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Contents

The Effect of Information Sources on Trust and Investment:
Evidence from Economic Experimentation

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This study aims to provide evidence from an economic experiment that explores the effect of different financial information sources on people's trust and investment decisions. Research participants consisted of 128 individuals aged between 18 and 30. An experiment design divided participants into three treatment groups and a control group. The participants in each treatment group were assigned to receive different presentations of financial information, namely, an official styled fact sheet (T1), a post on social media (T2), and in-person advising (T3). The study measured the level of participants' trust and investment in each treatment and compared it with the control group. The findings demonstrated that participants in T1 trusted their information and made significant investment, while those in T2 did not trust and invest. The participants in T3 trusted their information but did not decide to invest. These results suggest that traditional channels remain essential in communicating financial information, and financial institutions must take this into account when considering their communication strategies .

The development of the internet has brought significant changes in how people around the globe receive information, news, and knowledge. In the past, non-digital interactions, such as physical meetings, face-to-face encounters, telephone conversations, and letter exchanges, were main features of how people communicated. But recently, internet technology has become a prevalent method of communication. Internet-based information sources, like social media, are, therefore, prevalent in many aspects of social life, such as business commercials, public advertising, and social campaigns. For the past ten years, the number of social media users in the world has continued to increase. According to a Global Digital Report by We Are Social (2022), there were about 4.6 billion users in 2022 which is about three-times greater than the number in 2012. Browsing information on internet websites and social media can be useful. However, an overwhelming amount of information would blind users' discretion. Many social media users tend to be careless in considering their information. Chavanayan (2020) found that 80 per cent of research samples believed information from social media without questioning it, while only 20 per cent verify the information before accepting it. Moreover, addiction to social media could potentially cause low self-esteem and narcissism (Rahim et al., 2020).

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The financial and banking sector is among the many industries that have adopted digital and internet technology to provide investment information to their clients and potential investors. This information was once disseminated through traditional means, such as face-to-face consultations and hard copies of factsheets, but now is accessible via various online channels. Investment information is particularly important because it shapes the actions of loss and gain. Rational investors consider the risk and return of each financial product, the fees charged by financial institutions, investment policies and market insights related to those products. Therefore, making an investment decision could be influenced by information that investors perceive (Sanchez-Galan, 2011), and requires them to assess the quality of information and the reputation of the holding institutions (c.f., Aaker & Jacobson, 1994, Chemmanur & Fulghieri, 1994). Nonetheless, it remains unclear whether different sources of financial information, online and offline, have varying effects on investors' decision-making.

Previous studies conducting experiments about investment decisions aimed to explore various setting of risk-taking behaviors. Bosman and Van (2001) conducted an experiment using a game to investigate participants' decisions of investment. Participants in baseline group made decisions under a moderate level of risk (there was no chance to lose all money). The participants in global group made decisions under a high level of risk (there was a chance to lose all money). The result showed that introducing the high-risk information depressed the average investment level and increased more variance of investments. This suggested some indication of emotional anxiety in investment. The participants in this experiment appeared to be risk-averse which challenged the standard outcome of loss aversion in prospect theory. Charness and Gneezy (2012) added a gender dimension to the investment experiment to verify the difference in risk-taking behavior between the sexes. Their result revealed a consistent pattern that female invested less, and thus was financially risk-averse than males.

There was an experiment investigating the relationship between investment decisions and trust by utilizing a space on social media. Bapna et al., (2017) introduced an economic game on a customized Facebook application. A game was a means to collect and generate quantifiable trust measures. The game was played in pairs with the first mover acting as the sender, and the other player as the receiver. The sender sent money to the receiver, and any amount sent was tripled without the sender knowing. The receiver then decided on the amount to be returned to the sender. The amount of money invested by senders and reciprocal return of receivers determined the level of trust. This game is clearly a replica of a real-world investment situation in which people consider the trust of their business partner before putting money into action. The results suggested that having mutual friends might not be an effective way to establish trust in digital world, while photo tagging and wall posting were indicative of trust, as they signified a strong offline connection. Although this study is beneficial in understanding trust, it is still limited as it focuses solely on social media as a platform of economic transaction.

We shift the topic of interest to the channels through which the financial information is conveyed. This study aims to explore how each channel determines the trust of recipients on the information and their size of investment. Specifically, this study examines three representative channels used in real-world situations. The first channel is a traditional source: an official information sheet published online by an authorized agency. The second channel is information presented by social media platforms, such as Facebook pages and TikTok clips. The last channel is receiving financial information in a face-to-face meeting in which a

financial advisor presents the information to recipients. These types of information are included in an experimental design to test and compare the trust and investment decisions of participants. Every channel presents the same information about a complex return mutual fund. Exploring the role of trust and investment in this experiment would hopefully set a milestone in understanding how information channels would influence people in the era of digital disruption.

Conceptual Framework

This section reviews the concept of risk, trust, and framing effect and identifies its contribution to the experimental design.

Risk

Risk refers to activities involving a possibility of losses and harm. Economic activities, especially investment, are not risk-free. Investment outcomes are uncertain due to the change of socio-economic factors and perhaps difficult to predict. For example, political unrest or crowding out of foreign direct investment could be risky factors that undermine the prospective return on investment. Many investors prefer low-risk investment as they could be more profitability (Chong, 2004).

The standard economic theory of risk, as conceptualized by Neuman and Morgenstern (1944), divides economic behavior in risky situations into three classifications of expected utility functions. Figure 1 shows the utility curves of risk-aversion, risk-neutral, and risk-lover. The green curve presents a risk-averse individual. Her marginal utility is diminishing towards more money/wealth which means that taking additional risk to win money adds to enjoyment less than losing hurts. Conversely, the brown curve presents a risk lover whose marginal utility increases at increasing rates. Taking risks to gain money is a favorable choice. The blue curve presents a risk-neutral person whose marginal utility is constant. This means that the person is indifferent to the weights of hurts from losing and satisfactions from gaining. The grey curve presents an unstable pattern of marginal utility. In addition to the standard economic model, behavioral economists have refocused the factor that determines risk preferences, by pointing to psychological factors that suggest that people tend to take risk to avoid losses rather than obtain a gain in equivalent values (Tversky & Kahneman, 1981).
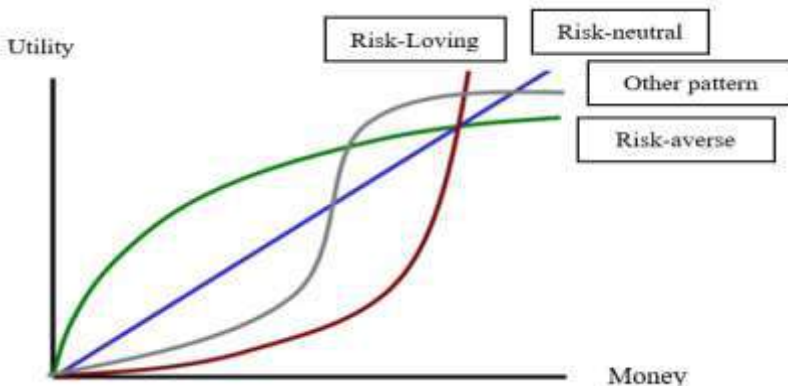

Figure 1. The categories of risk behaviors

The concept of risk is an important component of experimental design. This study measured the risk attitude of participants to determine its relationship to the level of investment made in an investment simulation game.

Trust

Economic transactions require trust in order to be settled. Trust creates mutual confidence between parties and without it would result the economic backwardness (Arrow, 1972). Trust is one of the important elements to civic society as it is associated with different results of economic prosperity and democratic performance (Putnam, et al., 1993). Therefore, it is plausible to say that trust definitely involves investment decisions as it influences the level of commitment in a relationship. Relationship commitment involves the readiness to allocate and devote financial, physical, or other related resources into a relationship (Morgan & Hunt, 1994). Moreover, individuals of a high social status possibly attract more trust than others (Glaeser et al., 2000). In situations where investors have incomplete information, they still make decisions based on the information they trust the most, even though its content may be questionable (Bikhchandani et al., 1992). There are many circumstances that investors delegate their decisions to financial consultants. They are likely to trust the advice from experts which sometimes overrides their own reasons (Christie & Huang, 1995).

The concept of trust is important. It indicates the reliance of financial information presented to the participants, with the aim of identifying which information sources exert the greatest influence.

Framing effect

The framing effect can be simply described by the example of a person buying a dress. This person may decide to buy a larger-sized dress when advised by the seller that the smaller size is not a good fit, even if she would usually opt for the smaller size. Therefore, people's buying decision is framed by information that causes them to make a decision otherwise to what they typically do. Furthermore, many psychological traits within the system 1 of Kahneman (2011), like heuristic biases, emotions, and shortsightedness, could entail errors in judging investment decisions.

Past evidence showed that the same situation could incentivize people differently based on which narrative framed it. He (2020) explored the effects of the same redistributive measure in two different settings, redistributing via tax and transfer system. The result indicated that participants had a higher work effort when framed by transfer system because they considered redistribution via taxation unfair. Moreover, individuals would prefer risk-loving options when the outcomes were framed with a losing scenario but favor the choice of risk-aversion when the equal outcomes were from with the gain scenario (Rabin, 1998). Cheng and Chiou (2008) conducted another study that discovered how the framing effect led to divergent investment choices among participants. The participants appeared to be more cautious in gain situations than they normally were. And the participants framed by loss situations were willing to take more risk than those in gain situations.

The participants of this study were asked to invest in framed situations. They were informed about associated risks and returns on a mutual fund. The level of investment observed in response to exposure to different financial information interventions reflected the cognitive bias of participants.

Method

This study conducted an experiment to verify and analyze the level test trust and investment. Three treatment groups were divided according to different sources of information, including an official factsheet, social media post, and in-person advising. The level of trust and investment across all treatment groups was estimated to assess statistical significance and verify the influence of each information intervention.

Design of Experiment

All experimental groups presented the same information to participants, but the styles of information representation in each group differed. The information of complex return mutual fund was used in this context because it captures the nature of risk in investment. The general strategy of a complex mutual fund includes investing in derivative contracts. When the fund manager incorrectly anticipates whether to take long or short contracts, it could lead to losses for the fund. The participants were instructed to decide the level at which they were willing to invest in their respective treatment groups. The following describes all of the experimental groups in the study.

Treatment Group 1 (T1): The participants were presented with a fact sheet information that is downloadable online. Its formatting style is the same as that presented on the websites of authorized financial institutions. The information includes descriptive data about the fund, its strategies, risks, and potential returns.

Treatment Group 2 (T2): The participants obtain the information in the form of Facebook post. The reason selecting Facebook as a channel is its prevalent use as a social media application, with 1.6 billion accounts worldwide (Matt, 2020).

Treatment Group 3 (T3): The participants in T3 were presented with information by a qualified financial advisor who held the IC Complex 1 license. The advisor conducted the session with an oral presentation, following the same sequence and content as that presented in T1 and T2.

The control group (C1) consisted of participants who were given a plain information on paper without knowing the original source, whether it was a fact sheet from an authorized website, a social media post, or advice from a financial advisor. This group was used as a counterfactual to those intervention groups (Roese, 1994).

The experiment starts by randomly assigning participants into three rooms. There is a researcher in every room to instruct the details and rules of the experiment. The participants then must complete a risk attitude questionnaire. After collecting all questionnaires, a presentation of complex mutual fund information lasting about 15 minutes takes place. Following the presentation, the researcher hands a trust-score questionnaire to participants to fill out.

In addition, the participants play an investment game where they must make investment decisions based on the information they receive, investing between 1 and 200 baht. The amount of their investment is recorded in the questionnaire. To simulate a risky investment situation, this experiment uses a draw-lot game. Participants randomly draw a ping-pong ball to determine whether they gain or lose. Inside the box, there are 10 balls - 5 white and 5 orange. Drawing a white ball results in a gain, while drawing an orange ball leads

to a loss. The ratio of losses to gains is 50:50. The participants are prohibited from being aware of each other's outcomes or gains. This investment game is a one-time occurrence, indicating that participants cannot repeat the process.

Data collection

We collected data from December 2021 to February 2022. The participants in this study were university students and early-career professionals aged between 18 and 30 years. A total of 128 participants took part in the experiment. The study was carried out at the Faculty of Economics, Khon Kaen University, Thailand. The experiment faced several obstacles during setup due to the COVID-19 pandemic. Despite the partial lockdown and restrictions imposed by Thai authorities on on-site activities, the researchers decided to collect data on-site to control the experiment's conditions and minimize any distractions to the participants. Unfortunately, some individuals declined invitations to participate due to the risk of infection. Consequently, the researchers had to conduct several smaller experiments gradually until they reached the total number of 128 participants, which was both statistically satisfying and feasible according to the research budget.

In this study, risk attitude and understanding were two main independent variables. We adopted the TSI risk profile questionnaire from the Thai Stock Exchange to collect the participants' risk attitude scores. The risk scores range between 11 and 33. An understanding score was measured by a separate questionnaire asking the participants to rate their understanding of the information on a scale of 1 to 10. In addition, trust and investment were dependent variables. Trust refers to the level of confidence participants have in the piece of financial information. Following the intervention, participants rated their scores (on a scale of 1-10) using the questionnaire. Investment corresponds to the monetary amount (in baht) that participants invested after receiving the information intervention.

Estimation

This study estimates two econometric models in parallel, with a dotted line in figure 2 separating the trust model on the left panel from the investment model on the right panel. The figure shows necessary variables in each model. Trust and investment models measure the reliability of different information sources, and the level of influence they had on participants in terms of investment decision. Both trust and investment are dependent variables resulting from the experimental process where financial information was provided first, followed by collecting trust score and amount of investment in a later step. Risk attitude and understanding level serve as independent variables in both models. The two models are formulated as ordinary least squares (OLS) equations:

$$\text{Trust score} = \beta_0+\beta_1\text{Risk-attitude}+ \beta_2\text{Understand}+\beta_3T1+\beta_4T2+\beta_5T3+ u \qquad (1)$$
$$\text{Investment} = \beta_0+\beta_1\text{Risk-attitude}+\beta_2\text{Understand}+\beta_3T1+\beta_4T2+\beta_5T3+u \qquad (2)$$

Where T1, T2, and T3 are dummy variables. T1. The dummy variables demonstrate the effects of various information sources in comparison to the non-intervention (control) group. Within these dummy variables, the value of 0 or 1 was assigned to indicate the participant status in each respective group. As in the first treatment group, the TI participants were assigned a 1 for their dummy variable (T1) and a 0 for all other dummy variables. u is an error term.

This experiment's hypothesis asserts that risk level and understanding are positively correlated with trust and investment. And, participants in different treatment groups have varying responses, reflected in their levels of trust and investment.
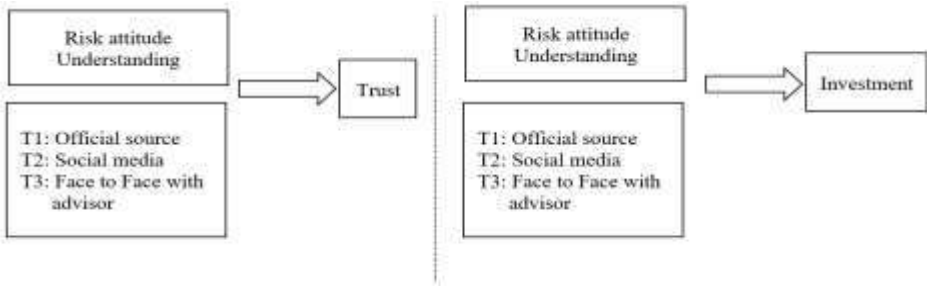
Figure 2. Variables in trust and investment models

Results

General Descriptive statistics

There are 128 participants in total, comprising 66 females and 62 males. They have quite a similar demographic character. T1 has 32 participants, with 16 females and 16 males. T2 has 33 participants, with 15 females and 18 males. T3 has 30 participants, with 15 females and 15 males. The control group has 33 participants, with 20 females and 13 males. The average age of all participants is 21 years old, with participants in T1, T2, T3, and the control group having average ages of 21, 21, 20, and 22 years old, respectively. Most participants (107) are undergoing undergraduate studies, with the remaining 21 having completed their undergraduate education.

Table 1-4 reports mean, maximum, minimum, and standard deviation values (SD.) of main variables of each experiment group. The average value of risk attitude is approximately 21. The average score of understanding across all experimental groups is about 6. Trust scores in T1 and T3 are higher than those of other groups. The highest level of investment is reported in T1, and the lowest is in the control group. Across all experiment groups, the average values of each variable were 7.25 for trust (SD. = 1.5), 129.91 for investment (SD. = 40.88), 21 for risk attitude (SD. = 3.1), and 6.29 for understanding (SD. = 1.2).

Table 1
Descriptive statistics of T1, N = 32

	Mean	Max.	Min.	SD.
Trust score	7.84	10	5	1.3
Investment	138.1	200	80	33.14
Risk attitude	21.22	27	15	2.92
Understanding	6.47	9	4	1.17

Table 2

Descriptive statistics of T2, N = 33

	Mean	Max.	Min.	SD.
Trust score	6.45	9	4	1.21
Investment	126.3	200	40	39.83
Risk attitude	20.97	28	15	3.26
Understanding	6.42	9	4	1.18

Table 3

Descriptive statistics of T3, N = 30

	Mean	Max.	Min.	SD.
Trust score	7.47	10	5	1.43
Investment	125.3	200	50	39.5
Risk attitude	20.9	27	16	2.96
Understanding	6	8	4	1.15

Table 4

Descriptive statistics of control group, N = 33

	Mean	Max.	Min.	SD.
Trust score	6.42	10	4	1.44
Investment	112.9	200	20	45.26
Risk attitude	20.73	26	14	3.17
Understanding	6.15	9	4	1.23

Trust model

Table 5 shows a combination of the estimations for cross-reference and robustness verification of the trust model. The statistical significance of variables across all models is consistent and there is no heteroskedasticity problem (see appendix).

Table 5

Estimation of trust model

	Model 1	Model 2	Model 3	Model 4
Risk attitude	0.076[*]	0.076[*]	0.085[**]	0.086[**]
	(0.051)	(0.061)	(0.04)	(0.041)
Understanding	0.152	0.117	0.178[*]	0.182[*]
	(0.132)	(0.262)	(0.095)	(0.093)
T1	1.333[***]	1.025[***]		
	(0.000)	(0.001)		
T2	-0.03		-0.817[**]	
	(0.929)		(0.006)	
T3	1.052[***]			0.638[**]
	(0.002)			(0.038)
Constant	3.905[***]	4.445[***]	4.446[***]	4.343[***]
	(0.000)	(0.000)	(0.000)	(0.001)

Note: [***]p value<0.01, [**]p value<0.05, [*]p value<0.1

Table 5 reports that risk attitude is positively correlated with trust, but understanding is not statistically significant across models. T1 is statistically significant which means that the trust of participants in T1 is higher than that of control group. T2 shows a negative relationship with trust, with statistical significance only in model 3. These results could be interpreted that the financial information represented by social media would undermine the trust of participants. T3 is statistically significant. Its coefficient is positive which means that face-to-face advisor encourages trust of participants more than in those of counterfactual group.

Investment model

Table 6 displays the same model combinations as in table 5, except that its dependent variable is the level of investment. The models in the table present robustness verification. There is no significant difference in correlations among models. These investment models do not face the problem of heteroskedasticity (see Appendix).

Table 6

Estimation of investment model

	Model 1	Model 2	Model 3	Model 4
Risk Attitude	2.104*	2.147*	2.249**	2.257**
	(0.058)	(0.054)	(0.045)	(0.044)
Understanding	10.22***	10.197***	10.719***	10.837***
	(0.001)	(0.000)	(0.000)	(0.000)
T1	20.97**	13.229*		
	(0.03)	(0.096)		
T2	10.097		-1.384	
	(0.289)		(0.86)	
T3	13.64			3.617
	(0.161)			(0.658)
Constant	6.403	13.446	11.62	9.528
	(0.834)	(0.657)	(0.704)	(0.758)

Note: ***p value<0.01, **p value<0.05, *p value<0.1

Table 6 reports that risk attitude and understanding are statistically significant, indicating that participants would be more attentive to understand information when facing a gain-or-loss situation (an investment game of this experiment). Among all three interventions, only T1 displays a statistical significance. The positive value of its coefficient explains the marginal change in the model: participants who receive official information increase their level of investment compared to the counterfactual group.

