to capture undergraduate students' perceptions of technology use and its role in sustainable education practices. Twelve undergraduate students from five universities in Lahore, Pakistan, were recruited for the study using the purposive sampling approach. The inclusion criteria were the following: (a) be enrolled in an undergraduate program; (b) be from Lahore city, either public or private; (c) be from different academic domains; and (d) have used technology in a classroom for at least one semester.

Research Instrument

Data were collected using Open-ended qualitative interview guides to elicit in-depth responses. The questionnaire guide consisted of two sections. The first section included demographic information on study participants, such as gender, type of institution, and academic discipline. The second section consisted of ten open-ended questions that focused on how students view technology's role in sustainable education, the benefits and challenges of technology, and whether technology helps prepare students for the challenges ahead. The interview guide was developed after a review of the literature on educational technology and sustainable education. Two qualitative research experts reviewed it to ensure that the data was understandable and relevant. Before data collection, we used a pilot interview to enhance the phrasing and flow. We also ensured the trustworthiness of the tool by sharing the transcripts to verify the key interpretations.

Data Collection Procedure

All the interviews were conducted remotely using Zoom and WhatsApp calls. To ensure participants' privacy, cameras were off during the interviews. A total of 12 interviews were completed on November 10, 2024. Each interview lasted 30 to 45 minutes and was audio-recorded with the participant's consent to ensure data transcription accuracy. We received clearance from the Ethics Review Board at Kinnaird College for Women, with protocol ID KC/ORIC/ERC/2025/008. The researcher informed the participants that their personal information would be kept confidential and that all the collected data would be used for research purposes. The interviews were stopped once data saturation was reached, which is the stage at which further interviews yielded no new insights or themes (Bouncken et al., 2025). Throughout the data collection process, saturation was regularly evaluated to guarantee the findings' depth and breadth.

Data Analysis

The researcher performed thematic analysis using NVivo software for Qualitative interviews. The study involved three coding phases: Initial codes were assigned for all themes using Open Coding. Then, sub-themes were refined into themes and aggregated into hierarchical structures to relate broader themes to one another. In the last stage, irrelevant themes were removed. Then, the data were synthesized to extract relevant responses regarding students' perceptions of technology use, its influence on sustainable education, and their recommendations.

Table 1

Demographic information about the study participants(N=12)

Characteristics	Frequencies	Percentages
Type of Institute		
Private	4	33.3
Public	8	66.7
Gender		
Female	5	41.7
Male	7	58.3
Academic Discipline		
Business Studies	3	25
Psychology	1	8.3
Computer science	3	25
Media Studies	2	16.7
Biotechnology	3	25

To guide the thematic analysis, we did not use predetermined themes. Instead, after organizing the data in NVivo software, we conducted three phases of coding, open coding, axial coding, and selective coding, aligning with "Free Nodes," "Tree Nodes," and "Nodes Selection" processes in NVivo. The research team conducted open and axial coding, which enabled the development of patterns and categories based on the narratives of the participants, rather than the fitting of data into pre-existing frameworks. To maintain confidentiality and anonymity, each participant was assigned a unique ID to omit their identities from the transcript.

Table 1 presents the respondents' demographic data; most study participants are from public institutions, with 66.7% of the respondents attending public institutions and 33.3% from private institutions. With 58.3% male and 41.7% female students, the number of male students was relatively equal to that of female students. The distribution of academic disciplines is diverse, with business studies (25%), biotechnology (25%), and other fields (50%). Moreover, 16.7% of study participants are from Media Studies and 8.3% from psychology.

Table 2

Explanation of Themes, Sub-Themes, and Descriptions Based on Interview Questions

Themes	Sub Themes	Description
Perceptions of Technology	Access to Technology	Examine the availability and accessibility of technology for different groups of learners.
	Using Technology in Education	Highlights the integration of technology tools in teaching strategies to improve knowledge delivery.
	Technology for Learning	Focuses on leveraging technology to enhance the overall learning experience and outcomes.
Technologies to boost sustainability.	Environmental Sustainability	Examines how technology reduces ecological footprints through the implementation of energy-efficient solutions.
	Social Equity	Promote equal opportunities by bridging gaps in education across socio-economic backgrounds.
	Economic Accessibility	Investigates the affordability of educational technologies for individuals and institutions.
Impact on Learning Outcomes	Engagement	Examine how technology fosters active participation and interest in learning activities.
	Critical Thinking	Encourages analytical and problem-solving skills through interactive and thought-provoking tools.
	Personalized Learning	Discusses tailoring educational content to meet individual learner needs and preferences.
Translate into Technological Integration Challenges.	Digital Distractions	Highlights challenges posed by non-educational content and excessive screen time.
	Inequitable Access	Addresses disparities in technology access among students and schools.
	Over-reliance on	Discusses risks of dependency on technology, which may hinder traditional learning practices.