Discussion

The results produce four key commentaries. One focuses on the general findings. The other three offers some insights to each treatment group.

First, the participants displayed a greater level of understanding of the information in the investment model than that in the trust model. This enhanced understanding of the investment model suggests that participants would be more considerate in the situation of loss and gain. Typically, people may not prioritize detailed comprehension when engaging in non-monetary matters. But when confronted with a risky situation, individuals tend to be more motivated to learn and understand to avoid losses or maximize gains. The participants in this

experiment were in a risky situation. Such a risky situation highlights the importance of understanding the information when undertaking a complicated task (Sprinkle, 2000).

Second, the participants in T1 trusted the information and invested significantly while the other treatments did not. This could be argued that official information is effective. The factsheets on mutual funds issued by financial institutions have been around for a long time despite the current period in which information from social media penetrates social life. One explanation is that they provide a sense of familiarity to its recipients. Therefore, people in T1 gained more confidence than information presented in a less-than-official format. Additionally, people are aware that official data must be thoroughly checked and regularly reviewed before being made public (Dejana & Kristina, 2016).

Third, it was found that a social media post (T2) did not encourage trust and investment, which may come as a surprise, considering the youth of the participants who are typically comfortable with social media. However, it could be argued that information presented through social media is likely to reduce trust in social networks, as these platforms are often used to steal personal data and perpetrate financial fraud (Pasieka et al., 2021).

Fourth, the participants trusted the information from advisor in T3 but did not invest. It is a common understanding that face-to-face meetings and activities could create trust between parties. But trust does not always motivate further actions, especially when dealing with risky situations. People may have a second thought and deter their advanced actions. This fear motivates individuals to take careful and sometimes precautionary measures when making decisions (Hassan et al., 2013). Moreover, T3 intervention is quite one-way-orientation. The participants listen and make decisions without a certain amount of time of self-reflection on the information. They may trust the information but are not confident enough to invest. This is not the same with T1 intervention where the participants have time to process the information and decide deliberately.

Conclusion

This study estimated how different information sources affected trust and investment decisions. Four experimental groups were conducted. One is a control group, and the other three were treated groups, namely: the official factsheet (T1), social media post (T2), and in-person advising (T3). The results obtained from three treatment groups were compared to those of the counterfactual (control) group to estimate the treatment effects.

The results reported that the participants in T1 and T3 trusted the information. The participants in T1 showed significant investments, while the participants in T3 did not. The participants in T2 did not trust and make any investments. The results implied the suspicious nature of information from social media. On the other hand, traditional information prevailed in this experiment: the participants tended to commit more trust and investment decisions than other information sources.

The researchers hope that this study will contribute to policymakers, especially at corporate level. While disseminating financial information through social media has become increasingly important because it can reach a number of audiences, the corporate should be active in promoting information via traditional means, such as authorized fact sheet and personal consulting. These traditional means, according to the experimental results, were

proven to be effective to induce trust between the corporate and its clients, which possibly leads to the decision to invest.

Future Recommendations

The future direction of research in this topic should expand the age range and sample size to increase statistical power and cover a broader range of social and demographic groups. This study only explored trust and investment decisions in a complex mutual fund, but in reality, there are many other financial products with various degrees of risk, such as derivatives and bonds. Different types of products might affect investment decisions and trust to different degrees. Therefore, expanding the range of products in future experiments is a favorable agenda.

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Appendix

Table 7

White test for heteroskedasticity of all trust models

	Chi^2	df	p-value
Model 1	17.2	14	0.2455
Model 2	14.74	8	0.0644
Model 3	8.49	8	0.3873
Model 4	8.91	8	0.3501

Note: p
value>0.05, fail to reject the null hypothesis of homoscedasticity

Table 8

White test for heteroskedasticity of all investment models

	Chi^2	df	p-value
Model 1	14.35	14	0.4238
Model 2	10.12	8	0.2568
Model 3	3.53	8	0.8968
Model 4	4.05	8	0.8528

Note: p value>0.05, fail to reject the null hypothesis of homoscedasticity

Motivational Factors in Chinese Language Learning: A Study of Foreign Language Learners

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Learning a new language can be a challenging but rewarding experience, and for many individuals, the Chinese language presents a unique set of difficulties and complexities. The present study aimed to investigate the motivational factors that impact the process of learning the Chinese language among non-native speakers. The study employed a questionnaire to survey 104 Chinese language learners from different countries. According to the study results, six factors were identified as motivators for learners of Chinese, which include the desire for career and economic advancement, the aspiration to become a global citizen, the wish to communicate and connect with Chinese people, the pursuit of self-satisfaction and self-efficacy, and the inclination to integrate with Chinese cultures. Moreover, the study found that video materials, particularly Chinese cinema and drama, play a crucial role in facilitating proficiency in the Chinese language. Overall, the results suggest that foreign language learners exhibit a positive attitude towards the Chinese language and are willing to continue learning it in the future .

Keywords: Chinese language learning, Chinese culture, film, motivational factors, quantitative research; second language acquisition

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Motivation is a fundamental psychological construct that drives individuals' behavior, actions, and decisions. It plays a crucial role in various domains, including education, work, and personal development. In the context of education, motivated students tend to be more engaged, persistent, and achieve better academic outcomes. At the workplace, motivation is a key factor influencing employee performance, job satisfaction, and organizational success. In personal development, motivation is the driving force behind individuals striving to achieve their goals and aspirations.

Numerous studies have explored the concept of motivation and its significance across different fields. For instance, Khudhair (2020) investigated factors predicting academic writing difficulties among first-year doctoral students, highlighting the importance of understanding motivation in educational contexts. Deci and Ryan (1985) proposed the Self-Determination Theory (SDT), which provides a theoretical framework to explain intrinsic and extrinsic motivation and their impact on human behavior. Deci, Ryan, Vallerand and Vallerand (1991) expanded on SDT, emphasizing the role of self-determination in promoting motivation in educational settings.

Intrinsic motivation refers to engaging in an activity for the inherent satisfaction and interest it brings, rather than seeking external rewards or avoiding punishments. Individuals driven by intrinsic motivation find enjoyment, curiosity, and a sense of competence in the activity itself, making it inherently rewarding. Deci and Ryan's seminal work (1985) identified three key characteristics influencing intrinsic motivation: a) autonomy: people feel a sense of autonomy when they have control over their actions and decisions, allowing them to pursue activities aligned with their interests and values. b) competence: individuals are intrinsically motivated when they perceive themselves as competent and capable of mastering challenges. c) relatedness: social connections and a sense of belongingness to others play a crucial role in fostering intrinsic motivation. In contrast to intrinsic motivation, extrinsic motivation involves engaging in activities to obtain external rewards or avoid punishments. Extrinsic motivators can take various forms, such as tangible rewards (e.g., bonuses, gifts) or social recognition (e.g., praise, awards) (Deci, Koestner & Ryan, 1999; Mehtab, Zaheer & Ali, 2015). Deci, Koestner, and Ryan's meta-analytic review (1999) examined the effects of extrinsic rewards on intrinsic motivation and found that while extrinsic rewards may enhance performance in the short term, they can undermine intrinsic motivation over time.

The distinction between intrinsic and extrinsic motivation lies in their psychological underpinnings and the driving forces behind behavior. Intrinsic motivation emerges from

internal factors, fostering a sense of personal fulfillment, curiosity, and joy in the activity itself. On the other hand, extrinsic motivation is rooted in external factors, where individuals are driven by the anticipation of rewards or the avoidance of negative consequences. Deci et al.'s (1991) self-determination perspective provides insights into the interplay between these two types of motivation. It suggests that supporting individuals' autonomy and intrinsic motivation can lead to better long-term outcomes, whereas excessive reliance on extrinsic rewards may hamper intrinsic motivation.

Motivation is also a crucial factor in foreign language learning, as it has been shown to significantly impact learners' engagement, persistence, and ultimately, their success in acquiring a new language (Herschensohn & Young-Scholten, 2018; Li, Hiver & Papi, 2022). Gardner's (1985) definition of motivation as "the degree to which an individual exerts effort or strives to acquire proficiency in a language owing to an inner desire and the gratification derived from such endeavor" (p. 10) highlights the importance of motivation in foreign language learning. This is especially relevant for learning Chinese as a foreign language due to its complex writing system, tonal pronunciation, and cultural nuances (Yue, 2017). Recent studies have focused on identifying the motivational factors that drive foreign language learners to pursue Chinese language learning (CLL) and their role in learning outcomes (Rahman, Mahmud, Jiang & Sarker, 2022; Wen & Piao, 2020; Xuejun, 2020; Zheng, Lu & Li, 2023).

The importance of learning Chinese has grown significantly due to factors such as economic growth, career prospects, and commercial ventures. With over 1.3 billion speakers, Chinese is the most widely spoken language globally (Lane, 2023). The increasing prominence of China in international politics, economics, and culture has further highlighted the significance of the Chinese language in the global sphere (Mkize & Chisoni, 2015). As one of the six official languages of the United Nations, the Chinese language holds a vital place in the international community (Xun, 2013). Thus, the growing prominence of China has made learning the Chinese language increasingly important. Motivation is critical in the language learning process, and the Chinese government has established various initiatives to aid in the spread of Chinese language and culture worldwide (Gamage, Fernando & Perera, 2015; Jiani, 2017; Wang & Ruan, 2016; Zhao & Huang, 2010). Therefore, it is crucial for researchers to investigate the motivational factors that influence students in learning Chinese and explore ways to enhance these factors to facilitate the language learning process.

This study aims to contribute to this growing body of literature by examining the motivational factors that influence foreign language learners' decisions to learn Chinese, and the extent to which these factors vary across different learner demographics. By drawing on survey data collected from a sample of foreign language learners in a Chinese language program, we investigate the relationships between motivational factors such as intrinsic interest, instrumental motivation, and cultural curiosity, and learners' attitudes towards Chinese language learning. Our findings shed light on the complex interplay between learners' motivational orientations and their experiences of Chinese language learning, and have important implications for foreign language pedagogy and practice.

The acquisition of L2 is influenced by numerous factors, including motivation, which serves as a necessary incentive to begin learning and subsequently drive learners to continue the often lengthy and tedious process (Kim, 2022; Mkize & Chisoni, 2015; Nkrumah, 2021; Peter, 2021; Singleton & Flynn, 2022; Wen & Tian, 2022; Ye, Ding, Han & Ye, 2022). Previous research has highlighted the importance of motivation in L2 learning, with early studies by Gardner and colleagues emphasizing its influence on L2 attainment (Gardner & Lambert, 1972). Subsequent research has also emphasized the role of motivation in language learning. Dewaele, Saito, and Halimi (2022) posit that motivation is a combination of effort, desire, and positive attitudes towards the goal to be attained. They further suggest that motivated students are highly desirable in the classroom, as they are willing to put in the effort, align their objectives with those of the class, focus on the task, and persevere through difficulties.

Motivation is particularly important for foreign students in the context of learning Chinese as a second language. Previous literature suggests that motivation is influenced by a range of individual and contextual factors (Kandambi, 2021; Wen & Tian, 2022; Wen & Piao, 2020b; Xu & Moloney, 2020; Xu, Zhang, Sukjairungwattana & Wang, 2022). For example, job prospects were found to be a strong motivator for both heritage and non-heritage learners in Australia (Xu & Moloney, 2020), while Thai learners identified anxiety as the most stable predictor of achievement in online Chinese learning (Xu, Sukjairungwattana & Wang, 2022). Wen and Piao (2020) found that the ideal self, instrumentality, and future self-guides were important motivational factors for Chinese as foreign language (CFL) at different proficiency levels.

Despite recent research on motivational factors in language learning, there is still a lack of literature on the primary factors influencing motivation to learn Chinese as a second

language among foreign learners. Therefore, this study aims to identify and analyze the six main motivational factors of foreign Chinese language learners to bridge this research gap and inform effective implementation strategies. Previous studies have primarily focused on the challenges of learning Chinese characters and the complexity of Chinese grammar (Li, Bao, & Yue-Li, 2022; Romagnoli & Ornaghi, 2022; Shum, Gao, Tsung, & Ki, 2011; Suleymenova & Yskaknabi, 2022). This study will provide valuable insights into the motivational factors that drive foreign students to learn Chinese language, ultimately contributing to the development of effective Chinese language teaching strategies.

Research Questions

This study aims to investigate the role of motivation in learning of the Chinese language among overseas students. The factors that motivate students to learn a particular language vary, and this study seeks to understand the specific motivations of international students to learn Chinese and its culture. Two research questions will be addressed in this study: (1) What are the motivational profiles of foreign Chinese learners? (2) What are the relationships between the six motivational models and the conscious effort in learning the Chinese language?

Methods

Participants

Quantitative research involves the collection and analysis of numerical data to uncover patterns, relationships, and trends. This type of research typically uses statistical methods to draw conclusions and make generalizations about a population based on the data collected. Quantitative studies often rely on structured questionnaires, surveys, or experiments to gather data from a large number of participants. Qualitative research, on the other hand, focuses on understanding the subjective experiences, meanings, and interpretations of individuals. It involves collecting non-numerical data, such as interviews, observations, or textual analysis, to gain insights into the participants' perspectives and social phenomena. Qualitative studies use methods like thematic analysis, content analysis, or discourse analysis to analyze and interpret the data collected (Bryman, 2016; Creswell & Creswell, 2017).

In this study, international students from various countries (including Vietnam, Indonesia, Sudan, Philippines, Cambodia, South Korea, and Pakistan) were recruited as participants. Due to practical considerations, the sample was composed of both male and female students who were currently studying in China or had already graduated. The participants were recruited through social media platforms, particularly WeChat and Q.Q., and

survey design and snowball sampling methods were employed. The selection of WeChat and Q.Q. as social media platforms for participant recruitment was based on several factors. Firstly, these platforms are widely utilized by foreign students in China for various purposes, including communication, networking, and information sharing (Yaqoub et al., 2022, 2023). Therefore, they provided a convenient and accessible means to reach out to the target population of foreign students learning Chinese.

Furthermore, the survey design incorporated the distribution of the questionnaire within specific foreign students' groups on WeChat and Q.Q. social media platforms. By sharing the questionnaire in these groups, the sampling method aimed to target individuals who were actively engaged in Chinese language learning and had a vested interest in the topic. The snowball sampling method was chosen to leverage the network effect within these groups. Participants were encouraged to share the questionnaire with their acquaintances and fellow language learners, thereby expanding the sample size and potentially capturing a diverse range of participants. The use of this sampling method ensured that the data collected came from individuals relevant to the study's objectives and provided a degree of control over participant selection. By focusing on foreign students in China and utilizing their established online communities, the researchers could increase the likelihood of obtaining responses from individuals who were actively learning Chinese and motivated to participate in the study.

However, it is important to acknowledge that the snowball sampling method may introduce biases, such as overrepresentation of certain subgroups or individuals with similar characteristics. The questionnaire was administered electronically using the Questionnaire Star website. A total of 126 questionnaires were completed and submitted, out of which 104 were deemed valid for analysis after screening for completeness and attention. The demographic characteristics of the sample are presented in Table 1. The sample consisted of slightly more males (55.8%) with an average age of 26.5 years. The majority of participants held a bachelor's degree or below (62.5%), followed by those with a Master's degree (28.8%). Most participants were studying in the humanities and social sciences (69%), followed by natural sciences and engineering (30.8%). Most participants confirm that they watched Chinese movies (90.4%) and the majority reside outside of China (62%) during the survey due to pandemic limitations. These findings provide a general overview of the demographic characteristics of the sample used in this study.

Table 1

Demographic Information of Respondents (n=104).

Demographic variables	Number of respondents	Percentage of respondents
Gender		
Male	58	55.8
Female	46	44.2
Age	Mean ± S.D. =26.5±5.5	
Academic qualification		
Bachelor's degree or below	65	62.5
Master's degree	30	28.8
Ph.D. Degree	9	8.7
Area of study		
Humanities & Social Sciences	72	69.2
Natural Sciences & Engineering	32	30.8
Chinese movies		
Watched	94	90.4
Did not watch	10	9.6
Current dwelling		
Out of China	65	62.5
In China	39	37.5

Measures

We chose the Chinese Language Learning Motivational Questionnaire (CLLMQ) originally created by Gonzales (2006) because it is a validated instrument with 50 items, providing a comprehensive assessment of motivational factors in learning a foreign language. Its established framework, comparability, and efficiency make it a suitable choice for our research on language learning motivations. The present study is based on six constructs: construct 1 (desire for career and economic enhancement, DCEE); construct 2 (desire to become a global citizen, DBGC); construct 3 (desire to communicate and affiliate with Chinese people, DCACP); construct 4 (desire for self-satisfaction, DSS), construct 5 (Self-Efficacy, S.E.); and construct 6 (desire to be integrated with Chinese cultures, DICC). The alpha coefficient for the different factors ranges from 0.71 to 0.92, and the reliability of the entire questionnaire is 90.6, which is well above the acceptable threshold of 0.70 (Taber, 2018). The demographic information includes gender (male, female), age, academic qualification, study area, and Chinese film-watching habits. Demographic information was collected to provide a comprehensive profile of the study participants. Although not a primary focus of the analysis, it was included to acknowledge sample diversity and present a holistic overview of the participants. The variables, such as age, gender, and educational background, were not specifically examined for significant differences in relation to the study's primary objectives. However, presenting the demographics allows for transparency and

contextualization of the study's findings. There was an open-ended question regarding the role of Chinese movies in promoting Chinese culture and acquiring the Chinese language.

Procedures

Initially, a quantitative analysis was conducted on the modified version of the Foreign Language Learning Motivation Questionnaire (FLLMQ) specifically designed for Chinese learners. This analysis was necessary as the questionnaire, originally validated by Gonzales for English as a second language learners, required adaptation and validation for the context of Chinese language learning. Hence, the analysis aimed to assess the applicability and reliability of the questionnaire in the specific context of Chinese language acquisition.

Significantly linked factors were discovered in the modified version. A high inter-item correlation cut-off of 0.80 was developed. Fifteen items had inter-item correlation values above 0.80. There were only four qualitatively similar items discovered. Four items were eliminated, leaving CLLMQ with 43 amended items. It was distributed to international students taking Chinese language programs or who graduated in the Chinese language and volunteered to participate. No particular incentives were offered for completing the surveys.

Then, an online tool was used for the study (Questionnaire Star form). International students from several countries, including Vietnam, Indonesia, Sudan, Philippines, Cambodia, South Korea, Pakistan, America, Laos, and Finland, submitted the questionnaires. The study lasted from 17 June 2022 to 5 July 2022 (Figure 1). The AMOS (Analysis of a Moment Structures; version 23) and SPSS (Statistical Package for the Social Sciences; version 23) were used to conduct the statistical analyses.
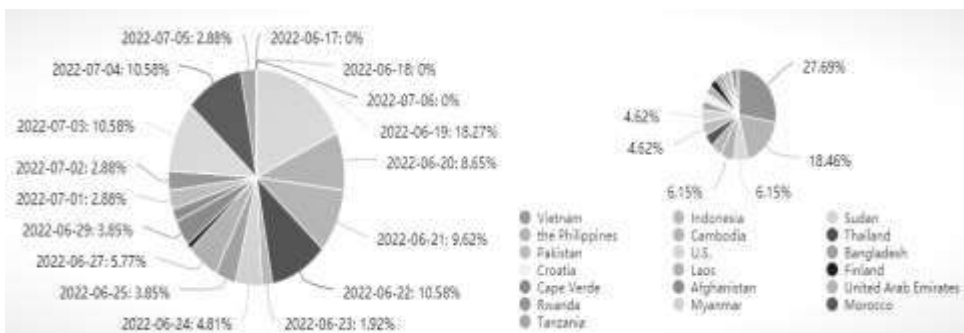
Figure 1. Time frame (17th June to 5th July 2022) and Respondents' nationalities (N=104).

Data Analysis

The main goal of our study is to investigate the possible motivational variables that affect non-native speakers who want to learn the Chinese language. The examination of the reliability of the Chinese Language Learning Motivation Questionnaire (CLLMQ) through descriptive statistics and internal consistency analysis using Cronbach's alpha (α) is a methodological step undertaken to ensure the reliability and validity of the questionnaire itself. This analysis helps establish the robustness of the questionnaire in measuring the intended construct of language learning motivation. Additionally, we investigated the inter-correlations among the six factors of the CLLMQ to evaluate how well the updated CLLMQ structure, proposed by Gonzales (2006), fits the data.

Results

The data set was analyzed and no outliers were identified. The results showed that the multivariate normality and linearity assumptions were met. Descriptive statistics, including means, standard deviations, and internal consistency coefficients were calculated for each component of the CLLMQ. The Cronbach's alpha coefficient, which is commonly used as a measure of internal consistency, was used in this study. A threshold of 0.70 was chosen, in line with the recommendations of Nunnally and Bernstein (2010) and Yaqoub and Shah (2014). The results revealed that the Cronbach's alpha coefficients for the CLLMQ factors varied from 0.71 to 0.94, indicating strong internal consistency (Gonzales, 2006). Furthermore, the dependability score for the CLLMQ is still very high, even though the questionnaire has been reduced to 43 items. The correlation coefficients between the CLLMQ factors were also calculated, showing a high degree of convergence among the components, ranging from $r = .41$ to $.74$. Overall, these findings suggest that the improved CLLMQ has extremely acceptable reliability indices per factor and for the entire test, and can be used as a valid and reliable measure of Chinese language learning motivation (Table 2).

Table 2

The CLLMQ's Descriptive Statistics, Reliability Indices, and Inter-Correlation Among Variables

	CLLMQ factor	# of items	Alpha (α)	M	SD	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1.	DCEE	8	.923	4.10	.64	1					
2.	DBGC	5	.828	4.29	.55	.625**	1				
3.	DCACP	7	.711	4.25	.47	.524**	.621**	1			
4.	DSS	9	.814	3.83	.58	.460**	.413**	.633**	1		
5.	S.E.	7	.878	4.16	.56	.556**	.511**	.644**	.600**	1	
6.	DICC	7	.869	4.35	.47	.535**	.645**	.723**	.462**	.747**	1

** $p < .01$ (2-tailed)

1. Desire for career and economic enhancement (DCEE), 2. Desire to become a global citizen (DBGC), 3. Desire to communicate and affiliate with Chinese people (DCACP), 4. Desire for self-satisfaction (DSS), 5. Self-Efficacy (S.E.), 6. Desire to be integrated with Chinese cultures (DICC).

Table 4 presents the results of motivation for learning the Chinese language. The questionnaire includes items that measure participants' desire for career and economic enhancement (DCEE), desire to become a global citizen (DBGC), desire to communicate and affiliate with Chinese people (DCACP), desire for self-satisfaction (DSS), and self-efficacy (SE) and desire to be integrated with Chinese cultures (DICC). The results are presented in terms of mean and standard deviation (SD).

The findings show that participants have a strong desire for career and economic enhancement, as evidenced by the high mean scores for items related to job opportunities, high-paying jobs, and financial benefits. For instance, the mean score for the item "Learning the Chinese language can improve the chances of getting a good job" is 4.39, which indicates that participants strongly agree with the statement. Participants also have a strong desire to become a global citizen, as indicated by the high mean scores for items related to cultural exchange and understanding Chinese culture.

Participants also have a strong desire to communicate and affiliate with Chinese people, as indicated by the high mean scores for items related to communicating with Chinese in their language and adjusting to Chinese people. Furthermore, participants have a moderate desire for self-satisfaction, as indicated by the moderate mean scores for items related to watching Chinese films and dramas, using Chinese websites, and enjoying learning Chinese at school. By extension, participants have a moderate self-efficacy, as indicated by the moderate mean scores for items related to enjoying learning Chinese, feeling comfortable in Chinese classes, and believing that they can learn Chinese.

Lastly, participants have a strong desire to be integrated with Chinese cultures, as indicated by the high mean scores for items related to understanding China's development, settling in a new environment, interacting with Chinese people, preparing to live in China and socializing with Chinese people.

Table 4

Responses to the questionnaire's items on motivation for learning the Chinese language

Items' statements	Mean	SD
Desire for career and economic enhancement (DCEE)		
a) Learning the Chinese language can improve the chances of getting a good job.	4.39	.674
b) Chinese language learners can get high-paying jobs.	4.09	.871
c) Chinese language proficiency has financial benefits.	4.05	.852
d) Chinese learner has better job opportunities.	4.19	.751
e) Chinese language gives an edge over other applicants for a job.	3.90	.819
f) Learning or knowing or mastering the Chinese language is another way of enriching my future career.	4.24	.704
g) Chinese language can also help to find job positions in Belt and Road Initiative projects (Chinese: 一带一路).	4.11	.749
h) There are more job opportunities for Chinese learners in my country.	3.86	.918
Desire to become a global citizen (DBGC)		
a) The Chinese language allows me to understand Chinese culture.	4.50	.591
b) Learning the Chinese language facilitates cultural exchange.	4.37	.683
c) Chinese language broadens my view of Chinese culture.	4.36	.622
d) Learning the Chinese language will help me appreciate China, its people, and its success.	4.31	.725
e) Chinese language allows understanding of other cultures.	3.93	.938
Desire to communicate and affiliate with Chinese people (DCACP)		
a) Chinese language helps to communicate with Chinese in their language.	4.51	.607
c) Chinese language is helpful to adjust with Chinese people.	4.39	.630
d) Communicating with Chinese in the Chinese language is fascinating.	4.27	.672
e) The best way to learn Chinese is to go to China.	4.39	.864
f) Learning Chinese is helpful to get an opportunity to travel to China.	4.25	.760
g) Every foreigner who lives in China should learn Chinese.	4.13	.801
h) Anyone who wants to go to China should learn Chinese.	3.83	1.028
Desire for self-satisfaction (DSS)		
a) Chinese films and dramas make it easier to learn the language.	4.06	.722
b) It is interesting to surf Chinese language and culture websites.	3.83	.743
c) People recommend learning the Chinese language due to its importance.	3.95	.781
d) Enjoy watching movies on T.V. and YouTube, especially if they are in Chinese.	3.87	.956
e) It is an excellent chance to learn Chinese at school.	4.22	.668
f) I learn the Chinese language to pass an entrance examination.	3.41	1.120
g) I learn Chinese in order to meet the school requirements.	3.61	1.153
h) I am learning Chinese in order to obtain a degree.	3.80	1.028
i) I learn Chinese in order to do business.	3.74	1.005
Self-Efficacy (S.E.)		
a) I can adapt well to Chinese language classes.	4.10	.757
b) I Enjoy learning of Chinese language because I got at it.	4.08	.746
c) I Feel comfortable in Chinese language classes.	4.13	.678
d) I enjoy learning Chinese, even if it is difficult.	4.13	.825
e) I was delighted when the teacher noticed my progress in Chinese language classes.	4.17	.743
f) I believe I can learn the Chinese language.	4.43	.604
g) Learning Chinese language is key to success in the future.	4.10	.830
Desire to be integrated with Chinese cultures (DICC)		
a) Chinese language helps to live in China.	4.47	.607

b) Chinese language helps to understand China's development.	4.35	.587
c) The Chinese language supports settling in a new environment.	4.14	.703
d) Chinese language helps interact with Chinese people.	4.50	.557
e) Chinese language will prepare me to live in China.	4.29	.692
f) The Chinese language helps to socialize with Chinese people.	4.43	.604

Dramatic and cinematic works have become an integral aspect of our daily lives, with viewers selecting the stories they wish to engage with based on their individual preferences and interests. China, in particular, has emerged as a leader in this field, surpassing all other countries in terms of the number of cinemas and screens, box office revenue, and workforce (Shah, Yaqoub & Jingwu, 2020, 2021). Furthermore, films play a significant role in promoting language and culture.

In response to a yes-no question, the majority of respondents (90%) reported that for they watched Chinese films. Moreover, the analysis of open-ended responses revealed that a considerable number of participants expressed the belief that films have a noteworthy influence in promoting both the Chinese language and culture. One respondent from Sudan (#23, aged 32 years, female) stated that Chinese films "reflect the richness of China culture, show that the Chinese have a good attitude and delicious variety of food, shows how Chinese care about sports like Kungfu, also shows how Chinese care about other communities, especially neighbors."

International organizations, such as the United Nations and the World Health Organization, and many countries have acknowledged China's support for worldwide humanities amidst the ongoing pandemic and its aftermath. The contribution of Chinese cinema in this regard has been recognized by respondents from various countries. For example, participant #88 from Vietnam noted that Chinese films and dramas "mirror Chinese concerns, attitudes, flaws, and strengths" and can promote awareness, curiosity, and interest in Chinese language and culture among foreigners. Another respondent from Rwanda (#7, male, aged 30 years) stated that Chinese films "help [me] to pronounce the Chinese language well, and it helps to increase the level of understanding the Chinese language and culture."

In additional case, a 23-year-old female from the Philippines noted that Chinese films and dramas enable language learners to learn about the actual use of language in different contexts and broaden their knowledge about the culture of both ancient and modern China. A 32-year-old participant from Afghanistan stated that Chinese films "will undoubtedly impact how we learn Chinese. Because the [Chinese] movies and dramas use natural language, the acquisition gets normal [for the viewers]" (Figure 2).

Figure 2. Sentence cloud of the role of Chinese films and dramas in promoting the Chinese language and culture.

Discussion

This study aims to investigate the role of motivation in learning of the Chinese language among overseas students. The updated CLLMQ consisted of 43 items and was predicted to have six factors or subscales, each comprising of at least five items. These items assessed participants' motivation for career and economic advancement (DCEE), motivation to become a global citizen (DBGC), motivation to communicate and connect with Chinese people (DCACP), motivation for self-satisfaction (DSS), self-efficacy (S.E.), and motivation to be integrated with Chinese cultures (DICC). This suggests that the factors identified in the CLLMQ are relatively stable constructs of Chinese language learning motivation.

Figure 3 illustrates the route diagram of the FLLMQ Six- constructs Model. The c-variables in the small circles (left side) represent the total items that comprise the CLLMQ, the big circles indicate the six factors, and the rectangular shape boxes show the items. The arrows that link the factors to the items reflect the factor loadings, and the model is constructed so that each factor's items can only load to their corresponding factor. If the model offers an accurate description of the data, it is possible to consider each component unidimensional. Furthermore, the arrows show that the six components regressed on the overall CLLMQ. It is possible to estimate these regression coefficients, and significance tests were carried out. If the coefficients are significant, this indicates a difference in CLL motivation at the factor level. The degree of each factor's influence can be estimated using the portion of variance that can be individually attributed to each factor.

Learning a foreign language, particularly Chinese, can appear challenging until certain motivating aspects encourage the student to do so. First, foreign languages often have different writing systems, pronunciation rules, and grammatical structures compared to one's native language, which can be intimidating and require significant effort to master. Chinese, in particular, has a complex writing system with thousands of characters. Second, language learning requires consistent practice and exposure to the target language. Without motivation, students may struggle to devote sufficient time and effort to language learning, especially if they perceive it as difficult or irrelevant to their lives. However, learners acquire more rapidly if this learning contains certain motivating elements pertinent to their daily operational experience and result. Each of the six motivating variables is crucial to learning Chinese as a foreign language. The response rate for this study was quite good. However, the average age of the respondents was 26 years, and 58% of the participants were male. Many nationalities participated in the study, although most were Vietnamese and Indonesian. When considering their educational backgrounds, most of the study population had bachelor's degrees, while a few participants had Ph.D. degrees. Learning Chinese is challenging, particularly for those who have never studied Chinese as a foreign language. It is complex and is influenced by a variety of motivating variables. The most important, influential, and predominant component is motivation. Motivation has several facets and is not just one single notion. The six motivating factors are related to this study, and the findings are analyzed.

This study supports the first factor, which argues that most learners study Chinese to secure a decent job (Shum et al., 2011). China is leading the world in many aspects, and the Chinese language helps people exchange their culture and understand Chinese culture. It helps international students appreciate China's achievements and success. Learners also think that the Chinese language helps them communicate with Chinese in their language. The popularity of Chinese film and drama among foreign language learners cannot be ignored. Research has demonstrated that these mediums serve not only as important tools for learning the Chinese language but also as powerful tools for promoting the Chinese language and culture. The cultural and linguistic elements present in Chinese film and drama provide an authentic context for language learning and can serve as a source of motivation for learners. Furthermore, the emotional engagement that these mediums evoke can enhance learners' cultural understanding and language proficiency. Thus, the integration of Chinese film and drama into language instruction may prove to be an effective pedagogical strategy for promoting Chinese language and culture.
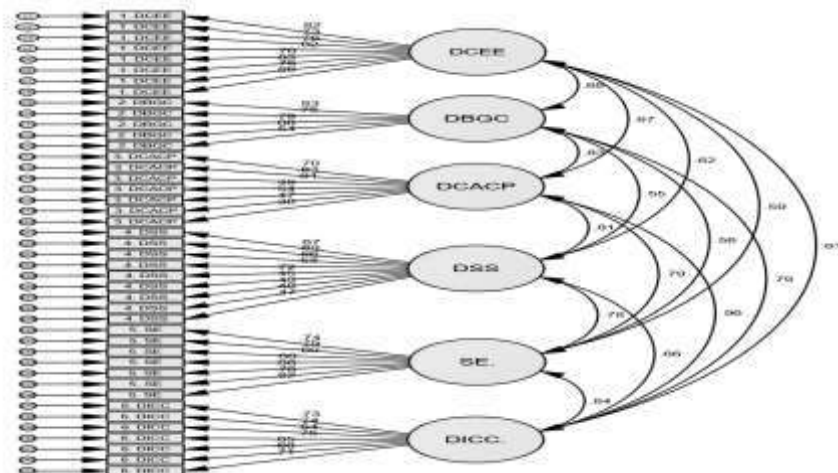
AMOS is used to show the path
Figure 3. CLLMQ six-factors model path diagram

Limitations and Recommendations for Further Research

In order to gather data, a modified version of the FLLMQ-6 (Gonzales & Lopez, 2015) was utilized. It is worth noting that this instrument may not have been previously applied to a specific population of Chinese language learners. The sample was obtained through a combination of random and purposive sampling methods. However, it is important to acknowledge that the sample size may not be sufficient to generalize the findings. As such, it is recommended that future research with a larger sample size be conducted to investigate these motivations further.

The current study has significant implications for both academic research and classroom instruction in Chinese as a foreign language. One key implication is the need to develop more reliable and valid measures of motivation for learning Chinese as a foreign language. To address this need, future research should consider explicitly applying a specific motivational theory to design and validate such measures. Theories such as expectancy-value theory, self-determination theory, self-efficacy theory, attribution theory, and goal-orientation theory could be useful guides in this endeavor. Additionally, the Chinese Language Learning Motivation Questionnaire (CLLMQ) developed in this study could be utilized for further validity investigations, using samples from diverse contexts such as candidates for international employment, service providers, and business people. Another avenue for future research could include the creation or modification of questionnaires that focus more specifically on

motivating variables, contextualizing students' extrinsic and intrinsic motivations and examining the relationship between motivation and learning anxiety. Lastly, it would be beneficial to investigate how other factors, such as cultural and demographic variables, interact with motivation and learning experiences in diverse locales and age groups.

Conclusions

The present study aimed to investigate the motivational factors influencing foreign learners' attitudes towards learning the Chinese language. The findings of the study indicate that various factors impact the attitudes of overseas non-Chinese students towards learning Chinese. These include awareness of the socio-economic benefits of the Chinese language, including its potential for personal prosperity and growth in the future. Besides, survey participants cited job prospects, clear communication, and the opportunity to experience a different culture as important reasons for learning Chinese. Overall, the study results suggest that foreign learners have a positive attitude towards the Chinese language, culture, films, dramas and economic development. They also indicate a willingness to continue learning the Chinese language in the future. These findings have important implications for understanding the motivations of foreign Chinese learners and can inform the development of language learning programs and resources.

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Unraveling the Dimensions of Child Sexual Abuse Portrayal by Web Based Media Channels: Pakistani News Framers' Perspective

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This empirical work is based on the partial phased findings of a colossal PhD work done with core objective of highlighting the role of TV web channels in representation of dilemma-oriented aspects, pertaining child sexual abuse reporting and such news' psychosocial impact on media consumers. The research strategy was mainly exploratory and was based on qualitative research design. This was targeted that major stakeholders in child sexual abuse news, need to be consulted in order to shed light on the menace of child sexual abuse's media reporting as this is being catastrophized due to misrepresentation of over-exaggerated aspects of abuse. Those professional reporters, news framers and news producers (15 from each category) who reported that they have been reporting on such matters in past five years or more were targeted as potential participants' of current research. Interview protocol guide was employed in this regard. The findings revealed that sexual abuse news content stakeholders reported that they had limited skills, technical insight, personal emotional issues, emotional exhaustion and burnout, limited insight regarding experts in dealing sensitive matters and diffusion of responsibilities due to which such news content was handled by them inapt ways. They also reported as having individual, familial, contextual and cultural factors that caused them hurdles. The emerging themes revealed that relevant education paucity not only stand out as foundational deficit rather also makes us turn into debilitated state of dismay. Furthermore, lack of relevant training in framing of such sensational news, fear of consequences and professional burn out are emerged as other main themes .

Keywords: child sexual abuse; media policy; TV web channels

When children are growing they are trained never to talk about their biological selves and feel embarrassed to inquire the issues related to sex; so much so that even when there are puberty times and children have started getting developmental transitions in their lives, they are discouraged to ask their parents about the bodily changes and to share their bodily concerns. The repercussions of such normative patterns of living with inhibited and suppressed attitudes toward sex education reprimand certain adverse outcomes. With the promulgation of *Zainab* Alert, Response and Recovery Act 2020, heavy responsibility lies on researchers to bring into highlights the social impact of *child sexual abuse (CSA)* and facilitate the media policy framework in dealing with such sensitive cases so that media consumers impact could be made proactive and affirmative. This is being realized that impact of child sexual abuse reporting is colossal and there are apathetic reporting procedures adhered by the reporters at large since no clearer framework policy for reporting of child sexual abuse related cases exists currently (Avais, Narijo, & Parker, 2020).

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Therefore, this research work has potential of being insightful in revealing the discrete dimensions of this intriguing topic. The present study is first phase of the momentous work to unearth the impact of CSA reporting from the perspective of children, their caregivers, and the professionals dealing with them using qualitative research methodology. This is being realized that trauma is revived, whenever some media source or channel tends to display the case scenario thereby jeopardizing the well-being of the victim and even for media consumers by providing emotional and psychosocial repercussions to the people involved, thus delineating the significance of styles of CSA news media reporting (Avais, Narijo, & Parker, 2020).

Media not only creates social awareness about child sexual abuse (CSA) through news coverage, analysis, and intervention, but also places the problem of child abuse in the minds of the public, and on the political and social agenda (Brawley, 1995). The media coverage of the issue has a major impact as it helps people to understand what CSA is and why child protection and safeguarding policies and services are required. The study analyzes the coverage, representation, and advocacy role of media in initiating a dialogue about prevention, in terms of building collective responsibilities for the public safety of children. It further helps to understand the social and cultural changes taking place in the society, emphasizing Indian and Pakistani media; as Indian media is consumed at large among Pakistani media consumers and how these changes help the institutions of alternative care to focus on broader solutions by improving the climate for prevention (Kumar & Semetko, 2018).

The crucial role of media tends to be significant in determining people's attitudes and behavior (Saunders & Goddard, 2001). In fact, the media plays crucial role in drawing attention to the essential role of the media in increasing society's awareness of, and response to, child abuse and neglect. Of particular concern is the role played by news and features that are reported on specific child abuse cases, as well as in documentaries and in so many of the intervention strategies. This sort of media attention extended towards crucial matters of child sexual abuse has been pivotal in positively determining public, professional, and political responses of the consumers and also helps in highlighting the concerning aspects in which children and young people find themselves stuck (Nguyen, 2022). This is, in fact, the constructive role of media in curbing this menace and that can serve as an effective tool or means of advocating proactively the causes for children, young people, and their families (Brawley, 1995).

Pakistan happens to be one of those countries where sex education stands as a cursed domain to be discussed. Media has its own vested trend sets to present sensitive news such as child sexual abuse. Irrespective of the considerations that have been laid in Islam and the Holy Quran for training and teaching human beings on their sex-related issues, Pakistan as an Islamic state has failed to promulgate the Islamic principles of teaching in its curriculum. In pre-partition times, Muslims stayed with Hindus for such a long time that their rites and rituals started getting reflected in the living (Avais, Narijo & Parker, 2020). Sex-related issues have been taken as sinful aspects of one's life and they are prohibited to be talked over. Due to this grim situation, there lie adverse outcomes and complications for young ones. From very young age, children are taught not to ask questions related to their sexuality. Few fanatic believers feel that sex-education would mean: spreading the vulgarity (Najafabady, Salmani, & Abedi, 2011). They forget that there are always positive and constructive means of imparting education and they need to dispel their insecurities and fears. There is the likelihood

of having a better secure, sex-crime-free society if people are properly guided and children are imparted rightful education to make themselves secure. Media literacy-related measures towards sex education and how to present sensitive news, appear to be the only resolving strategy for all the complicated upheavals that ignorance keeps rising in such matters.