	Technology	
	Policy Suggestions	Proposes formulating policies to ensure ethical and equitable use of technology in education.
Two recommendations for improvement.	Training for Educators	Advocates for professional development programs to empower teachers with technology skills.
	Technological Innovations	Encourages advancements in educational tools and systems to address emerging challenges.

Results

Perceptions of Technology
Access to Technology
Most students (9 out of 12) reported having access to relatively basic technological tools, including laptops, smartphones, and online platforms. However, three said unreliable internet connections and malware make it challenging to find time to use advanced gadgets.

Nearly all students (10 out of 12) stated that these tools are necessary for conducting research, completing assignments, and communicating with peers and instructors. Study participants reported unreliable internet connection issues that hindered their ability to engage in online learning, access resources, and join virtual classes.

Furthermore, students encounter issues with malfunctioning devices, which can significantly impede their ability to utilize technological tools effectively. Acquiring and sustaining a few of these advanced gadgets remains a challenge for these students, as they either lack the requisite resources to purchase them or are unavailable in their region.

Using Technology in Education
Although most students agree that technology has made education more straightforward and flexible, allowing for remote attendance and access to online resources, they also note that some aspects of its adoption are ambiguous. Students indicated that technology is less effective than in-person interaction between students and instructors in specific subjects.

In contrast, there is a concern that an online platform could not fully replicate the efficacy of in-person interaction with teachers. For example, physics, biology, and chemistry, which require hands-on practice or face-to-face discussion, cannot be taught as effectively online. The study participants also reported that there should be a balance between online and in-person learning, which leverages the irreplaceable value of person-to-person encounters in conjunction with the benefits of technology.

Technology for Learning
Several students reported the value of using various applications, such as Google Workspace, Microsoft Teams, and whiteboards, for interactive learning. These tools have been beneficial, particularly in collaborative projects, real-time communication, and interactive lessons, making learning more engaging and efficient.

However, students were not always aware of more advanced tools, such as AI-based learning platforms, that could enhance their educational journey and make it more personalized. Most students emphasized the need for proper training and orientation to maximize the benefits of these advanced AI-driven tools, suggesting that educational institutions invest in workshops or training sessions to bridge the knowledge gap and leverage the technology's educational potential.

Technologies to boost sustainability
Environmental Sustainability

Many students appreciated digital tools because they required less paper and were more environmentally friendly. They stated that using applications and Google Classroom has decreased the amount of paper used for assignments and note-taking, which is an eco-friendly approach.

Other students further stated that they have been encouraged to submit assignments electronically, which has helped to reduce paper waste. Digital technology has also enhanced organization and storage, making it faster and easier to disseminate information published in sources.

Social Equity

According to many students, technology also brings together students from different socioeconomic backgrounds because they have equal access to all resources.

Technology has reduced the barriers in all territories by providing online platforms for everybody. Now, with the Internet, everyone can connect with anyone online to seek help globally. A digital divide still exists in many educational institutions in Pakistan. Not all students can afford laptops or have stable internet connections, which disadvantages students from low-resource families. Schools must support and resource students without access to the necessary technology to achieve complete and accurate equity.

Economic Accessibility

Most students said that quality education nowadays highly depends on online resources, of which few are paid, and many are free.

Other students questioned the high cost of subscriptions for online tools and applications, which may be unaffordable for students with low family incomes. Therefore, they cannot fully capitalize on technological advancements.

Students have also stated that most online journal articles and books have restrictions on premium features or full-option downloads, which is detrimental to the quality of learning. Financially disadvantaged students perceived their financial status as a constraint that makes it challenging to maintain continuous internet service, which hinders their access to online materials while completing their assignments. It was also suggested that universities partner with tech companies to give students free or discounted access to educational software.

Impact on Learning Outcomes
Engagement

Students reported how gamified learning platforms and tools make the material more interactive and compelling. However, the concern was raised that excessive use of technology may lead to distractions. Some students reported using AI tutoring systems because they receive quick feedback and personalized learning content.