From the past many decades, there has been a foreign influx of media, and children and youth are confronting much more communication challenges than what people had a few decades back. There had been scanty reports and incidences of sex crime against children in the past but this trend and ratio have risen much higher. Despite the fact that sexual crimes conducted against children have increased multifold, no professional efforts have been invested to devise preventive and curbing strategies against such heinous crimes (Easton et al., 2014). The menace of child molestation, rapes etc. have taken the worst form with a wild spread in dark-net websites where worth billion rupees' business is carried up by showing the children as dummied actors in sexual crimes (Srivastava, Seth, & Van Niekerk, 2013). This horrific finding has created a wave of fear and shock and this has stimulated caretakers, parents, media educationists, media-stakeholders and psychologists to work for the development of such school based sexual abuse prevention programs that can train children to stay safe and secure. This is substantiated that prevention is better than cure so the promulgation of this preventive program is likely to safeguard and secure the future victims. There is likely to be the reduced sexual crime rate against minors (Alaggia, 2010; Collin-Vézina et al., 2015; Easton et al., 2014; Hunter, 2011; Ungar, Tutty, McConnell, Barter, & Fairholm, 2009).

If current scenario is appraised out, this would become clear that in spite of efforts of so many Non-Governmental Organizations' efforts, there does not lie any structure, systematic, feasible child-sexual abuse preventions program. Pakistani children have been suffering colossal from past one decade as the informal analysis about the sexual abuse of children reveal that there are 5 minors per day who go through the torture of sexual abuse; some of them get reported at family level and there they are suppressed while fewer get reported and very fewer have evident the perpetrator seeking its damned punishment (Avais, Narijo, & Parker, 2020).

There has been a growing body of research examining the differences between traditional media and web-based media still in developing countries like Pakistan, traditional media, such as television and newspapers, are often seen as more authoritative and credible. Web-based media, such as social media and blogs, are often seen as more interactive and participatory.

Additionally, this has been noted that web-based media is often significant in presenting greater diversity of opinions and viewpoints, while traditional media might express as limited in gaining direct information of the media consumers. New digital web based media offers significant avenue in presenting the platform for shaping public opinion and influencing behavior. This is generally observed now-a-days that Pakistani media carries such professional practices that daily compromise their ethical and moral standards, and the age of digitalization is even much more diverse as that is fairly free from regulatory by laws. Such empirical work while addressing sensitive issues must strengthen the perception among the masses that journalists are not performing their moral and ethical duties and responsibilities properly. Due to the fact that profit making is primal targeted objective of major media houses these days. Sources validation and source authentication have almost become nil practice (Ali,

2021). Still people cannot negate the fact that due to profusion of internet, the web based digital media has become a dynamic and consistent source of information, (Wathen & Burkell, 2002). Diffusion of electronic media in digital media is a stark reality that can never be escaped (Garrison, 2003). Both traditional and web-based News media are influencing public opinions by disseminating basic and shallow knowledge and are creating a huge number of uniformed individuals, often armed with irrationality and biases (Quackenbush, 2013).

Most of the empirical work that is done in Pakistan has been observational, descriptive, and anecdotal. In fact, the data collected through survey methods and interviews with small sample sizes have been the hallmark feature of such research (Avais, Narijo, & Parker, 2020; Sahil, 2003). In such investigations, the role of prevention by considering the etiological factors and triggering factors are being ignored; this is just by the dint of digital media that confluence of macro risk factors, such as poverty, paucity of resources, low-income level, poor legal protections, illiteracy, burdened family size, and joblessness tend to lead to the verge of such massive social issues like violence against children. Most of the data on child sexual abuse prevalence is sought through media reports; even if such cases are not reported to the law enforcement authorities, they are still recorded by the media reports. However, the dearth of research in this domain, specifically, the lack of empirical data makes it difficult to assess the magnitude of this alarming issue (Easton et al., 2014). The health repercussions, lifelong deficits, and hazardous aftereffects to victims' families are some of the issues that are only raised by media professionals through multiple platforms of digital media. Still, the extent of human potential destroyed during all this is unknown. This is only through media research that focused empirical work in order to examine the prevalence, potential interventions, and policies in child sexual abuse prevention domain in Pakistan can be undertaken.

Child sexual abuse (CSA) is a global problem that affects millions of children worldwide. Research has identified several factors that may be correlated with CSA, including gender, age, socioeconomic status, family structure, and cultural factors. In Asia, there is a need for more research on the correlates of CSA, as well as on the prevalence and impact of CSA in different countries and cultural contexts. The empirical data has shown that children in Pakistan have very limited awareness regarding sexual education, such as a research survey for aged 16-25 years, reported that 25.3% have never been taught about any kind of sexual health education, 32.7% don't have desired gender professionals to communicate with, and 42% have secondary source of information including internet, parents and telephone help-lines (Talpur & Khowaja, 2012).

Some specific areas that require more attention include the role of cultural norms and values in perpetuating CSA, the impact of poverty and economic inequality on children's vulnerability to CSA, and the effectiveness of prevention and intervention strategies in Asian contexts. Overall, there is a pressing need for more research on CSA in Asia at large and in Pakistan more specifically, in order to better understand the problem and develop effective prevention and intervention strategies. This research mainly aims to examine the various dimensions of child sexual abuse reporting from the perspectives of media news reporters, framers and producers, and its ultimate contribution in framing the issue-specific policy guidelines.

The main objectives which would be targeted in the current research include but are not limited to: a) to explore the professional challenges as experienced by reporters, media news framers and producers in reporting child sexual abuse incidents, b) to examine the perspectives of major stakeholders c) to highlight the expected guidelines in the light of feedback as given by respondents that could ultimately be proposed as potential news framing policy (while displaying the child sexual assault news on Web-TV channels).

Research Questions

The qualitative and exploratory phase includes the following research questions: a) What are significant psychosocial experiential challenges that media reporters, news framers and child sexual abuse news producers experience? b) What are significant feedback features that need to be potentially added in news framing policy while displaying the child sexual assault news on Web-TV channels? c) What are the stakeholders' perspectives on child sexual abuse? d) What are potential challenges faced while reporting on such stigmatized and ethics bound topics? e) What are potential barriers while reporting on such stigmatized and ethics bound topics?

Method

Research Design

This exploratory, explanatory research was laid out as insightful first step that is likely to help in executing the need assessment of the preventive program and to devise the policy guidelines for child sexual abuse reporting on digital media such as web TV. The main research strategy was based on thematic analysis.

Sample and Participants

The sample consisted of major stake holders of child sexual abuse news reporting phenomenon comprising news reporters, news-framers and news-producers. In this particular phase, in-depth interviews were executed with 15 media reporters, 15 news-framers, and 15 news producers (n=45).

Inclusion and Exclusion Criterion

Media reporters, news-framers, news producers that have been dealing with sensitive news media content from past two years or more, were included in the current research. Those have at least graduate Media degree and the ones that were actively working on some digital media from past two years and were engaged in traditional media platforms earlier, were included.

Procedure

After formal approval from authorized sources, the interview protocol guide was developed after rigorous discussion from all literature review and concerned stakeholders, dealing with cases and media content of child sexual abuse. The interview protocol guide was critically reviewed by the experts from constructivists' aspects. All of the interviews were recorded. Thematic analysis strategy was used in this regard, in accumulating the most prevailing, frequent, leading repetitive themes related to current conditions, prevalent in the domains of news framing and transmission.

Questions:
Main Question 1: What are significant psychosocial experiential challenges that media reporters, news framers and child sexual abuse news producers experience?

Probing Questions:

      a)   How do you recognize or suspect CSA victims in children while media reporting?

      b)   What are the common symptom presentations that rise in CSA reporting?

      c)   How do cultural factors play a role in determining the reporting and presentation?

      d)   How do you handle such reporting, once CSA is indicated?

Main Question 2: What are significant feedback features that need to be potentially added in news framing policy while displaying the child sexual assault news on Web-TV channels?

      a)   How professional barriers create threats and challenges in reporting CSA?

      b)   Do you think social services agencies collaborate in managing such cases?

      c)   Is there any formal training in media reporting of such sensitive issues at large and specifically that you received?

      d)   What professional ethics based guidelines do you suggest in this regard?

Main Question 3: What are potential barriers while reporting on such stigmatized and ethics bound topics?

Results

      The data so collected, was put to analyses in systematic manner through thematic analysis that has been narrated by Braun and Clark (2006) as an analysis method in which systematic patterns or forms are recognized that help in producing comprehensive, repetitive themes; there is careful reading, review and critical review that is undertaken by expert researchers and that helps in building model of iterative process of inductive analysis (Fereday & Muir-Cochrane, 2006).

      The data is analyzed, coded, organized and reorganized multiple times for the generation of logical categories, in addition to themes and subthemes. The creation of within, between and subthemes helped in producing the preliminary themes from critically analyzed data. All these steps have been amply clarified in step wise schema chart given below:

Electronic and manual recordings of all transcripts from interviews saved successfully
Written transcript of recorded sessions prepared
Merged transcript was prepared containing transcripts of all the Interviews
After reading and re-reading each line of the transcript various codes were assigned manually for each of significant sentences to be analyzed
Codes were matched with manually written notes of the Interview sessions to ensure the inclusion of any new information
Agreement on codes from independent evaluators taken
If between evaluators consensus on New code >50% = Code Modified
Based on similarity of codes, potential sub-themes were assigned to codes using colour coding technique
Similar sub-themes: name and psychological construct were grouped into themes Master chart was prepared for each category
Overlapping sub themes were further merged into broader themes and naming of the themes done

Figure 1: *Flowchart of the procedure followed in qualitative analysis*

Socio-demographic Characteristics

      Mean age of the reporters and news-framers and producers was 35.65 years; 39.21 years and 52.43 years respectively. Most of them had worked in print and digital media on alternately basis. The means reported general experience of reporters and news-framers and producers, was 13 years, 7 years and 18 years respectively.

Table 1

Finalized Themes & Sub-Nodes

Identified & Finalized Themes/Nodes	Sub-nodes	News Reporters	News Framers	News Producers
Education Paucity	**a.** Limited	85%	76%	81%
	b. Unaligned to work	65%	68%	72%
	c. Non –availability of adequate education & Training	73%	75%	77%
Fear of Consequences	**a.** From victim	65%	62%	75%
	b. From perpetrator	62%	71%	72%
	c. From other social stakeholders	86%	75%	81%
Reporting Norms & Routine	**a.** Mundane	82%	71%	78%
	b. Casual	73%	82%	81%
	c. Apathetic	80%	77%	83%
	d. Unconcerned	81%	67%	78%
Emotional Burnout	**a.** Anxiety	82%	74%	82%
	b. Stress	83%	73%	77%
	c. Depression	78%	76%	67%
Social Services	**a.** Lack of social services	43%	56%	65%
	b. Limited resources	53%	65%	66%
	c. Non responsive feedback from social services	62%	72%	73%
	d. Clash of authorities			
	e. Lack of cooperation & coordination among functional agents	66% / 71%	76% / 65%	56% / 68%
Barriers to CSA Reporting	**a.** Individual	76%	66%	77%
	b. Familial	67%	56%	68%
	c. Contextual	81%	72%	81%
	d. Cultural factors	72%	71%	71%
Lack of Training	**a.** Technical insight	67%	67%	77%
	b. Technical knowledge	77%	78%	85%
	c. Technical training	73%	81%	84%
Diffusion of Responsibilities & Cases Overlapping Trampling	**a.** Deferring responsibility to report to rightful forum	76%	81%	77%
	b. Unavailability of specialized and expert care	67%	76%	79%

Qualitative Interpretation

This research has been successful in identifying various themes; out of which some have been discussed here in order to impart insight to general readers. Paucity of education is the first topic that has been gleaned from the collected data. This was evident that stakeholders framing child sexual abuse news admitted that they were not being able to capture such news effectively due to limited education that they carried. Some of them reported such as the ones holding duties for reporting that the education that they had received so far does not align with the work that they have undertaken. They raised concern regarding inclusion of training and scenario-specific field training that could ultimately help them to carry out their work on more prolific grounds. There has been certain group of professionals that also reported that such crimes are typically executed by the people who have been in influential backing; thereby this gets extremely difficult sometimes to report

the matter accurately as there are continuous threats and victimization by the perpetrators. The research has established that the best practices for training journalists in reporting sensitive news include providing ethical guidelines, teaching cultural sensitivity, and offering resources for self-care and support (UNESCO, 2021).

Similarly, this was being reported that sometimes the reporting norms and permissibility checks implicated on channels by Pakistan Electronic Media Regulatory Authority (PEMRA) and other regulatory authorities in addition to departmentalism constraints restricted accurate and compassionate reporting by the child sexual abuse news stakeholders. Casual, apathetic and unconcerned attitude by the news media holders also turns out to be major limitation sometimes. Among all stake holders, news reporters reported maximum emotional exhaustion and burn out. Almost all stakeholders reported that there was apathetic and ill-concerned behavior of social services provision agencies who were supposed to play their proactive role in helping the victims and their caretakers survive the trauma.

News-stakeholders also maintained that there were quite serious and grim aspects related to self, professional, financial, contextual, cultural and technical nature that lead to create a state of helplessness and state of being adrift not only on the behalf of victims but also on the behalf of reporters. Almost all the stakeholders were of the view that there is collective state to dehumanize the matter by all forums. Therefore, News stakeholders also turn out to be apathetic and start pursuing only commercial incentives.

Discussion

Generally, this was maintained with consensus by all three groups of respondents' groups that depending on the media outlet, locale, and culture, the styles and context of news reporting on child sexual abuse might differ significantly across cities. Nonetheless, some recurring themes and patterns in news reportage on child sex abuse are discussed below. These themes may not be exhaustive, but they can provide a starting point for understanding the common issues and concerns related to child sexual abuse's impact in news reporting.

The most significant themes that emerged from news-framers perspectives were multifold. Foremostly, this was evident that there is a major limitation in education and relevant training in the framing of such sensational news. In traditional training platforms which are available at academic and news production forums, there is paucity of news data content. The available data content is not only limited rather does not align with the targeted goals and objectives of the news content. The patterns of relevant education paucity not only stand out as foundational deficit rather also makes us turn into debilitated state of dismay. This is being reported that news framers and news producers have aspiration to be equipped in their relevant skills and some if not all keep making their personal systematic efforts to acquire training regarding framing patterns of different news genre yet there is no cohesive and formal platform available in Pakistan that could emerge as professional training cater for such media personnel. Thereby, so far they have been trying at personal levels to grasp the relevant skills and expertise by being a part of every other available relevant media training forum. Many news framers report (72%) that children are apparently too young in so many of the cases, too young of being capable of telling in the first place what exactly happened with them. Sometimes in identifying perpetrators, as such heinous crimes occur in darkness and they while reporting to concerned professionals and reporters, they are in a continuous

state of fear blame and disbelief from non-offending adults (Finklhor & Ormrod, 2001). This being reported that, more than 200 reporters have been trained under the project and training is ongoing. UNDP's long-term engagement with the media sector has already paid off, with the trained reporters increasingly contributing to a more professional and inclusive media sector in Albania. Project monitoring shows a trend towards better overall coverage of multinational communities and the challenges they face, as well as an increase in the number of positive stories about these communities (UNDP, 2021).

Still, the paucity of knowledge from formal educational platforms turns them incapacitated to handle such sensitive news content by adhering to absolute insight into such topics. Dong et al., (2004) also cited the likewise illustrations in their exponential study that limited knowledge tends to emerge as big barrier in objective reporting of news pertaining child sexual abuse. This was also illustrated in this study that dealing with sensitive circumstances in news reporting requires ample training and expertise in order to provide accurate news reporting.

Another leading theme that was encompassed as having major and sub nodes included as stark fear of consequences which happened to be maximal for news reporters as they tended to be the front field bearers of such news. In most of such cases the perpetrators tended to be powerful, having nuisance position and dominating with ample societal position; due to which the phenomenon of reporting the criminal details of such influential people proves to be a great challenge and threat for the people at large. This can be substantiated by past empirical evidence as well such as one such study narrated that the parent's adverse experiences in their efforts to seek justice with the criminal justice system like courts, police, and concerned social services institutes insensitivity and the financial and non-material pressures and strain in due to course of seeking justice from the court (Sauzier, 1989). Furthermore, people may also not report CSA cases so as not to dishonor the family's name (Fasihuddin, 2006). Children often do not disclose their abuse verbally, but demonstrate distress by their behaviour (Newland, 2017).

Sometimes even the informants, caretakers and family members of the victim exerted pressure to hide the matter and to suppress it in order to safe their public image and reputation. Conventionally this is in practice to place the maximal blame and allegations on victim such as regarding and labeling them as vulnerable and susceptible to crime and abuse.

Some past researches while delving on this point has maintained that in order to increase reporting one sensible policy would be to make the experience more positive for CSA victims and their families, however obviously what is preferable is to prevent CSA offenses from occurring in the first instance (Gillani, 2009). In Pakistan some other reasons in addition to these are, lack of knowledge regarding the different forms of CSA, denial due to the perception that Pakistan is an ideological state following Islamic ideals, the society is somehow immune to immorality and even if there is a problem of CSA it is on a very small scale (CCRC, 2009).

Taylor and Norma (2013) also highlighted that sexual abuse cases of children tend to be strained by dint of social pressures and challenges and cannot be justified for valid and accurate reporting. This is being observed further that due to professional burn out elements, most of the reporters and news framers carried the tendency to report sensitive news like this in most mundane, casual, apathetic, and apartheid manner. That sounded callous pattern of reporting while some would endorse it as framing it as objective ways of

reporting the matter. In fact, there lies very thin lining between news reporting in professional care vs. framing and reporting/ presenting news in factual yet bitter means and ways. This has been corroborated by the study of (Radakin et al., 2021), who maintains that lack of expertise and intellectual sensitivity in reporting child sexual abuse leads to major problems. Even some reporters had the tendency to report sensitive news with the least concern and professional regard and maintained that they adopted an unconcerned pattern in order to safeguard their emotional and psychological well-being. Denov (2004) has provided similar findings that news reporting in the case of media personnel who are exposed to continuous trauma, they either adopt an estranged and distant approach or they tend to be involved awfully, causing them to be drawn into mental distress.

Yet there have been reports by some of the news reporters, framers and producers that the brutality narrated in such incidents and happenings caused them much of the psychological distress. The experiences of trauma tended to resonate in their mind as recurrent episode and just like rescue workers, they fell direct victim of absorbing the burn out from such events. Therefore, after direct exposure to such events, they experienced stark states of anxiety, stress and depression and few also reported that they had to seek formal professional help in order to overcome and circumvent the negative impact of such trauma.

In seeking updates regarding news framing, there was still very significant dimensional information that was obtained such as some stated that such news coverage opened up new avenues of societal information and challenges to them. Since in so many of the cases while such news coverage they came across the bitter facts of limited social services. So many of the departments from crime and health sector that got involved tended to be in constant friction and clash in handling such news phenomenon. Each of the government department tried to get away from their due responsibilities and created further challenges and problems to the victims' families. This lack of cooperation from diverse functional agents therefore resulted to be the major source of distress for the victims, its family members and also for professionals involved in case-narration coverage (Brawley, 1995).

There were diverse individual, cultural, familial and social factors that were reported as possible challenges such as people reported that victims' themselves were not interested in revealing the details due to all these above challenges and avoided sharing open information. Further this was highlighted that technical trainings in successful media coverage is required in which not only content related expertise should be held by news stake holders rather they must be having technical strengths in order to carry out their pivotal responsibilities. The scarcity of specialized care and lack of awareness in dealing aptly such incidents by the experts resulted in much trauma for all major stake holders involved in child sexual abuse cases; thereby reprimanding the due concern to include the rightful forum involvement at the right time in order to overcome the undue hassles to victims, their families and for media framers.