They also noted that creating assignments on online platforms like Canva, Google Drive, and presentation tools has made learning more interactive and innovative. The use of games in learning activities was considered an exciting approach. However, their use was perceived as a

distraction due to its potential to divert focus from achieving academic goals. They also reported that their learning improved when using digital tools and engaging in group discussions on online platforms such as Google Classroom and Microsoft Teams.

Critical Thinking
Students also noted that technology provides a better foundation for critical thinking by making more sources of information accessible. However, caution was suggested concerning packaged digital content, which can discourage students from independent analytical and critical thinking.

Others stated that students nowadays can examine one aspect from several perspectives, using Digital debate platforms and online case studies to enhance their reasoning ability. On the other hand, a few students argued that technological advances have fostered critical thinking by enabling people to engage in real-time, global discussions. However, students believed that some AI-based tools provide answers too quickly, forcing students to rely on machines rather than applying logic to solve problems.

Personalized Learning
Most students' content was tailored to their individual needs and learning pace. However, study participants reported that these tools could not consistently adapt to the specific nuances of their learning preferences. Several students highlighted that AI-based platforms are adaptive and help them to improve their weak areas. The customized online tools, such as voice translators and voice recognition software for students with disabilities, are invaluable from the students' perspective. It was also suggested that human interaction, like peer review or mentorship, should be incorporated into individualized learning for a more well-rounded experience.

Translates into Technological Integration Challenges.
Digital Distractions
Many students agree that using technology for education can create significant distractions, such as social media or non-educational apps. A few suggested that different self-discipline or app-blocking options might help with this.

The perception that background apps and pop-up notifications distract them from concentrating while studying online also existed among the students. Others opined that their capacity to focus intently on a single topic is hindered by excessive multitasking, which digital tools facilitate, making learning passive. Some students mentioned that even instructional apps can occasionally include unnecessary distractions, such as leaderboards, that promote competition over learning. Some perceptions emphasize that institutions should provide tech-friendly but distraction-free learning spaces, such as digital study areas with limited access to non-educational materials.

Inequitable Access
Several students from rural or economically disadvantaged backgrounds highlighted the inequitable access to high-speed internet and modern devices as particularly challenging. Some had suggested that institutions could offer reduced rates for institutions to access technology.

Some students noted that pupils cannot fully utilize digital tools in certain areas due to a lack of technical support. Students also thought that institutional policies must prioritize

infrastructure development in rural areas to guarantee equitable access. Universities should offer device-lending programs to ensure every student has an equal learning opportunity.

Over-reliance on Technology

However, as most students warned, overreliance on technology could mean students have fewer communication skills and hands-on experiences. Some even suggested that education should balance traditional and technological means.

Some students expressed concern that technology may reduce students' ability to recall information without digital assistance. Others pointed out that reliance on AI-generated summaries may prevent students from engaging with primary sources. Excessive screen time was thought to be a source of fatigue, potentially detrimental to information and knowledge retention. Recommendation for classrooms to adopt a hybrid approach was also made to promote a balance between traditional note-taking and digital tools to strengthen learning outcomes.

Recommendations for improvement
Policy Suggestions

Most students recommended that educational institutions should develop policies to ensure equitable access to technology for all students. Another proposed that mandatory training in using advanced technological tools be recommended. Others suggested that institutions should implement data privacy policies to protect students from unethical data collection practices by online learning platforms. Several students emphasized the need for government subsidies to help low-income families access digital learning resources. Some recommended that universities negotiate bulk licensing deals with software providers to lower student costs.

Training for Educators

Many students believe that educators should be trained to use technology effectively in their teaching. A couple of instances noted that teachers lacked essential technology tools, which hindered the learning process.

Some students highlighted that while teachers have access to technology, many lack confidence in integrating it into their teaching. Others mentioned that professors often struggle with troubleshooting technical issues during online lectures, leading to wasted class time. Students also suggested that faculty development programs should include continuous training rather than one-time workshops to ensure educators stay updated with technological advancements. Some recommended peer-training models involve tech-savvy faculty members mentoring those who are less experienced in digital teaching methods.

Technological Innovations

Most students proposed that institutions invest in innovative tools, such as virtual reality (VR) labs and AI-driven learning platforms, to support the learning experiences. One or two mentioned piloting new technology before rolling it out across the board to confirm that it will work.