Conclusion
In a nutshell, this is concluded that there is dire urge among professionals too, to adopt clear rules and procedures for ethical reporting on child sexual abuse. This is insightful to maintain here for media regulatory authorities that there must be pre-stipulation protocols of news framing as the consumption of digital web TV and media is on continuous rise. This can help indeed to resolve many ethical and media-consumers related issues and problems. Such forums and avenues of training wherein sensitive content news framers and

reporters can find proactive outlets and channels in order to solve social dilemma must be made available. This entails disseminating correct and verified facts, refraining from sensationalism, preserving the privacy and dignity of victims, and giving the general public accurate and thorough information. In order to ensure that reporting on child sexual abuse is ethical and promotes constructive societal change, it invokes the need for increased cooperation with law enforcement organizations and victim advocate groups.

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Policy Regime Analysis of Border Security Governance in Myanmar: A Preliminary Case Study of Myawaddy (2020–2021)

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This study is a case-study research that explores the anatomy of Myanmar's border security governance using the Myawaddy Township as an exploratory case study. To explore how the Burmese borderlands, represented by Myawaddy, have been governed, the policy–regime approach is adopted as a conceptual framework to illustrate the idiosyncrasies, including relevant parties and their interactions. It was found that the following actors are involved in the security governance of borderlands: ethnic armed organisation, local bureaucratic agencies, Border Guard Forces (BGFs) and foreign interest groups. *Prima facie*, civil government agencies have performed their duties of overseeing border activities; however, they appear to have only *de jure* authority, serving as soft infrastructures for the lawful border economy. Contrarily, Karen BGF leaders, appointed by the Tatmadaw (i.e. Myanmar armed forces), have held *de facto* authority, controlling and benefiting from the border's shadow economy—which is marked by gambling businesses—as well as from running protection rackets. Still, the BGF units in Myawaddy have retained a considerable degree of autonomy without necessarily following the Tatmadaw's order. In a nutshell, border security governance in Myanmar's Myawaddy consists of several governing modes existing in parallel and, hence, it is prismatic in nature .

Keywords: Border Guard Force, border security governance, Myanmar, Myawaddy

In Myanmar, a multitude of underlying problems—notably, ethnic exclusion from state power, unresolved ethnic group grievances, competition over scarce resources, fractured leadership in state administration and growing foreign influences—have provided fault lines for violent conflict. There are approximately 135 ethnic groups in Myanmar, most of which have played a role in armed hostilities at one point in time (International Institute for Strategic Studies [IISS], 2021). In its report, the International Institute for Strategic Studies (IISS) identified 20 ethnic-armed organisations (EAOs) as key conflict parties in Myanmar besides the Tatmadaw or Myanmar armed forces (IISS, 2020). Characteristically, EAOs have controlled vast areas of land, especially along borderlands, and run parallel administration

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systems with their own militias (Bashar & Wai, 2016). Such complications have become more difficult to manage because in Myanmar, modernisation (i.e. the installation of modern political structures such as government internal security controls) has remained incomplete, flawed and fragile. Given the complex situations, learning what has transpired in such border security settings is indeed a difficult but still necessary task.

The ongoing armed conflicts in Myanmar, fuelled by the Tatmadaw coup in Naypyidaw in February 2021, followed by the brutal crackdowns on anti-coup protests across the country (Ardeth, 2021), have complicated the picture of the country's border security actors as well as that of their governing patterns. The border security actors include inter alia, EAOs, Border Guard Force (BGF) battalions and other semi-private militias (see Ong, 2021). Yet, little is known about how borderlands have been governed, and thus, border security governance has become an urgent issue for exploratory policy research.

This study sheds light on Myanmar's border security governance by using Myawaddy as an exploratory case study. The Myawaddy Township was selected as a case study for exploration due to its significance and dynamism. For example, politico-economically, two border checkpoints between Myanmar and Thailand are located in the township. Additionally, the township has recently made headlines worldwide due to grey activities growing in such area, which may thereby reflect how border security was governed.

Being an exploratory case-study research, our research questions are straightforward, namely:

- What parties are involved in border security governance in Myawaddy?
- What does Myawaddy's border security governance look like?

Since the goal is 'exploratory,' both case and approach are selectively used based on situations examined. To explore the border security governance in the non-Western context, political sociology is deliberately applied, owing to its interdisciplinary nature (see Hicks et al., 2003). Specifically, Wilson's (2000) policy–regime approach is used as a conceptual framework to map the institutional essence of Myanmar's border security governance using the case of the Myawaddy Township.

Policy–Regime Approach

Conducting research on the political sociology of border governance in general, and on border security in particular, in developing countries is challenging. This is partially due to the fact that for non-democratic or hybrid regimes, borderland management is highly securitised and is therefore considered one element of territorial security (Can & Çağla, 2016). This is partly because of the politico-economic dynamics within and surrounding the border areas (Ackleson, 2011). Entering and exploring borderlands in Myanmar, a long-closed country, has become even more difficult since the short-lived elected government was recently toppled by the military (Dussud, 2021). Despite this however, as Ackleson (2011) suggested, border politics and security can be understood in terms of policy regimes. In doing so, Wilson's (2000) policy–regime approach seems to work well in explaining multi-dimensional issues such as border security governance (see Ackleson, 2011). Therefore, his approach is applied as a conceptual lens in this study, and is summarised below.

Borrowing the tenets of regime theory and widely used in the study of international relations (Kratochwil & Ruggie, 1986), Wilson's (2000) policy–regime lens approaches the unit of analysis differently than do prevailing policy analysis tools. For instance, rather than

beginning with one particular policy that is treated analytically as a study object, policy–regime perspectives—including Wilson's (2000)—start with a specific set of public problems—technically referred to as an issue area—that includes cybercrime, unlawful immigration and viral epidemics. The perspectives then identify and describe a constellation of attributes that make up the specified issue area (May & Jochim, 2013). Regarding the definition of policy regimes, the present study relied heavily—albeit not exclusively—on the paper by Wilson (2000) in which policy regimes are concisely defined as institutional governing arrangements that 'are organised around specific issue areas' (p. 257).

According to Wilson (2000), policy regimes have four dimensions: (1) arrangement of power; (2) policy paradigm; (3) government organisation; and (4) policy goals, rules and routines. These dimensions are detailed as follows.

Arrangement of power
This involves actors playing roles in a given area of issues. The arrangement of power can exist in a variety of patterns. For instance, there may be one private sector or a few interest groups, while the state limits its role to rule-making and adjudication. In some circumstances however, the state may do the opposite. Specifically, it can serve as a power broker or a key player, directly managing the affairs of particular public issues along with one or several allied interest groups.

Policy paradigm
This dimension is the presiding paradigm whereby many problems are defined and certain strands of public policy are considered preferable in resolving problematic issues. The policy paradigm is also referred to as interpretive structures. In foreign policy research, for example, the structures of interpretation have been particularly highlighted (e.g. Norris, 1997). Policy paradigms are shaped and disseminated by several kinds of actors ranging from practitioners to media to scholarly observers.

Government organisation
This dimension is responsible for policymaking arrangements and their implementation structure. The former includes inter alia, a group of decision- and policymakers (from national executives to technocrats) and a variety of institutions (from parliamentary committees to government bureaus). Meanwhile, implementation structure includes policy-implementing agencies at multiple levels.

Policy goals, rules and routines
The final dimension is a policy by itself, and specifically, it embodies the policy–regime goals. Further, this dimension incorporates the rules and routines administered by the policy-implementing agencies. All of these factors functionally reinforce the policy's legitimation.

All dimensions of the policy regime tend to bring about long-term stability, making a substantive change in the policy regime less likely. Nevertheless, the policy regime change might take place under some conditions such as a legitimacy crisis or power shift. This change might be triggered by precipitating factors such as major international turning points, which are best exemplified by the disintegration of the Soviet Union.

Method

This study employed an exploratory case study method (Gerring, 2006), and the case was interpreted through a conceptual lens to explore its idiosyncrasies (see Stake, 1978). That said, applying the policy–regime model enabled us to frame our description of Myawaddy's border security governance using a set of hypothetical guidelines. Notwithstanding this, an in-situ description of interactions among actors noted during fieldwork was weighted equally in our assessment.

The data collection was carried out during two visits to the Myawaddy–Mae Sot border and nearby communities in May 2021. This fieldwork was conducted by the first and fourth authors, who are fluent in Burmese and familiar with field research along the Myanmar–Thailand border areas. During the field visits, unstructured interviews were held with 10 stakeholders, the minimum sample size for policy-related research, as recommended by Dunn (2008). The stakeholders included border officials, army officers, local politicians and local business people. Due to the sensitivity of the relevant issues such as illicit border activities, all informants participated in the interviews anonymously. Given the fast-growing severity of the situations in Myawaddy and wider Myanmar during the time of writing (i.e., from June 2021 to January 2022), interviews cited in this paper are deliberately brief so as to ensure the safety and confidentiality of the informants. In addition, secondary types of data, including media outlet reports and scholarly publications, were used as supplementary sources.

The present study is limited to the period from 2020 to mid-2021. Given the limitations of data collection (especially border-crossing difficulties) and in citing the data (due to escalating armed clashes in Myawaddy Township and wider regions), the account that follows should be regarded as tentative.

Ethical Approval

The ethical approval for this study was granted by the Human Research Ethics Committee of Thammasat University (approval number: 044/2564), while the need for informed consent was waived by the Committee at the request of the authors.

Study Area

The study area was the township of Myawaddy, the only township in Myawaddy District in the Kayin State of southeast Myanmar. To the north, Myawaddy Township borders Hlaingbwe, a township of Hpa-an District, and to the south, it shares a border with Kyainseikgyi, a township of Kawkareik District. The township borders Kawkareik, another township of the same district, on the west and Thailand's Mae Sot on the east (General Administration Department, 2019). Myawaddy consists of three towns, 10 wards, 17 village-tracts and 57 villages. Its administrative seat is the town of Myawaddy, which is tiny and covers about 3 km^2. Myawaddy Township is approximately 3,136 km^2 in area, and the total town area is 1,285 km^2 (Myanmar Investment Commission, 2017).

According to the 2019 census, the total population of Myawaddy Township is 139,510; around 40% reside in town, whereas 60% live outside town. In 2019, nearly 90% of the population practised Buddhism, around 8% were Christians and 2% were Muslims (General Administration Department, 2019).

Results

This section presents the findings, partially based on field visits, and our interpretation framed by Wilson's (2000) policy–regime approach, thereby outlining the tentative components of border security governance in Myawaddy. To simplify the understanding of the findings, the policy–regime dimensions of the case study presented below are ordered differently from Wilson's (2000) series. We begin by summarising the policy regime and its paradigm, then we follow this with a description of the power and policymaking arrangements as well as the implementation structure.

Policy Regime and Its Paradigm

Border security governance in Myanmar drew attention when the junta began promoting the formation of new militias—an initiative to transform the ceasefire factions of EAOs into Tatmadaw militia and paramilitary groups—in April 2009. There were two schemes under the initiative: (1) the BGF; and (2) the People's Militia Force (PMF). The former was organisationally more stringent, wherein it required the integration of Tatmadaw soldiers. More precisely, around 3% of the new battalion's composition—approximately 30 regulars—were sent from Myanmar's armed forces (Maung, 2014). The requirement did not apply to the PMFs (Buchanan, 2016).

Although no official documents delineating the BGF scheme were released (Myanmar Peace Monitor, n.d.), the Tatmadaw made a vague reference to Chapter VII of Myanmar's Constitution—particularly Article 338 which reads, '[a]ll the armed forces in the Union shall be under the command of the Defence Services' ('Constitution of the Republic of the Union of Myanmar,' 2008)—as a rationale of the scheme (Caballero-Anthony et al., 2013). Officially, both the BGFs and PMFs have fallen under the de jure chain of command of the Tatmadaw. In reality, however, they have retained a degree of autonomy in their activities and have preserved the de facto power to lead (Beehner, 2018; Maung, 2014). Moreover, PMFs have enjoyed even greater autonomy because no Tatmadaw officers were appointed within their forces (Jolliffe et al., 2017).

The Tatmadaw's formation of new militias and paramilitary groups should not be misconstrued as a synergy necessarily bringing about peace or ending violence. Arguably, one consensus reached among Myanmar specialists has been that BGFs and PMFs were behind a variety of violent acts ranging from serious crimes to severe human rights violations, including extortion, forced labour and rape (Chaturvedi, 2012; Priamarizki, 2020; van der Maat & Holmes, 2021; Yoni, 2021). Further, majority of scholars have shared the common view that the Tatmadaw could not effectively command some BGF units, and BGFs—especially those under powerful ethnic elites—reportedly resisted the orders of the Tatmadaw from time to time (Buchanan, 2016; Jolliffe et al., 2017; Maung, 2014). Hence, the Tatmadaw's initiative of forming new militias should be deemed as a mode of governing distant areas that the top-down power of Myanmar's armed forces has been unable to reach (Jolliffe et al., 2017).

Ethnic minority leaders who aligned their armed groups with the Tatmadaw received economic benefits and business opportunities in return. The case of Colonel Saw Chit Thu, who led Karen BGF units in the Myawaddy borderland, was cited in that regard (Ong, 2021).

Arrangement of Power

From 2020 to mid-2021, there were at least six key parties involved directly and indirectly in activities surrounding the border polity in Myawaddy. They were: (1) the Karen

National Union (KNU); (2) the Karen National Liberation Army–Peace Council (KNLA-PC); (3) the Democratic Karen Benevolent Army (DKBA-5); (4) local bureaucratic agencies, excluding regiments and units of the Tatmadaw; (5) BGFs; and (6) foreign interest groups. While the first three were EAOs, the next two were part of the Burmese state. However, it must be noted that BGFs were not under the control of the civilian government, unlike bureaucratic agencies including police forces, in Myawaddy Township. The last group was composed of foreign nationals running businesses in Myawaddy, and their brief details are described below.

Ethnic armed organisations: At least three EAOs were key parties involved in border activities in Myawaddy: (1) the KNU, (2) the KNLA-PC and (3) the DKBA–5. These EAOs were under the umbrella group of the Nationwide Ceasefire Agreement–Signatory (NCA–S), and as of early 2021, all were allies against the Tatmadaw (IISS, 2020). In terms of armed strength, the KNU, KNLA-PC and DKBA–5 had approximately 5,000, 200 and 1,500 fighters, respectively (IISS, 2020). Furthermore, their capabilities included small field arms, AK-47 machineguns, M16 rifles, rocket-propelled grenades and landmines (IISS, 2021). A large proportion of armed supplies, including older hand grenades, were illicitly imported with assistance from sub-state actors in nearby countries (Anon. 1, personal communication, May 10, 2021).

The EAOs have controlled the areas surrounding Myawaddy Township where BGF units were posted, and have engaged in guerrilla warfare against Myanmar's armed forces. Economically, the EAOs reportedly relied heavily—though not exclusively—on the shadow economy, including illicit drug trafficking and sales (Su-Ann Oh, 2013). Also, protection rackets such as illegal taxation along KNU-controlled logistic routes to central Myanmar have been prevalent (Mekong Economics & ADRA Myanmar, 2015; Su-Ann Oh, 2013). Allegedly, illegal taxation notably collecting protection money was arranged and conducted in a sort of informal collaboration with the BGF units (Anon. 1, personal communication, May 10, 2021).

Apart from this, the EAOs in Myawaddy have had close ties with foreign interest groups, especially those running businesses in the black market, and as a result, the movement of the EAOs has not been limited to Myanmar's territory. On the contrary, they have enjoyed a degree of cross-border mobility (Anon. 2, personal communication, May 11, 2021). More precisely, EAO fighters reportedly infiltrated and resided in refugee camps in nearby countries (Murshid, 2012). Such ability to cross the border, in turn, has given them leverage in the guerrilla war by using hide-and-seek tactics (Beehner, 2018).

In spite of their warfare strength and rich resources, EAOs were neither monolithic nor firmly unified. Rather, institutionalisation inside the EAOs has remained inherently vulnerable, flawed and fragmented (see Brenner, 2019). This probably explains why EAOs in Myanmar have been easily split into several separate, smaller cells (Bashar & Kyaw San Wai, 2016), as well as partitioned into separate units that have been rebranded as Tatmadaw-appointed BGFs (Buchanan, 2016).

Local bureaucratic agencies: Prima facie, Myawaddy Township has formal administrative structures through which modern bureaucratic organisations have been functioning. For instance, public services (e.g. hospitals and schools) are provided by the government, and local branches of the bureaucracy such as customs offices are in place—superficially at least—and perform their duties. All these have functioned as soft

infrastructures for a border gate, serving the country's open-door policy. That said, the raison d'être of local administrative bodies is to serve the formal border economy (e.g. cross-border trade and border industrial zones) with the flows of foreign direct investments from overseas (Kudo, 2013).

Still, the formal administrative structures (i.e. local bureaucratic agencies) have had limited authority in enforcing the law to regulate cross-border activities in daily life; as such, illegal flows of money, goods and people have been prevalent. The reality of cross-border interactions has been in the hands of actors other than civil government agencies (Lee, 2015), and ostensibly, such actors with de facto authority include, above all, Tatmadaw's BGFs and PMFs (Jolliffe et al., 2017).

Border Guard Forces: By and large, EAOs in Myanmar have been fragmental and fluid, organisationally (Brenner, 2019). Some armed groups within the EAOs operating in Myawaddy accepted the Tatmadaw's proposal, joining the state military as Karen BGF units.

Five BGF battalions have been stationed around civilian settlements in Myawaddy Township; they include battalions 1017, 1018, 1019, 1020 and 1022. The former four units were run under Colonel Saw Chit Thu, while the last was under Major Saw Mote Thon. The dividing line between the zones of control of the former and the latter units in Myawaddy is Asian Highway 1 (AH1), a land route connecting a border town of Myawaddy and the former capital, Yangon. BGF battalions commanded by Colonel Chit Thu have controlled the northern areas, whereas the battalion commanded by Major Saw Mote Thon has controlled the southern ones (Anon. 1, personal communication, May 10, 2021).

In return for becoming Tatmadaw militias, Karen BGF leaders were given access to economic resources and to business opportunities in border areas, thereby granting them de facto authority to control illegal cross-border flows of cash, goods, services and people (Chambers, 2021; Woods, 2011). For instance, they ran protection rackets for gambling businesses and casinos along the Myawaddy–Mae Sot border owned by foreign businessmen, many of whom were khaki-clad giants and cronies in neighbouring countries (Anon. 3, personal communication, May 11, 2021). Furthermore, BGF commanders assumed the role of middlemen, illegally taxing the import of prohibited goods that were transported through natural border channels from Thailand. Banned products included, for example, seasoning powder (monosodium glutamate), liquor and second-hand automobiles (Anon. 3, personal communication, May 11, 2021).

In sum, Karen BGF commanders were awarded economic resource concessions from land grabbing to illegal-business running, which have allowed them to enjoy economic privileges over others. This Tatmadaw–BGF symbiosis was aptly described by Woods (2011) as 'ceasefire capitalism.'

Foreign interest groups: The Tatmadaw, ethnic minority leaders and foreign interest groups have ostensibly had complex interdependent ties, feeding what might be called Khaki capitalism both at the national and border levels (Chambers, 2021). Like borderlands elsewhere in Myanmar, owing to Naypyidaw's legalisation of gambling for foreign tourists in special border regions (Nitta, 2018), cross-border casino tourism has been prevailing in Myawaddy (Neef, 2021).

The sources of capital flows into the gambling sector in Myawaddy have been diversified in recent years. Unlike the past when casinos were largely linked to a khaki-clad capital network in Thailand, recently, a Chinese investor group's project of building a new casino megaresort—that is, Shwe Kokko New City—in the north of Myawaddy Township has made headlines globally (Ong, 2020). Yatai International Holding Group, a Hong Kong-registered investment company headquartered in Bangkok, made an initial investment of US$500 million and reportedly signed an agreement with Colonel Saw Chit Thu, the key leader of the Karen BGF units, in September 2017 (Neef, 2021). In early 2020, the investment company falsely claimed that the project was part of China's Belt and Road Initiative's economic corridor projects, resulting in investigations by both Burmese and Chinese authorities (Nyein Nyein, 2019).

Regardless of the company's advertisements and the BGF's claims, the Shwe Kokko New City turned out to be a hub of online Chinese gambling platforms (Ong, 2020), and it was accused of being linked to transnational Chinese criminal networks involved in virtual gambling, money laundering and violent crime. Therefore, these networks reportedly fled from Cambodia's Sihanoukville, their former operation centre, where the Chinese mafia committed a series of brutal crimes (see Tower & Clapp, 2020), including human smuggling (Benar News, 2021).

Given the huge amount of capital flows into Myawaddy, the expanding role and growing influence of Chinese interest groups should not be overlooked. The Shwe Kokko New City exemplifies the deep shadow economies in the Myanmar borderlands. More importantly, it illustrates the impotence of the government in Naypyidaw and of the Tatmadaw in governing the country's peripheral regions (Ong, 2020). This includes their inability to enforce law and order to prevent the Kayin State from becoming the Chinatown of illicit digital-casino enclaves and to promote sustainable development.

Policymaking Arrangements and the Implementation Structure
From 2010 onwards, BGF units were established in Myawaddy as a consequence of the Naypyidaw's effort to break up existing EAOs throughout the country (Buchanan, 2016). In Myawaddy, several armed factions recruited from Karen insurgents took the Naypyidaw side and have become Karen BGF battalions. Those joining the Tatmadaw BGF included inter alia, the members and soldiers of the DKBA Battalion 999, led by Colonel Saw Chit Thu, a highly influential military commander who used to be under the DKBA's wing (Than, 2010). He was then appointed as senior advisor and general secretary of the Karen State BGF central command located in Hpa-an District (Karen Human Rights Group, 2018).

Organisationally, as already mentioned, Karen BGF units are under the loose control of the Tatmadaw. Nonetheless, they have occasionally tended to act like semi-private militias, and have not strictly followed the orders issued by Myanmar's military (Bashar & Kyaw San Wai, 2016). That is, the BGF battalions have retained a degree of autonomy in their choices of action. In late February 2021, for example, those in charge of the Karen BGF units turned a blind eye to, and simply enabled, a battalion of armed Karen soldiers that moved to protect and guard anti-coup protesters in the border town of Myawaddy (South, 2021). However, to those involved in the Myawaddy–Mae Sot borderlands, this kind of situation was not unexpected (Anon. 2, personal communication, May 11, 2021).

It is noteworthy that armed leaders joining the Tatmadaw BGF, such as Colonel Chit Thu, have shown a considerable degree of latitude when it comes to matters of their personal

relations with the leading enemy commanders. Recently, for example, Colonel Chit Thu reportedly attended the funeral of General Saw Jaw Phu, the late commander of the KNLA Brigade 7, in June 2021 (@4newskarenstate, 2021). Apparently, regardless of any officially assigned mission, ethnic oligarchs and warlords in the Kayin State have retained their personal ties, shared ethnicism and mutual benefits. Therefore, Karen BGF battalions seem to share some characteristics of private militias rather than having professional features of modern military entities. Arguably, they are very fluid in terms of their political alignment (Anon. 1, personal communication, May 10, 2021).

Although Karen BGF units under the leadership of Colonel Chit Thu continued fighting alongside Myanmar's armed forces against EAOs, especially KNU fighters, after the coup in February 2021 (Karen Information Centre, 2021b), his battalions reportedly did not completely follow the order issued by the Tatmadaw, as stated earlier. In June 2021, besides attending the late General Jaw Phu's funeral, it was reported that Colonel Chit Thu and senior leaders of the KNU, KNLA-PC and DKBA–5 attended the meeting held at KNU headquarters in Hpa-an District to discuss a cessation of hostilities among Karen armed forces (Karen Information Centre, 2021a; Mon News Agency, 2021). At the meeting, Colonel Chit Thu said,

> …the rate of death toll amongst our forces is getting high because of being attacked seriously, and this situation leads to the negative potential. I want all of you know that our [BGF] is a strong armed-group, having lots of forces. Now, I am not threatening you. It is true that KNU leaders are also my teachers and parents. Since BGF is the one whose main responsibility is to protect and maintain the security of border areas, I urge the responsible persons to restrict sniping to our troops who are on service (as cited in Mon News Agency, 2021).

More recently, there have been unconfirmed reports that armed operations of the Karen BGF units in Myawaddy were broken up. According to one source, the reason was that Karen BGF leaders, especially Colonel Saw Chit Thu, intended to take revenge on the Tatmadaw because he, along with other commanders, had been pressured and demanded to resign following their involvement in the Shwe Kokko New City project (Finney, 2021; The Nation, 2021). Still, the Tatmadaw's demands were later abandoned since the junta needed Karen BGF militias to secure order and stability during the coup and after the topple of the civilian government (Anon. 3, personal communication, May 11, 2021).

Discussion and Conclusion

The preceding section has already answered the two research questions with regard to the key parties involved in and the anatomy of border security governance, thus fulfilling the overall objective that is exploratory. This section discusses our findings, that is, we address how the situation in Myawaddy's borderlands—particularly its border governance—should be understood.

First and foremost, it is clear that neither the government (before the coup) nor the Tatmadaw have had the governance capacity to effectively govern activities in the Myawaddy borderlands. For instance, they were even unable to fully control Karen BGF units, which were supposed to function as part of the state apparatus. The information obtained during the fieldwork corresponds to that from the literature in that BGFs (and PMFs) had characteristics of (semi-) private militias rather than modern military corps, especially in terms of their formal structure and rules (Bashar & Kyaw, 2016; Brenner, 2019; Buchanan, 2016).

While local bureaucratic agencies have been present in Myawaddy Township, they seem to have only de jure authority, regulating legal activities and overseeing the lawful economy. That said, such agencies were unable to enforce law and order over the actors (i.e. Karen BGFs) with the de facto authority granted by the Tatmadaw, who were involved in illegal cross-border activities and who controlled the shadow economy in the border area. In other words, both the lawful and unlawful modes of governing have coexisted in parallel, and the latter appears to be much more powerful than the former. Apparently, this is not peculiar to administration in Myanmar's borderlands. To some extent, such a condition is similar to what happened in Pakistan's Federally Administered Tribal Areas, albeit differing in context (see Ullah, 2019).

Administratively speaking, border security governance in Myanmar, as the Myawaddy case demonstrates, is arguably similar to what is known as a 'prismatic polity' in that Western forms of governance—including the organisation of modern armed forces—have camouflaged traditional social contracts (see Basu, 2021). Therefore, the modern mode of administration (e.g. bureaucracy and a modernised military) has become entangled in the concealed, older institutions of the bygone age. This has resulted in formalism—that is, substantial decoupling between form and reality, and notably, authority and control, law and enforcement as well as policy and practice—in other words, a divorce between structure and effective function (Riggs, 1964).

Through our policy–regime analysis of Myawaddy border security governance, the main conclusion reached is that border administration in Myanmar is primarily of a prismatic nature: a modern governance system has displaced but not replaced or fully eliminated the old political establishment. Consequently, to understand border security governance and the ongoing violent conflicts along Myanmar's borderlands after the 2021 coup, it is essential to explore the history of the event. Thus, in future research on border politics and policy in Myanmar, the prismatic condition should be regarded as a basic premise for making sense of Burmese border dynamics. The same shall be considered in any policy recommendations for policymakers in foreign capitals.

Acknowledgement

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Curriculum of Higher Education for Fostering Economic Development in Pakistan

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Education is deliberated comprehensively as a gadget for growing financial development, authorizing people, valuing individual incomes, and humanizing a satisfying and elastic atmosphere that concretes the way for a well-off economy. It also offers suggestions gearing the new generations to contract with the contests of markets in the future. Deprived of a vigorous education curriculum, neither economic nor social development is conceivable in Pakistan. The main purpose of this study is to investigate the role of curriculum of higher education for fostering the economic development and find out relationship between curriculum and economic development. The subjects of this research were university students and sample of 600 university students were selected via stratified and simple random procedure. The collected data was analyzed by using descriptive statistics frequency percentage and correlation on SPSS version 28.0. The results exposed the low indications that the Pakistani curriculum is teaching the techniques of financial learning, financial intelligence to its youth. The results found that participants were incapable to capitalize and grasp businesses in the global market to revel in financial independence. Positive descriptions for educational institutes entails to update their curriculum with acquaint practical courses for youth with boosted job scenarios in the marketplace. A robust positive correlation between financial knowledge and job opportunities as an apprise in the curriculum with modern-day mandatory subjects can resulted to enhance opportunities for graduates in the job market .

Keywords: curriculum, higher education, financial intelligence, financial literacy, economic development

Education is the process of acquiring knowledge, skills, values, and attitudes through formal or informal means. It is a lifelong journey that involves the systematic and deliberate transfer of information and learning experiences from one generation to another. Education archetypally occur institutions, through self-directed learning and practical experiences. Educational level categorized into low, medium and high. Primary level corresponded to medium to secondary, and high to tertiary education (Zohar et al., 2022). Primary and secondary education provide the introductory knowledge and skills essential for higher education. Universalization of primary education diversification of secondary education and specialization of higher education has remained the goal of developing nations. Perceived in this context higher education primary purpose is to develop knowledge need specialized skills for socio economic development. Higher education institutions, frequently depend on a well-educated pool of students impending from primary and secondary education systems. The

quality of higher education can be affected by the readiness and preparation of students at lower levels.

There is a strong correlation between the overall education level of a population and the economic growth of a country, the higher education significantly impacts the economic growth of the country (Zhu et al., 2018). Universities provide students with an opportunity to acquire knowledge and develop a wide variety of attitudes and characteristics for personal development as well as association with society. It is the demand of era that universities to ensure their role as provider of education so that graduates have the right skills to meet the demands of the labor market (Okolie et al., 2019). Universities also need to prepare their graduates for the labor market by adapting their curricula to current and future labor market demands. Higher education with employability; recommending the two-dimensional model of the employability-related personnel and the factors of the market; supporting students' careers by providing the model of career advice from the employers, and universities and providing policy implications regarding the future funding of higher education and employability of graduates (Donald et al., 2018). Higher education plays a significant role in shaping the economy, society, and overall progress of a nation through productivity, personal development career preparation skilled workforce, research and innovation, technology integration, entrepreneurship, policy development and relevance curriculum which impact on economic development.

Economic development is perceived as significant for nations to reduce poverty by providing more and more jobs, higher incomes, modern production techniques, and improved goods and services. Economic development is investing in people's lives, bringing material prosperity and an improvement in the quality of life of individual satisfaction and well-being. Higher education provides information and skills that the labor market requires. It enhances standard of living and provides a slew of social benefits to both people and society. In the current scenario, as the world is moving at a faster pace towards modernization and innovation; it is the need of the hour to promote higher education in Pakistan because higher education, economic growth, and novelty are linked with each other.

Adopting a 21st-century curriculum should blend knowledge, thinking, innovative skills, media, Information and Communication Technology (ICT) literacy, and real-life experience in the context of core academic subjects. To achieve authentic learning that is demanded in the 21st century. Students engage in the learning environment effectively and develop 21st-century skills such as critical thinking, problem-solving, and collaboration. In this way, students will be prepared with the necessary knowledge and life skills that will help them be successful in their future careers (Lombardi & Oblinger, 2007).

A well-crafted curriculum can equip students with the necessary skills and knowledge required to meet the demands of the job market. It is crucial for Pakistan's policymakers and education stakeholders to review regularly and update the higher education curriculum to stay aligned with the changing economic landscape market needed curriculum of higher education which foster the economic growth of the country (Zohar et al., 2022). The relationship between level of education and household income in the justification of political violence in the moderating effect of poverty at the country level. Economic development as transferring capital from current methods of production to new innovative, productivity-enhancing methods (Schultez, 1961). Higher education brings innovation through the development of skills (Peters et al., 2020). Many studies have been undertaken to evaluate the value of higher education in Pakistan, however, they are primarily based on secondary data

and do not measure the influence of education on Pakistan's socioeconomic progress (Rieckmann, 2019). By investing in and continuously improving the curriculum, Pakistan can ensure that its higher education curriculum can plays a vital role in driving economic development and prosperity in the country. This study aims to identify those factors and aspects to produce the job oriented curriculum which is essential for economic development.

Literature Review
Higher education and Economic Development

Education has a great impact on the economy of a country. Therefore, spending on education is considered a kind of investment, that increases individual human capital and makes society more productive (Higgins, 2014). Gunawardena et al., (2020) described that education also fosters social mobility by helping those who were poor or underprivileged to better their social and economic status. Increased educational attainment in one generation led to increase schooling, work productivity, and income in the following generation, resulting in intergenerational economic and social advantages, individuals' cognitive and soft skills improved because of the education. Xu et al., (2020) identified that higher education brings innovation through the development of skills. Higher education promotes the socioeconomic development of developing countries by increasing people's productivity or developing human capital (Volchik et al., 2018). Higher education significantly impacts the economic growth of the country it is also highlighted by Kotaskova et al., (2018). Hamdan et al., (2020) discussed that higher education is an investment in the growth of human capital that contributes significantly to a country's economic success. Higher education is becoming an important component of countries' development towards knowledge economies. It helps to develop educated workers who can deal with the knowledge economy, higher education helps individuals socialize, aids in the modernization and development of civilizations, and perhaps most crucially, helps to generate, absorb, and spread information through teaching and scientific research.

Chankseliani et al., (2021) offered to provide a new empirical and conceptual insight, how higher education can contribute in meeting and exceeding the goals set by the sustainable development goals. The capacity to increase efficiency and effectiveness in executing all activities also to bear influence on the quality of technical and vocational higher education environment, competence and knowledge may prepare a responsible individual to take responsibilities that will help to grow economically, drawing data from Palestinians in Gaza as deliberated by Assaf (2018). Higher remuneration to individual workers increases job-finding opportunities, the ability to earn financial and non-financial rewards, and job mobility options.

Ali and Jalal (2018) Sustainability-focused stated that there was a significant positive relationship between higher education and employment was evident that higher education has a significant impact on employment and is used as a predictor. Based on the findings systems were offered that the educational ministry uses its resources to support proper structural reforms in employment directions and the expansion of higher education. Pakistan's higher education system has its share of shortcomings, including inadequate quality management, institutional structure, and gaps in knowledge when comparing educational systems from different cultures. To enhance the effectiveness of the current higher education setup in Pakistan and transform the country into an educational hub, there is a need to bolster the education system. This involves embracing modern technology and making strides in the field of higher education (Murtaza & Hui 2021). Education serves as the backbone of a nation's growth, providing the essential support for progress. Pakistan's current education system calls

for urgent, practical, and effective reforms to address pressing challenges such as equal access, gender parity, and teacher availability before 2019, requiring a doubling of education funding. Any changes to the curriculum should stem from a deep grasp of the existing context, with crucial input from teachers, who understand their students best. Empowering teachers to tackle academic and professional issues through reflection and research is vital. Encouraging continuous curriculum enrichment aligned with classroom needs is equally important. These educators are professionals whose insights on school management and education matter greatly. A collaborative approach involving teachers and curriculum experts is necessary for fostering the exchange of ideas and practical experiences. Despite prior budget constraints, it's imperative to reassess priorities and maintain a forward-looking trajectory for the nation's growth (Jahantab 2021).

Pakistan has achieved great progress in growing the quality of its institutions in recent decades, but it still has a long way to go in terms to provide the human resources for the growth of the contemporary knowledge-based economy prom by promoting its higher education system (Rehman, 2021). Pakistan allocates approximately 2.5 percent of its GDP towards education, a proportion that falls short when considering the sizable population that requires access to quality education (Alwi et al., 2021).

Pakistan's economic growth reached 1.3 percent in the financial year (FY) 2021 and then improve to an average of 2.7 percent in the financial year (FY) 2022-23. However, considering the third and most contagious wave of the epidemic presently circulating in the country, the baseline economic growth prediction appeared quite questionable during the Covid Pandemic as reported by Najy (2021).

World Bank (2021) updated Pakistan's development data concerning South Asia's Economic Focus. A multiple-time World Bank study examined the economic developments and possibilities as well as policy problems in the area. While economic activity in South Asia appeared to be recovering, recovery weak, the economic outlook hazardous and a cost-benefit analysis of vaccination in the region was provided by the study, which examined a variety of vaccine distribution factors.

Role of Curriculum in Economic development
The curriculum is the hub of educational programs. It encompasses a diverse range of processes, curricula, products, and internships. Designers set goals and outcomes and emphasize education while planning. It helps implement teaching and learning methods, engagement in learning, and student experience. The curriculum also needs to be continuously evaluated to know what is of value. When it comes to higher education, curricula are designed taking into account the social, economic, physical and cultural environment and to identify the needs of society and students. Universities well-designed curriculum is paramount to achieving academic excellence as well as inculcating competencies and skills in the learners (Fahimirad et al., 2019). The major aim of lecturers, managers of the universities and policymakers to motivate the students with knowledge self-efficacy` and skills (Okolie et al., 2019).

Okanovic et al., (2021) conducted a comparison of the three distinct methodologies for evaluating sustainable university activities; the study was carried out at Novi University. The purpose of the study was to highlight the competitiveness of higher education by evaluating green content in the curriculum. The findings demonstrated that the eco-labeling

methodology was useful for sustainable goal development, additionally, it will benefit all stakeholder's university as well.

Gunarathne (2019) discussed digital transformation as a significant force for change in the education sector. The study's findings provided reasons for industry players to reevaluate their educational offerings and the organization of the entire business model. As a result, the industry's players must incorporate a curriculum that encourages students to use active learning strategies. by Turan, (2020). This will inspire policymakers, businesses, and higher education institutions to build coalitions to develop innovative funding resources and employment partnerships that lead to progress in sustainable development. A curriculum is a means to achieve educational goals. Education plans in Pakistan do not meet today's requirements. The psychological, philosophical, and social foundations of education must be built so that educational goals can be achieved. Pakistan's current curriculum falls short of modern teaching and research standards (Alvi et al., 2021). The Quality Assurance Agency (QAA) is a policymaking and oversight entity that works to improve and ensure quality in higher education institutions. It is concerned with the systematic execution of quality improvement procedures/criteria at the institutional and Program levels to achieve higher levels of international compatibility and competitiveness (HEC, 2021). Segura & Gonzale (2021) the quality of workers' education and in-country training is an important factor in deciding how well its financial system will operate. There will be a variety of industries in a typical developed economy; each has its competitive strengths and weaknesses in the global market.

Financial Literacy, Financial independence and Financial intelligence emerging in curriculum of higher education.

Rana and Mishra (2022) defined that literacy refers to the level of education that an individual has acquired, but financial literacy is complete different from the literacy. An individual who has a professional degree, but it cannot be ensured that he is one is financially literate. FL essentially manages our own money; it can be said that we use our funds profitably to improves our level an exit that leads automatically to the economic development of the country. According to OECD (2013) "financial literacy is a blend of knowledge awareness, attitude, skills, competency and behavior rationale of financial decisions that is ultimately for human welfare". Financial literacy is included all inspiration and motivation for its development, awareness promises of self-improvement in sphere of finance, charity motivated to higher earnings (the need to help those in need) and a sensible disposition for earned money. In this way taking under consideration these view pints, financial literacy is characterized as a combination of knowledge and aptitude to accomplish the funds of individuals in a productive way to ensure financial independence and to contribute in the events of charity.

Ozdemir (2022) examined that for advancement of society financial literacy level of students needs to increase from school to university as the financial literacy levels of students are low. Financial literacy can be emerged in the curriculum and compliance and related activities can be created according to the stated objectives that leads to the culture of society (Kuzma et al., 2022).

Kozina and Metljak (2022) described that results showed that for developing viable and effective financial literacy curriculum the involving of teachers is significant for formulation of strategy of teaching financial content.

 Segura and Gonzalez (2019) researched the growing network of international colocations; it was worth noting the increasing number of institutions and countries publishing on the impact of financial intelligence and literacy on entrepreneurial creativity. In general, the study of the relationship between financial literacy and creative entrepreneurship has emerged as a relevant research area in both developed and underdeveloped countries.

Financial intelligence is about the confidence and ability to do whatever it takes, because everything in life has a direct or indirect connection with money. Money's either enhancing or inhibiting what people might be able to do. In order to learn the basic management of money, financial intelligence must apply a disciplined approach and acquire skills that are necessary in order to be properly responsible for finances. One of the five components of a twenty first century education, which delivers financial and wealth building outcomes for people who deserve them, is financial intelligence. Emotional intelligence, four basic skills, results of purpose action and life by design are the other four components. To ensure success in life, these five elements have paramount importance.

Financial intelligence has emerged as a dimension in the economics of planning and curriculum development. Accessibility of employment opportunities and the improvement of employment conditions, monitoring of work-life skills, having higher education institutions increase graduate's employability rates with work-related learning offers and various business collaborations, improving skill-matching and consultancy services, and enhancing lifelong learning opportunities for alumni (Alpaydın & Kultrk, 2022).