Some students have proposed that universities explore blockchain-based credentialing systems to enhance digital certifications' security and widespread acceptance. Others suggested that AI-powered chatbots could be integrated into learning platforms to provide instant academic support outside class hours. Institutions invest in mixed-reality simulations for fields requiring hands-on experience, such as medical or engineering studies, recommended the study

participants. Some emphasized that pilot programs should incorporate student feedback to ensure that new technologies enhance learning before being fully implemented.

Discussion

This study investigated undergraduate students' perceptions of using technology in the classroom to contribute to sustainable education. The technological equipment most frequently used by students includes computers, laptops, tablets, smartphones, and online tools, which aligns with Acut et al. (2025), who note that widespread access to basic technology is prevalent among students. However, a group of undergraduate students reported difficulties due to instability in connectivity and the inability to afford better devices. Valverde-Berrocoso et al.'s (2021) findings highlight the digital divide as discouraging for hardworking students. The results are consistent with the work of Podder et al. (2022), which stressed the ability of technology to create inclusive learning settings. Nevertheless, in contrast to earlier research focusing on positive impacts, this study uncovers student worries about over-reliance on technology and a decline in critical thinking, highlighting new challenges in digital education that require additional investigation.

On the other hand, a minority of students found themselves at a loss with more advanced tools, such as AI-based learning platforms, underscoring the urgent need for targeted training, as highlighted by Khurshid (2024). Lee and Hwang (2022) argued that technology has made education more flexible and accessible by providing access to online resources. Nevertheless, the irreplaceable value of face-to-face interactions in specific subjects, such as those discussed by Garrison and Kanuka (2004), highlights the necessity of in-person engagement in these areas as a significant concern.

Despite the study participants being students from various academic disciplines and from both public and private institutions, our thematic analysis did not reveal any substantial disparities in students' overall perceptions. Nevertheless, some subtle variations were identified. For example, students enrolled in technology-oriented programs, such as Computer Science, demonstrated a superior understanding of AI-based tools and appeared more at ease navigating digital platforms. Conversely, students from some disciplines, including Psychology and Media Studies, frequently reported difficulties in accessing or effectively utilizing advanced technologies. These discrepancies underscore the necessity of discipline-specific digital literacy initiatives to guarantee that all students are equally prepared to capitalize on educational technologies.

Regarding environmental sustainability, students supported reducing paper use through digital tools and promoted eco-friendly practices. Charina et al. (2022) also emphasized digital learning from an environmental perspective. Podder et al.'s (2022) suggestions aligned with the institutional facilitation of e-submissions and encouraged digital note-taking to reduce waste. Ali et al. (2024) study findings highlighted the importance of social equity, in which technology served as a bridge, ensuring that students from varying socioeconomic backgrounds had equal access to resources. The economic availability of free or low-cost online resources has been recognized to increase educational accessibility, which aligns with the findings of Jamil et al. (2024). Nevertheless, the prohibitive costs of proprietary tooling were identified as a barrier to applying specific tools, preventing some students from utilizing technology (Deng & Yu, 2023). Lin et al. (2023) reported that most students opined that gamified learning platforms and interactive tools increase support and engagement.

However, many students expressed that technological advancements help them improve critical thinking and access diverse learning needs. Afiyah (2025) suggested that students primarily utilize AI-driven platforms to enhance their personalized learning experience tailored to their needs and pace. A few students reported that using cell phones in classrooms often creates distractions that make it difficult for students to concentrate on academic tasks, such as the pop-ups of online social media applications. According to Wilson et al. (2024), teachers should set specific rules for self-discipline or application blocking. Angelaki et al. (2024) study reported that students from rural or economically disadvantaged backgrounds lacked equitable access to high-speed internet and modern devices. Okada and Gray's (2023) study findings include institutional interventions and subsidized access to technology.

Conclusion

In conclusion, students suggested that institutional policies be developed to promote equitable access to technology. As Albert and Uhlig (2022) indicated, mandatory training sessions should be implemented for advanced technological tools and sustainable education. Additionally, students reported that educators need to be adequately trained if assigned to teach a course that requires technology use. Moreover, most students suggested investing in innovative tools, such as VR labs and AI-powered learning platforms, to reduce the digital divide, especially in remote areas. This study highlights the challenges and benefits of technology in the classroom, facilitating learning outcomes while improving students' interpersonal communication skills and providing hands-on experiences. In summary, technology has a significant impact on students' educational experiences. The use of technology in the classroom provides unlimited online resources, accessibility, and sustainability benefits.