The curriculum of higher education was traversed and examined by Rehman (2021) encompassing two decades' analysis of public and private universities denoted that the country developed tremendous progress in increasing the quality of education needed to produce necessary human resources for the growth of modern economy-based knowledge. Peters et al., (2020) identified that in the current scenario, the world is moving at a faster pace toward modernization and innovation. It was the need of the hour to promote higher education in Pakistan because higher education, economic growth, and novelty are linked with each other. While Pakistan has achieved tremendous progress in increasing the quality of its institutions in recent decades, it still has a long way to go in terms of upgrading its higher education system to offer the human resources required for the development of a modern knowledge-based economy (Rehman, 2021).

Objectives
Owing to the importance of curriculum in higher education for employment, this paper formulated the following objectives:
To find out the role of higher education curriculum in economic development.
To find out the relationship between financial education curricula (financial literacy, financial intelligence international competitiveness and modern day curriculum) and economic development in Pakistan.

Method
The design of this investigation was quantitative in nature that was used to find out the relationship among the variables (Cresswell & Cresswell, 2017). The goal of this design is to ultimately reach a reasonable and well-founded, authenticated, and valid conclusion about the particular phenomenon (Cresswell & Plano, 2011). Male and female of social sciences students of the universities were targeted respondents in this research were pursuing degrees, diploma and postgraduate scholars in a variety of fields (Gunarathne, 2019). Statistically

ensuring significant results a sample size was calculated to use a determinant equation. (Yamane, 1967). In this regard 20 selected universities of Islamabad and Punjab were covered a total of 600 respondents initially but 560 students fully responded as sample in this study.

Instrument

According to Leung (2001), the type of information takes into account an individual's or organization's level of knowledge, attitudes, personality, beliefs, and preferences. Surveys are often used to collect such information and to accumulate genuine data. Proper questionnaire design is likewise from people to quantitatively and systematically analyzed data. Surveys permit the collection of factual data, and good survey design is essential to ensure valid answers to questions**.** A specific questionnaire was designed and administered in this research. Seven dimensions were identified from the literature review and measured on a five-point Likert scale. The students marked one out of five choices i.e. strongly agreed (SA) agreed, (A) disagreed, (DA) strongly disagreed (SDA) and (UN) uncertain. Four dimensions were identified for higher education curriculum and three for the impact of curriculum on economic development. According to Connelly (2008), the pilot study is carried out with a 5% population of the study which is not part of the sample to confirm the reliability and authenticity of the tool. In this research study, there were selected the students of 3 universities for pilot testing. The data was collected through a questionnaire received from respondents and was analyzed through SPSS. In the pilot test process, many experts contributed to confirming the validity and reliability of the tool.

These tools were reviewed in the light of expert comments and then the tools were administered for the sample member of the study who was not part of the main study. Further changes were made in the light of observations, and the result of the pilot study helped the researcher to improve the tool.

Validity and Reliability of Tool

Before collecting the data, the tool's authenticity was established. The instrument's face and content validity was finalized and validated through the experts. In a set of questions any inconsistencies will give results of unstable. In addition, Cronbach's alpha coefficient of each dimension was found above 0.7 indicating the reliability of dimension measures. The validity of the questionnaire was checked by experts and internal consistency reliability of the overall scale was established with the help of Cronbach's alpha at 0.76. The refusal rate of the questionnaire was 3.5%. Reliability co-efficient (Cronbach alpha) values calculated after piloting of the instruments as .873 for the questionnaire. The content validity of the tool was assessed by associating the distinct questions with the objectives of the study. Instruments were devised from the perspective of the expert's opinion and authenticated based on proposals suggested by the specialists improved and submissions were combined subsequently and finally.

Collection of Data

Quantitative data was collected from university students through a questionnaire in this study to find out the relationship between education and these indicators posted by the researcher as shown following the conceptual framework in Figure 1.
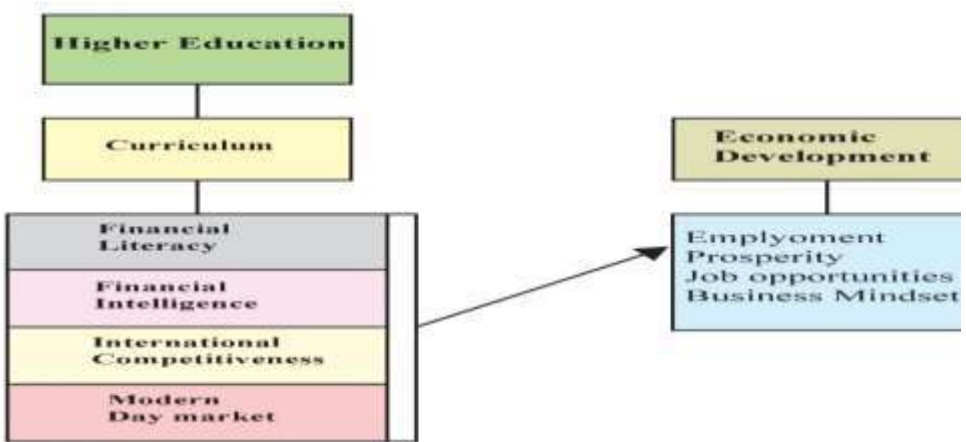
Figure: 1 Conceptual framework

Data Analysis

The primary data was analyzed after collection of data through a questionnaire tool. The statistical package (SPSS) version 28 includes a validation process (Huck, 2012). Validating model measurements were involved the aspects that were used to investigate the component factor analysis. The descriptive statistics, and correlation was done by using Kendall, s tau b test. The data was tabulated and formulated in this section.

Results

Curriculum impact on economic development has been tested and results have been extracted from the respondents. In Table 1, seven selected dimensions were tested under the impact of curriculum on economic development.

Table 1

Perceptions of students towards the impact of curriculum on economic development.

Sr. No	Dimensions	SDA	DA	UN	A	SA	Mean
	Curriculum						
1	Financial intelligence	290 (51.6)	209 (37.2)	36 (6.4)	16 (2.8)	10 (1.81)	3.63
2	Financial literacy	306 (54.4)	200 (35.6)	29 (5.21)	14 (2.51)	12 (2.10)	3.53
3	International Competitive	218 (31.8)	211 (37.5)	40 (7.10)	37 (6.62)	52 (9.32)	3.64
4	Modern day market	35 (12.12)	38 (12.13)	102 (8)	211 (37.5)	170 (30.2)	4.19
	Economic development						
5	employment	19 (2.9)	29 (5.21)	56 (10.0)	238 (42.3)	215 (38.3)	3.89
6	Prosperity	17 (3.3)	70 (12.51)	54 (9.65)	154 (27.3)	165 (47.3)	4.23
7	Job opportunities	13 (2.3)	18 (3.2)	21 (3.7)	315 (56.01)	193 (34.3)	4.27

The dimension of financial intelligence in Table 1 in terms of the statement that the Pakistani curriculum teaches the techniques of financial learning to its youth, shows the results that 2.8% of students agreed and 1.8% strongly agreed while the students who responded disagreed 37% and 51.6% strongly disagreed with the said statement while only 6.4% remained uncertain on this statement. The results show that the majority was not satisfied with the statement and also clear from the mean score (3.63).

In Table 1 the dimension of financial literacy in terms of the statement that the Pakistani curriculum teaches the techniques of financial literacy to its youth shows that 2.10% of students strongly agreed, students 2.1% agreed while only 5.2% remained uncertain in this statement whereas 54.4% strongly disagreed and 35.6% disagreed with the statement. The tabulated results show that the majority of the students disagreed with this statement. The mean score of 3.53 also proved the claim.

The statement in Table 1 indicated that we have changed the traditional mindset that cannot compete with international competition in terms of dimensions "internationally competitive" Table shows that 9.3% of students strongly agreed and 6.62% agreed with this statement. Only 7.1% gave no response and remained uncertain. The student's responses resulted in a term of strongly disagreed 31.8 and disagreed. The majority thought that they were not satisfied with the statement. The mean score is 3.64 also supported the claim.

The results of the dimension, in Table 1 modern-day market in terms of the statement an updated educational curriculum with the modern-day market can be a source for higher wages in the job market Table 4.6 show that 12.12% of students disagreed and 12.13% agreed. Only 8% remained uncertain about the statement. Meanwhile, 37.5% strongly agreed and 30.2% agreed, this result shows that the majority were satisfied with the statement, and also mean score is 4.19 supported the preposition.

The dimension in Table 1 "employment" in terms of the statement that a major employment is the demise of the curriculum taught to students in Table 1 showed that 42.3% of students agreed and 38.3% strongly agreed whereas 5.21% disagreed and 2.9% strongly disagreed with the statement and 10% remained uncertain and gave no response. From the results, it was founded that the majority were satisfied with the condition. The mean score of 3.89 also confirmed the statement.

The dimension prosperity in Table 1 in terms of the statement need to update our curriculum to bring prosperity in the lives of youth indicated that 27.3% of students agreed and 47.3% strongly agreed whereas 12.15% disagreed and 3.3 % strongly disagreed with the statement and 9.64% remained uncertain. The calculated results show that the majority of the respondents agreed with the statement. The mean value of 4.23 equally supported the claim.

The results of towards the statement in Table 1 showed, our educational institutes need to introduce technical courses for youth for better "job opportunities" in the market, Table 1 indicates that 5.5% of students disagreed and 90.3% agreed. Only 3.7% of the respondents gave no response to the statement or remained neutral. These results are showing that the majority were satisfied with the mean score that was 4.27 showed that the majority of the respondents were not agreed with this statement.

Correlation Analysis between curriculum and economic development

In Table 2 Kendall's tau-b statistical test 1: tau-b measures direction and the strength of association between the two variables on an ordinal scale. The test applied to measure the correlation between curriculum, its variables (financial intelligence, financial literacy modern day and business mindset) and economic development, its variables (employment prosperity job opportunity and international competitiveness).

Table 2
Correlation analysis table

	Variables	FI	FL	MD	BM	EM	PR	JO	IC
1	Financial intelligence	1							
2	Financial Literacy	.030	1.000						
3	Modern day	.031	.007	1.000					
4	Business Mindset	.059	-.005	.94*	1.000				
5	Employment	.004	.023	.58	-.016	1.000			
6	Prosperity	.062	-.057	.82**	-.060	.013	1.000		
7	Job Opportunity	.054	.94**	.064	.076	-.059	.068	1.000	
8	International Competition	.059	.93	-.025	.070	.024	-.056	-.061	1.000

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

In Table 2 Kendall's tau-b statistical test curriculum and economic development, a tabular measure of the direction and strength of the association between two variables on an ordinal scale indicated the result of Kendall's statistical tau-b test showed that there was a significant positive correlation (tau b = .094*) between International Competition and business mindset and modern-day market (tau b=.82**) and business mindset had also a strong positive correlation with financial learning and job opportunities (tau -b =.94**.)

The results exposed the low indications that the Pakistani curriculum is teaching the techniques of financial literacy to its youth. The results revealed that students were unable to invest and grip businesses in the international market to enjoy financial independence. It is essential to modify the traditional attitude in terms of production and trade to contest with international competitors. The modernized educational curriculum is a source for higher earnings in the job market. The majority were satisfied that an update in the course curriculum with modern-day required subjects can result in better opportunities for graduates in the job market. The findings showed on the bases of results that a positive indication for educational institutes requires to update their curriculum with familiarize procedural courses for youth with enhanced job prospects in the market.

The findings of statistical results showed that there was a significant positive correlation between international competition and business mindset as the traditional mindset was found that cannot compete with international competition in terms of its production and trade, the basic result of the poor curriculum introduced in our educational system and the result of the disappointment of educational curriculum showed that students were unable to invest and hold businesses in the international market to avail financial independence. There was also a significant positive correlation between the modern-day market and business mindset. Also, a robust positive correlation between financial knowledge and job opportunities as an apprise in the course curriculum with modern-day obligatory subjects can

result in improved opportunities for graduates in the job market.

Discussion

While Oliver and Jorre, (2018) stressed graduate qualities for employment such as their characteristics most commonly publicized by industries and discipline groups and also looked into how graduate baits were graduated to reduce unemployment in Australia. unemployment was due to the production of graduates/post graduates, not coinciding with the market needs and remaining unemployed. Such an outcome had been in reciprocal agreement work done by Turan (2020) supported with the accessibility of employment opportunities and improvements in terms and conditions for this purposed by Ali and Jalal (2018), Murtaza & Hui (2021), Hassan and Hussain (2020), Ahmed et al., (2014) towards the creation of job opportunities. Such findings are an agreement with the exertion done by Segura (2019) Wheelahan and Moodie (2021) as well as Faboyede and Egbide (2012) stating that in the 21st century education produces financial and wealth-building outcomes that people deserve. Das and Mahapatra (2023) has denoted that financial knowledge financial behavior and financial attitude are three coined components of financial literacy. A significant strong influence of financial literacy has found in wellbeing of the people. The findings indicated that a particular type of financial intelligence and financial literacy is needed (a professional graduate program) in social sciences, education in particular remains within the domains of teaching. Education Planning and Management (EPM) syllabi the curriculum teacher education and related teaching principle theories and research work etc. Such courses as advocated by Segura (2019) link these financial markets, updating markets intelligential a dire need of the hour. A particular type of financial intelligence is needed (a professional graduate program) in social sciences. A curriculum towards quality education, warranting the market needs of the hour, such as findings recorded by the WB reported (2020) and Haque and Nayab (2022) supported by Umar and Hassan (2019) together with Topper (2020). The researchers stressed towards model curriculum, so developed to make/ equip graduates with such competence that is reflected in their imminent participation in educated society and / community development, they also maintained making use of added material, proficiency, information to meet the demands of the national and international job market.

The curriculum of higher education was traversed and examined by Rehman (2021) encompassing two decades of analysis of public and private universities denoted that the country tremendously progressed in increasing the quality of education needed to produce necessary human resources for the growth of modern economy-based knowledge. Simultaneously the government of Pakistan has also documental the increases in expenditure on education for previous financial years from Rs1.5% to 1.7% of the GDP and strengthened various sectors of education, special on higher education (in areas of quality assurance, scholarships to students for MSc, M.Phil. and Ph.D. studies research-based projects findings under ORIC program as well as local and foreign evaluation of the research. Curriculum and economic development had been tested and results have been extracted from the respondents that students were satisfied with the condition that a key reason for joblessness was the expiry of the curriculum imparted to the learners.

Conclusion

Based on the findings of this paper is concluded that education is a powerful instrument for the development of any country. This research indicated that the higher education system contributes for development through its mission and it has responded to contemporary 21st-century challenges by enhancement of several courses similar to financial

intelligence, and financial learning, and introducing technical courses with applied executions for youth by way of enhanced job prospects in the market.

Both local and global research yielded that higher education is the key element of the success of any nation. In the education system, our curriculum of higher education contributes effectively to social and economic development in Pakistan. Further, the curriculum with modern-day required subjects as financial literacy financial intelligence could produce better results and opportunities for graduates in the job market. The curriculum does not decide the future of students in the later stages of their life in Pakistan. Educational institutes need to introduce higher-tech courses for youth with better job opportunities in the market.

It is prerequisite to modernize our curriculum to transport prosperity to the lives of youth. The requirement to frequently reinforce research perspective in directing business-related plans and projects with global publication in journals and periodic evaluation of the curriculum is obligatory. In this regard, an excessive survey of professors, parents, and the expectations and perceptions of the local community might be done.

The government increases funding levels for Higher Education Commission (HEC) to attract more students who will benefit from the rich curricula, develop attractive and marketable programs, put up structures to motivate both professors and students and encourage creativity to enhance sustainable development. The study recommended such type of research with variables of financial literacy and associated variables of the research and its impact on economic development at individual and societal level.

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The Impact of Work-Life Balance on Employee Performance: Examining the Mediating-Moderating Role of Job Satisfaction and Affective Commitment

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The main purpose of this study is to test (1) the influence of work-life balance (WLB) on employee performance (EP), (2) the potential mediating effect of job satisfaction (JS), and (3) the moderating effect of affective commitment (AC) in these relationships. The collected data from 146 employees of a plywood manufacturing company in Indonesia via a self-administered questionnaire survey are subjected to analysis employing the smartPLS-SEM technique. Also, the mediated-moderated procedure recommended by Hayes (2013) is applied to examine the relationships among investigated variables. The results showed that WLB has a significant effect on both EP and JS. Also, AC positively affects EP. Furthermore, the mediational analysis indicated that JS mediates the link between WLB and EP. Moreover, the moderation analysis revealed that AC fails to moderate the effects of WLB and JS on EP[*].

Keywords: WLB, job satisfaction, affective commitment, employee performance, mediated-moderated model

Achieving a healthy work-life balance (WLB) becomes challenging in today's fast-paced world. In the era of increased remote work and mobile technology adoption, people struggle to connect with work even during off-hours. This can result in a persistent sensation of being constantly connected to work and difficulties in maintaining a clear boundary between professional and personal life. However, many employees work long hours (Johari et al., 2018), which leaves little time for other activities or personal lives and responsibilities. This can lead to causing anxiety and tension at home (Uzonwanne & Ijide, 2017) as well as poor performance in the workplace (Borgia et al., 2022).

WLB of employees in Indonesian companies depends on the specific industry, culture, and individual circumstances. However, in the recent period, there has been an increasing acknowledgment of the significance of achieving WLB, specifically in the Indonesian plywood manufacturing company. For example, the standard working hours are usually 40 hours per week (Pratomo, 2014), with five working days (Yestiana et al., 2019) from Monday to Friday. In addition, Indonesian labour laws provide for various types of leave, including annual, maternity/paternity, and religious leave. Employees are generally entitled to paid annual leave, which can range from 12 to 24 days per year, depending on the length of service in the organization. However, while there are positive trends towards WLB in Indonesian companies,

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it is important to note that not all companies may prioritize this equally (Irawanto et al., 2021), depending on the specific company and position within the organization.

Although there are growing bodies of studies that have analyzed the impact of WLB on employee performance (EP), the generalization of its significant effects across cultures, situations, and organizations has not been universally acknowledged. For example, Campo et al., (2021), Irfan et al., (2023) found that WLB significantly affects EP. However, Anita et al., (2020), Katili et al., (2021), Borgia et al., (2022) found that WLB has no effect on EP.

The lack of WLB in most employees around the world puts family and work priorities under pressure, which leads to the cracking of daily responsibilities (Goyal & Arora, 2012). In their in-depth description, Punia and Kamboj (2013) noted that the scarcity of boundaries between work and life can interfere with the professional and personal lives of employees in organizations. Therefore, in relation to these issues and the research gap of previous studies, this study aims to test (1) the influence of WLB on EP, (2) the potential mediation role of job satisfaction (JS), and (3) the moderation role of affective commitment (AC) in these relationships.

Literature Review
Employee performance
Employee performance (EP) refers to the level of productivity and achievement which an employee performs in his/her job roles and responsibilities (Pawar, 2013). EP encompasses various aspects, such as quantity and quality of work, communication, and adherence to policies within organization (Mathis et al., 2015). EP is usually evaluated through various methods such as key performance indicators (KPIs), performance appraisal, feedback from supervisors and colleagues as well as self-evaluation of the targets. High EP is vital for the success of an organization, as it leads to increase higher revenue (Chowdhury et al., 2014).

Previous studies showed that there are many factors affecting EP, including JS (Alam et al., 2023), AC (Ochoa et al,, 2023; Udin et al., 2022), and WLB (Irfan et al., 2023). Employees who possess the ability to maintain equilibrium between their professional and personal spheres, alongside demonstrating dedication towards their employment and organization, are inclined to exhibit elevated levels of performance.

Work-life balance
Work-life balance (WLB) is defined as the balance between the energy and time an individual devotes to his/her work and personal activities outside of work, such as family, hobbies and praying. According to Noon and Blyton (2007), WLB refers to an individual's ability to balance their obligations outside of work properly while avoiding unneeded stress. WLB involves prioritizing and managing one's time and commitments to achieve a sense of equilibrium to feel fulfilled and satisfied in both aspects of their life (Manoj et al., 2022). Maintaining a vigorous balance between work and personal life helps employees increase their level of concentration and reduce stress in their overall activities.