Recommendations

Educational institutions should develop policies to provide all students with equitable access to technological tools and high-speed internet. One way to bridge the digital divide is to subsidize access for economically disadvantaged students and supply the required devices. Teachers should be provided with the necessary training to integrate technology into the classroom effectively. Educational institutions should invest in virtual reality (VR) labs and AI-powered learning platforms. Piloting technology before it needs to scale up fully will allow them to test its practicality and effectiveness in enhancing students' educational experiences. There should be app restrictions on educational apps, such as features that block apps and promote stringent self-discipline among students.

Study Limitations and Future Research Directions

The results of this study should be viewed within the context of its limitations. This study is based on a small, homogeneous sample of 12 undergraduates from five universities in Lahore. Although we experienced data saturation, the small sample size and single-city focus limit the generalizability of our results. Future studies could involve larger and more varied samples and use mixed methods to complement qualitative insights with quantitative data. Additionally, the current study used only self-reported perceptions from semi-structured interviews, which were reported without any validation of responses through any additional data sources. Our results may have been affected by recall bias, social desirability bias, and lack of observational or quantitative data triangulation.

References

Ali, W., Rahman, A., & Karsidi, R. (2024). Sustainable Skill Development in Pakistan: Bridging Gaps in Vocational and Technical Education Policy–A Systematic Literature Review. *Society*, *12*(2), 656-673.

Abulibdeh, A., Zaidan, E., & Abulibdeh, R. (2024). Navigating the confluence of artificial intelligence and education for sustainable development in the era of industry 4.0: Challenges, opportunities, and ethical dimensions. *Journal of Cleaner Production,* 140527. DOI: 10.1016/j.jclepro.2023.140527

Akram, R., Waqar, Y., & Raza, A. (2023). Learning Innovation Utilization in Technical Education: A Quantitative Study. *Research Journal for Societal Issues*, *5*(4), 131-142.

Acut, D. P., Lobo, J. T., & Garcia, M. B. (2025). Determinants of Teachers' Intentions to Integrate Education for Sustainable Development (ESD) Into Physical Education and Health Curricula. *In Global Innovations in Physical Education and Health* (pp. 439-472). IGI Global.

Afiyah, I. (2025). The Existence of Library Literacy in Indonesia in the Millennial Era: Strategies for Improving the Quality of Education to Support the Sustainable Development Goals (SDG's). *Solo International Collaboration and Publication of Social Sciences and Humanities, 3(0*1), 41-52.

Akbar, S., Pranajaya, S. A., Nurkadarwati, N., Hoesny, R., & Mutmainnah, I. (2024). Leadership Dynamics in The Era of Educational Transformation: Integrating The Concept of Adaptable Leadership in Sustainable Educational Administration. *International Journal of Teaching and Learning, 2(1*), 223-235.

Albert, M., & Uhlig, M. (2022). Education for sustainable development at Chemnitz University of Technology. *International Journal of Sustainability in Higher Education, 23*(6), 1229-1249.

Angelaki, M. E., Bersimis, F., Karvounidis, T., & Douligeris, C. (2024). Towards more sustainable higher education institutions: Implementing the sustainable development goals and embedding sustainability into the information and computer technology curricula. *Education and Information Technologies, 29*(4), 5079-5113.

Bortoló, G. M., Valdés, J. Á., & Nicolas-Sans, R. (2023). Sustainable, technological, and innovative challenges post Covid-19 in health, economy, and education sectors. *Technological Forecasting and Social Change, 190*, 122424. DOI: 10.1016/j.techfore.2023.122424

Bouncken, R. B., Czakon, W., & Schmitt, F. (2025). Purposeful sampling and saturation in qualitative research methodologies: Recommendations and review. *Review of Managerial Science*. https://doi.org/10.1007/s11846-025-00881-2

Charina, A., Kurnia, G., Mulyana, A., & Mizuno, K. (2022). Sustainable education and open innovation for small industry sustainability post covid-19 pandemic in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(4), 215.

Cranton, P. (2006). *Understanding and promoting transformative learning: A guide for educators of adults*. San Francisco: Jossey-Bass.

Das, S., Lekhya, G., Shreya, K., Shekinah, K. L., Babu, K. K., & Boopathi, S. (2024). Fostering Sustainability Education Through Cross-Disciplinary Collaborations and Research Partnerships: Interdisciplinary Synergy. *In Facilitating Global Collaboration and Knowledge Sharing in Higher Education With Generative AI* (pp. 60-88). IGI Global.

Deng, X., & Yu, Z. (2023). A meta-analysis and systematic review of the effect of chatbot technology use in sustainable education. *Sustainability, 15(*4), 2940. DOI: 10.3390/su15042940

Davis, F. D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. MIS Quarterly, 13(3), 319-340.

Edwards-Fapohunda, M. O., & Adediji, M. A. (2024). Sustainable development of distance learning in continuing adult education: The impact of artificial intelligence. *IRE Journals, 8(1),* 113-114.

Ghazali, A., Ashari, Z. M., & Hardman, J. (2025). The Effectiveness of Technology-Project-based Learning (TPBL) Module in Fostering Children's Creative Thinking Skills Through Science Education. *FWU Journal of Social Sciences, 19(1).* DOI: http://doi.org/10.51709/19951272/Spring2025/6

Jamil, M., Nosheen, S. S., & Saleem, A. (2024). Sustainability education in Pakistan: Qualitative content analysis of English textbook grade X. *Journal of Social & Organizational Matters (JSOM)*, *3*(2), 1-11.

Kamruzzaman, M. M., Alanazi, S., Alruwaili, M., Alshammari, N., Elaiwat, S., Abu-Zanona, M., ... & Ahmed Alanazi, B. (2023). AI-and IoT-assisted sustainable education systems during pandemics, such as COVID-19, for smart cities. Sustainability, 15(10), 8354. DOI: 10.3390/su15108354

Khurshid, A. (2024). Gender Equality and Inclusive Technology: Cultural Innovations for Sustainable Development in Khyber Pakhtunkhwa (KP), Pakistan. *Pakistan Journal of Gender Studies*, *24*(2), 107-123.

Lee, H., & Hwang, Y. (2022). Technology-enhanced education through VR-making and metaverse-linking to foster teacher readiness and sustainable learning. *Sustainability, 14*(8), 4786. DOI: 10.3390/su14084786

Lin, C. C., Huang, A. Y., & Lu, O. H. (2023). Artificial intelligence in intelligent tutoring systems toward sustainable education: a systematic review. *Smart Learning Environments,* 10(1), 41. DOI: 10.1186/s40561-023-00222-5

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Okada, A., & Gray, P. (2023). A Climate Change and Sustainability Education Movement: Networks, Open Schooling, and the 'CARE-KNOW-DO'Framework. *Sustainability, 15*(3), 2356. DOI: 10.3390/su15032356

Phulpoto, S. A. J., Oad, L., & Imran, M. (2024). Enhancing Teacher Performance in E-Learning: Addressing Barriers and Promoting Sustainable Education in Public Universities of Pakistan. *Pakistan Languages and Humanities Review, 8*(1), 418-429.

Podder, S. K., Karuppiah, M., Thomas, B., & Samanta, D. (2022, February). Research initiative on sustainable education system: Model of balancing green computing and ICT in quality education. In 2022, *Interdisciplinary Research in Technology and Management* (IRTM) (pp. 1-5). IEEE. DOI: 10.1109/IRTM54592.2022.00014

Selwyn, N. (2024). Digital degrowth: Toward radically sustainable education technology. *Learning, Media and Technology, 49*(2), 186-199.

Shishakly, R., Almaiah, M., Lutfi, A., & Alrawad, M. (2024). The influence of using smart technologies for sustainable development in higher education institutions. *International Journal of Data and Network Science, 8*(1), 77-90.

Shwedeh, F., Salloum, S. A., Aburayya, A., Fatin, B., Elbadawi, M. A., Al Ghurabli, Z., & Al Dabbagh, T. (2024). AI Adoption and Educational Sustainability in Higher Education in the UAE. In Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom (pp. 201-229). Cham: Springer Nature Switzerland.

Tarraya, H. O., Camposano, C. E., Rojo, S. G., Dolorica, M. C. C., Polon, J. H., & Digo, G. S. (2025). Emerging Technologies for Sustainable Universities and Colleges: A Meta-Synthesis. *ASEAN Journal of Educational Research and Technology, 4*(1), 11-22.

Wilson, A., Kask, R., & Ming, L. W. (2024). Exploring circular digital economy strategies for sustainable environmental, economic, and educational technology. *International Transactions on Education Technology (ITEE),* 2(2), 129-139.

Yazdani, M., Pamucar, D., Erdmann, A., & Toro-Dupouy, L. (2023). Resilient sustainable investment in digital education technology: A stakeholder-centric decision support model under uncertainty. *Technological Forecasting and Social Change, 188*, 122282. DOI: 10.1016/j.techfore.2023.122282

Valverde-Berrocoso, J., Fernández-Sánchez, M. R., Revuelta Dominguez, F. I., & Sosa-Díaz, M. J. (2021). The educational integration of digital technologies preCovid-19: Lessons for teacher education. *PloS one*, *16*(8), e0256283.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46(*2), 186-204

GUIDELINES FOR AUTHORS

Guidelines for Authors:

- Title of the paper.
- Abstract and title of the article would be in English. The abstract should be between 150 and 200 words explaining concisely the reasons and object of the manuscript, the methodology used and the main results and conclusions. 3-5 keywords that define the article and serve to identify the content of the work in the language of the article. The entire paper should have 600 words
- Text of the article.
- Notes (that will go at the end of the document with the endnote format, before the reference list).
- References.
- The tables and figures (if any) will have a brief title and explanation. In the case of images, it is necessary to send them in jpeg format.

Authorship: A maximum of three authors should be listed for each article. Authors should avoid disclosing their identity. The name of the author(s) must not appear on any page of the manuscript. This information will be included in the electronic platform and it should not appear in the manuscript sent for review. All authors must be listed in the online platform at the time of submission, including their full name, their affiliation, postal address and electronic address.

Title Page: A separate document will be added with the name of the authors, their affiliation and email address. Please indicate who is the corresponding author Style: The manuscripts have to follow the APA style (Publication Manual of the American Psychological Association, 7th edition, 2020).

Lenght: The manuscripts submitted should have minimum 3000 and maximum 6000 words, including abstract, notes, references and annexes. Format: The manuscripts should be presented in the format MS Word Abstract and keywords: All manuscripts should include an abstract between 150 and 200 words explaining concisely the reasons and object of the manuscript, the methodology used and the main results and conclusions. It is also necessary to include between three and five keywords that defined the article and serve to identify the content of the work.

Tables and figures: Diagrams, charts, graphs and tables will have a brief title and explanation.

Abbreviations: The only abbreviations that can be used are those universally accepted. Contribution to the preparation of the article: Information on the specific contribution of each of the authors of the submitted article should be provided in a separate document to be attached to the submission. This document will indicate the specific contribution of each of them in the preparation of the article.

Language: The manuscripts should be written in English. The submitted articles should be grammatically correct regardless of the language used. It is responsibility of the authors to ensure that the submitted manuscript follows the language standards required by the publication of the scientific journal. Authors are invited to use the language editing services. If the manuscript is written in a second or third language, it is recommended to first contact a language reviewing service to avoid grammar and style mistakes.

.

Address for manuscript submission and all correspondence:

The Editor

FWU Journal of Social Sciences, Shaheed Benazir Bhutto Women University, Peshawar

Ph: 92-91-9224793- 92-91-9224777

journal@sbbwu.edu.pk

FWU Journal of Social Sciences is a research journal published quarterly by Shaheed Benazir Bhutto Women University Peshawar. Its first issue was published in 2007. The Journal provides a forum for publication of original papers on a variety of issues pertaining to social sciences. We hope that researchers in their fields of specialization will enthusiastically contribute to this journal and enable others to benefit from their empirical studies.

This Journal has, on its Editorial Board, 100+ renowned experts from USA, UK, Canada Australia, Egypt, France, Ireland, Spain, Malaysia, New Zealand, India, Sweden, Nigeria, Bangladesh, Oman and Pakistan, with expertise in different areas of social sciences, such as, Psychology, Education, Management Sciences, Social Work, Sociology, Anthropology, History, Economics, Political Science and Mass Communication. The scheme of publication employs a double-blind reviewing process.

We extend our invitation to all social scientists to make scholarly contributions to FWU Journal of Social Sciences to make it a success.

To maintain the standard of FWU Journal of Social Sciences, the Editor reserves the right to make necessary changes in the manuscript

Annual Subscription Rates

Individuals

Rs.1200.00 per year in Pakistan and US $25.00 for foreign countries

Institutions

Rs. 1600.00 per year in Pakistan and US $30.00 for foreign countries