Organizations support WLB for their employees (Kar et al., 2019; Mukhopadhyay, 2023) by (1) offering flexible work arrangements to help employees balance their work and personal life activities, (2) providing adequate vacation time to recharge employees' personal matters without sacrificing their work responsibilities, and (3) supporting employees' wellness and mental health resources to manage their stress and maintain a healthy WLB.

Achieving a good WLB can increase overall productivity and well-being (Kar et al., 2019) and lead to greater JS. When employees are able to balance work responsibilities with their personal lives, they are likely to experience many benefits that can positively influence job performance (Kaya & Karatepe, 2020). Also, balancing work and personal life helps employees develop better time management skills in the workplace to accomplish better work performance (Chatterjee et al., 2023). Several studies have revealed that WLB positively and significantly improves EP (Madogwhe & Omogero, 2023) and JS (Al Dilby & Farmanesh, 2023). Thus,

H1: WLB is positively related to EP.
H2: WLB is positively related to JS.

Job satisfaction

Job satisfaction (JS) refers to an individual's overall feelings and attitudes towards his/her job (Sharif et al., 2021). According to Spector (1997), JS is the extent to which individuals like all elements of their work. JS happens when employees enjoy and feel a sense of accomplishment with their work and believe that the work is valuable and meaningful. As many employees spend a significant portion of their time and energy at work, JS becomes an important component of overall well-being and quality of life (Polychronidou & Chapsa, 2022).

JS can be a subjective experience and is influenced by various elements such as the nature of the work itself, salary, work-life balance, work environment, relationships with superiors and colleagues, and opportunities for career growth and development (Kong et al., 2018). When employees feel satisfied with their job, they are more motivated to exhibiting better performance (Goetz & Wald, 2022; Srimindarti et al., 2020). Also, high JS leads to better mental and physical health of employees contributing to overall greater productivity (Morin et al., 2023). In addition, when employees are able to balance their work demands with their personal life and responsibilities, they are more likely to feel satisfied with their job (Wijaya & Suwandana, 2022), leading to better performance. Hasan et al., (2023) acknowledged that JS positively affects EP. Also, Susanto et al., (2022) found that JS mediates the link between WLB and job performance. Thus,

H3: JS is positively related to EP.
H4: JS mediates the effect of WLB on EP.
Affective commitment

Meyer et al., (2002) define affective commitment (AC) as the willingness and emotional attachment of employees to remain in the organization by considering the values, norms and goals of the organization. AC refers to an employee's emotional attachment and loyalty with his/her organization, team, or group (Mittal et al., 2022). AC is characterized by the employee's willingness to go beyond the requirements of the job and stay with the organization (Khan et al., 2020). Employees who are affectively committed to the organization tend to identify strongly with it and feel a sense of loyalty even in the face of difficulties (Aziz et al., 2020; Mufidah & Mangundjaya, 2018).

Employees with high levels of AC tend to feel a strong sense of belonging, identification, and emotional connection to their organization. This emotional attachment can lead employees to stay with the organization for a longer period of time and ready for change, and increase better performance (Alqudah et al., 2022). Past studies have shown that AC significantly influences EP (Ochoa et al., 2023; Sopiansah et al., 2023). Thus,

H5: AC is positively related to EP.

When employees have a strong AC, they are more engaged with the organization's goals (Abebe & Assemie, 2023). Also, when employees have both a strong AC to their organization and a good WLB, they are more likely to be highly productive in their work (Anita et al., 2020). This is because employees who have a high level of AC view their work as a central part of their identity and are, therefore, more motivated to demonstrate greater levels of job performance. Thus,

H6: AC moderates the relationship between WLB and EP.

AC is very important for organizations because it leads to increase better job performance and higher employee productivity (Leung & Lin, 2022). In addition, when employees are highly committed to the organization, their JS is more strongly related to their performance (Kaur et al., 2020). This is because they are more likely to identify with the goals and values of the organization, and therefore feel more motivated to perform well and exert extra effort to help the organization achieve its goals.

H7: AC moderates the link between JS and EP.
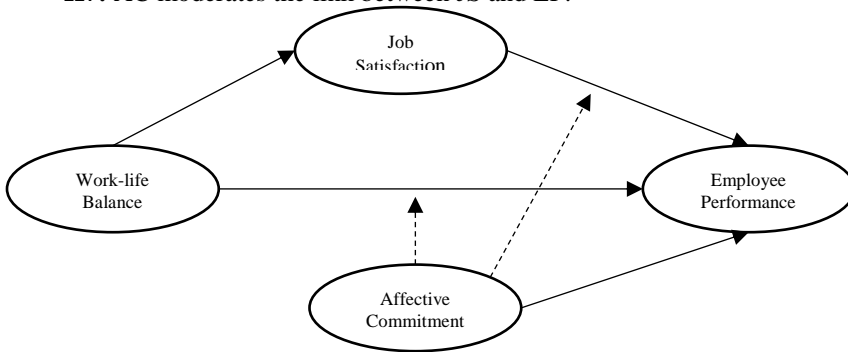
Figure 1. Research framework (Source: Authors)

Method

Sample profile

The quantitative research method was employed to analyze the proposed research model. The individual employee working in the plywood manufacturing company – Indonesia became the unit of analysis in this study and was selected using purpose sampling. A self-administered questionnaire survey was distributed to 150 selected employees and 146 usable questionnaires were returned for further analysis. For gender of the respondents in Table 1, 51.4% are female and 48.6% are male. In terms of age group, 40.4% of the respondents belong to the age group of 31–40 years, followed by 41 to 50 years is 28.8% and 19.2% in the age group of 21–30 years. In addition, the majority of the respondents are about 71.2% had work experience of above 1 year. In more detail, the mean age of respondents is 36.5 with a standard deviation (SD) = 18.16 years.

Table 1
Characteristics of respondents

Respondents	Frequency	Percent (%)
Gender		
Female	75	51.4
Male	71	48.6
Age (years)		
21 – 30	17	11.6
31 – 40	59	40.4
41 – 50	42	28.8
> 50	28	19.2
Tenure (year)		
> 1	104	71.2
< 1	42	28.8

Research instrument

WLB. The 5-item scale (e.g., *working based on family responsibilities makes me a strong person*) adapted from Losoncz and Bortolotto (2009), Borgia et al., (2022) is used to measure WLB. Cronbach's alpha is 0.815 which is higher than minimum value (0.60).

The five items to measure AC were adapted from Raineri (2017), Astuty and Udin (2020), Udin et al., (2022). The sample of items is '*I am strongly proud to be part of the organization*'. Cronbach's alpha is 0.811.

The 5-item scale (e.g., *I am satisfied with my job*) of JS adapted from Paais and Pattiruhu (2020), Abdullah et al., (2021). Cronbach's alpha is 0.804.

The five items were adapted from Paais and Pattiruhu (2020), Abdullah et al. (2021), Udin et al. (2022) to measure EP (e.g., *I always complete the task well*). Cronbach's alpha is 0.814.

A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure all of the items in this study.

Tool of data analysis

For analyzing the relationships among variables in a research model, two different approaches are commonly used: PLS-SEM (Partial Least Squares SEM) and CB-SEM (Covariance-Based SEM). PLS-SEM is known as a path modeling software that has sufficient statistical power to test a small sample size (Ringle et al., 2012). PLS-SEM also does not rely on assumptions of multivariate normality. Moreover, PLS-SEM provides a piece of brief information about the strength and direction of relationships, as well as the importance of individual indicators in explaining latent constructs. In contrast, CB-SEM relies on assumptions of multivariate normality and requires a relatively large sample size to produce reliable results (Rigdon et al., 2017). Thus, for the data analysis in this study, PLS-SEM is utilized through Smart PLS 3.0. According to Amram and Dryer (2008), since it is seen as being more potent than conventional regression analysis, the Smart PLS software is frequently used by the scientific community.

Results

The research model in this study was tested using PLS-SEM via Smart PLS 3.0 software. Also, the reliability and validity of the measurement model were explored for significance and overall suitability.

Table 2

Convergent validity and internal consistency reliability

Variables	Factor loading	CA	rho_A	CR	AVE
Work-life balance		0.815	0.820	0.871	0.575
WLB1	0.762				
WLB2	0.698				
WLB3	0.767				
WLB4	0.751				
WLB5	0.811				
Job satisfaction		0.804	0.807	0.864	0.560
JS1	0.750				
JS2	0.780				
JS3	0.777				
JS4	0.746				
JS5	0.687				
Affective commitment		0.811	0.814	0.869	0.572
AC1	0.719				
AC2	0.848				
AC3	0.763				
AC4	0.754				
AC5	0.688				
Employee performance		0.814	0.816	0.871	0.574
EP1	0.760				
EP2	0.744				
EP3	0.771				
EP4	0.719				
EP5	0.793				

Note: CA = Cronbach's Alpha, CR = Composite Reliability, AVE = Average Variance Extracted

Table 2 showed the values of factor loading, CA, rho_A, CR, and AVE. All factor loading values of four constructs in this study were >0.60 value and fulfilled the recommended requirements of Moores and Chang (2006). Also, the CA, rho_A and CR values for WLB (0.815, 0.820, 0.871), JS (0.804, 0.807, 0.864), AC (0.811, 0.814, 0.869), and EP (0.814, 0.816, 0.871) respectively were greater than 0.70, indicating that the scores of the constructs were reliable (Henseler et al., 2014). Additionally, the AVE values were greater than 0.50, implying that reflective constructs were unidimensional. However, if an AVE of less than 0.50, it is negligible and suggests that the constructs have not been fully explained, as well as include more serious errors. Thus, convergent validity and internal consistency reliability of the empirical model are established.

Table 3

Discriminant validity

Constructs	AC	EP	JS	WLB
Fornell-Larcker criterion				
AC	0.756			
EP	0.759	0.758		
JS	0.792	0.770	0.749	
WLB	0.753	0.768	0.700	0.759
Latent variable correlations				
AC	1.000			
EP	0.759	1.000		
JS	0.792	0.770	1.000	
WLB	0.753	0.768	0.700	1.000

Table 3 presented the results of the discriminant validity of the empirical model. All four constructs' values were <0.70 cutoff value (Ab Hamid et al., 2017). In addition, the Fornell-Larcker criterion displayed values greater than the correlations among the variables, indicating the empirical model confirmed the requirements of discriminant validity.

To evaluate model fit, the saturated model (measurement) was exactly tested, namely NFI (Normed Fit Index), SRMR (Standardized Root Mean Square Residual), d_ULS, d_G, and Chi-Square. The results showed that fit values (i.e., SRMR = 0.072; NFI = 0.759; d_ULS = 1.092; d_G = 0.478, and Chi-Square = 381.282, respectively, indicating the model is acceptable and substantially can be improved.
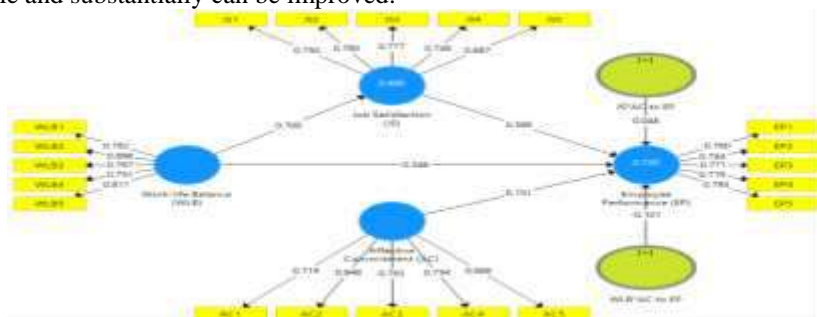
Figure 2. Result of structural model (Source: Authors)

Figure 2 revealed that r-square (R^2) of 0.49 of JS implies that WLB explains 49 percent of the JS, while the remaining 51 percent is justified by outside factors. EP's R^2 of 0.72 indicates that WLB, JS, and AC explain 72 percent of the EP. On the contrary, within the context of this research, the remaining 28 percent is explained by other factors.

Table 4

Direct, mediating, and moderating effects

Hypotheses	Original sample	Standard deviation	T statistics
Direct effects			
WLB → EP	0.346	0.073	4.744
WLB → JS	0.700	0.051	13.723
JS → EP	0.389	0.093	4.168
AC → EP	0.151	0.087	1.732

Mediating effect			
WLB → JS → EP	0.272	0.067	4.084
Moderating effects			
WLB x AC → EP	-0.101	0.067	1.509
JS x AC → EP	0.048	0.063	0.759

The findings in Table 4 showed that the direct effect of WLB on EP (β = 0.346, T-statistic = 4.744) and JS (β = 0.700, T-statistic = 13.723) is significant, indicating a positive relationship of WLB on EP and JS. These findings ordinarily support H1 and H2. In addition, the evidence reveals that the effect of JS (β = 0.389, T-statistic = 4.168) and AC (β = 0.151, T-statistic = 1.732) on EP is significant, indicating a positive link between JS and AC on EP. This result implies supporting H3 and H5. Table 4 further shows that t-value is > 1.65 for one-tailed test, predicting there is a significant indirect effect for JS in the relationship between WLB on EP (β = 0.272, T-statistic = 4.084). Thus, JS mediates the relationship of WLB and EP, supporting H4. However, the moderation analysis reveals that the interaction of WLB and AC (β = -0.101, T-statistic = 1.509) as well as JS and AC (β = 0.048, T-statistic = 0.759) fail to increase EP. Thus, H6 and H7 are not supported. This is because, depending on the specific circumstances and individual differences, highly satisfied and committed employees may become complacent and less motivated to strive for better performance.

Discussion

The impact of WLB on JS and EP

The findings revealed that WLB has a significant positive effect on both EP and JS. When employees have a good balance between their work and personal life, they tend to be more satisfied and productive to exhibit higher performance. Additionally, when employees are able to have time for activities outside of work, such as praying, taking care of physical health, and spending time with family, they are more likely to feel satisfied in their overall lives (Aruldoss et al., 2022). This strongly contributes to higher levels of performance.

The impact of JS on EP

This study further found that JS significantly promotes EP. JS provides employees with a sense of purpose in their work. When employees are satisfied, they are more likely to perform well to achieve their goals. Also, satisfied employees are generally more focused to their tasks, leading to increased overall performance and productivity. This evidence is consistent with some previous studies (Maryati et al., 2019; Silva et al., 2023) that JS positively contributes to higher levels of EP.

JS as a mediator

This study acknowledged that JS acts as a mediator between WLB and EP. When employees perceive a favorable WLB and have a sense of control over their personal lives, it positively influences their JS, which in turn affects their best performance. In addition, WLB contributes to higher JS (Hasan et al., 2021). When employees have a positive WLB, they ultimately have more opportunities for personal fulfillment and experience less work-related stress. This, in turn, enhances their JS. Also, satisfied employees are more likely to exhibit a higher level of overall job performance.

The impact of AC on EP

The result also showed that AC significantly affects EP. By fostering a strong sense of attachment and identification, employees invest additional effort in their work, to show greater levels of performance to the organization. Furthermore, employees with high levels of

emotional attachment and dedication to the organization are more likely to provide a greater sense investment in their work (Agyare et al., 2022; Udin et al., 2022).

AC as a moderator

The findings of the moderation analysis reveal that the interaction of WLB and AC, as well as JS and AC, fail to increase EP. This is because highly satisfied and committed employees may become complacent and less motivated to strive for better performance depending on the specific circumstances and individual differences.

Conclusion

The findings concluded that WLB has a significant effect on both EP and JS. Also, AC positively affects EP. Furthermore, the mediational analysis indicated that JS mediates the link between WLB and EP. Moreover, the moderation analysis revealed that AC fails to moderate the effects of WLB and JS on EP.

The results of this study offer important lessons for HR practitioners and academics in organizations. The results show the significant role of WLB, JS and AC to improving EP. These findings suggest organizational practitioners strengthen employee AC to stimulate the best performance. Through AC, according to Udin et al., (2022), EP and organizational success can be improved for better prospects.

The study has several limitations that should be acknowledged for guiding forthcoming investigations. First, the research design is cross-sectional, which captures the participants' perceptions at a certain point using a questionnaire. This makes it difficult to determine the causal relationships between variables on the temporal dimension. Second, filling out the survey questionnaire is highly dependent on the subjective participants in measuring the research construct of the proposed model. Therefore, future research needs to use more objective indicators and measurements to increase data accuracy. Likewise, longitudinal research is crucial and needed to determine the exact causal relationship between variables.

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Teachers' Perceptions and Readiness for Digital Transformation in Education: Empirical Evidence from Vietnam, a Developing Nation

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For countries to remain competitive in the global knowledge economy, digital transformation of education is becoming increasingly important. As a developing nation, Vietnam recognizes this importance and is adopting policies to integrate digital technology into its education system. This study investigates how teachers in Vietnam are prepared for digital transformation in education using the Unified Theory of Acceptance and Use of Technology. An online survey involved 403 teachers across 22 Vietnamese provinces. Its purpose was to understand their readiness and perspectives on digital tech integration in education. The collected data underwent descriptive and inferential statistical analyses. The findings revealed that teachers in Vietnam demonstrated a moderate degree of readiness to integrate digital transformation into their teaching practices, along with a moderate level of acceptance of its implementation (mean = 3.67 and 3.65, respectively). The survey indicated teachers' positive views on digital education transformation (average rating: 3.28) and its user-friendliness (average rating: 3.42). Preparedness, usefulness perception, and ease of use affected 86.1% of teachers' digital transformation acceptance. As a result, it is possible to assume that Vietnamese teachers intend to implement digital transformation in their teaching. Based on the data gathered, the study concludes that targeted interventions and support are critical to assisting Vietnamese teachers in overcoming the challenges of digital transformation in education. Possible interventions encompass better tech access, enhanced training, fostering innovation in classrooms, and professional development. The study's insights can shape education policies and practices, and enrich literature on digital transformation in developing nations .

Keywords: digital transformation; developing country; education; teachers' perception; readiness

Industry 4.0 tech's appeal drives global education's digital transformation, spanning various nations (Cuellar, 2002; Dede, 2011). Digital tech is now integral to daily life, impacting teaching and research significantly (Al-Khresheh et al., 2022; Habes et al., 2021; Nasim et al., 2022). Every school, community, and country is unique, and no single set of action steps will be appropriate for all digital transformation initiatives (Barba-Sánchez et al., 2021). Vietnam acknowledges digital transformation's importance in education (Hai, 2022) and is

implementing strategies for tech integration (Tung, 2022). Policies' success hinges on teachers' readiness to embrace digital transformation in their teaching (Gunadi et al., 2020). Understanding factors shaping teachers' digital transformation readiness is crucial (Tanveer et al., 2015).

This study fills gaps by exploring teacher attitudes toward education's digital transformation in Vietnam, a rapidly advancing developing nation (Nguyen et al., 2018). By uncovering teachers' digital transformation perspectives, this study guides policymakers and educators in formulating effective tech integration strategies for Vietnamese education.
To reach this goal, the study will tackle these questions:
1. How ready are Vietnamese teachers for education's digital transformation?
2. How do Vietnamese teachers perceive digital transformation in education?
3. How do usefulness, ease of use, and readiness affect Vietnamese teachers' acceptance of digital transformation?
4. What are the challenges faced by Vietnamese teachers when integrating digital technology into their teaching practices?
5. What interventions and support can be implemented to help Vietnamese teachers overcome the challenges associated with digital transformation in education?

To answer these research questions, an online questionnaire was distributed to 403 teachers from 22 provinces in Vietnam. Data analysis involves descriptive and inferential statistics. Results will uncover factors affecting Vietnamese teachers' readiness for digital transformation in education. Additionally, interventions and support strategies will be recommended to address related challenges.

This study contributes to digital transformation in education literature, particularly in developing countries like Vietnam, through meticulous investigation and addressing limitations. The implications of the study's findings will inform policy and practice in the education sector, promoting effective integration of digital technologies and facilitating educational advancement in the digital era.

Literature Review
This literature review concentrates on education's digital transformation, notably in developing nations, like Vietnam. Its goal is to outline theoretical frameworks and empirical research on the topic. It will delve into factors impacting teachers' tech adoption and discuss policy implications, challenges, and opportunities in developing countries, particularly Vietnam.

The Technology Acceptance Model (TAM) (Davis, Jr., 1986) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) offer insights into digital tech adoption (Marangunić & Granić, 2015; Wang et al., 2022). Several studies explored teachers' tech integration perceptions. In China, Li et al., (2019), Teo et al., (2018, 2019) investigated classroom tech usage. Teachers with greater computer self-efficacy and perceived usefulness embraced digital tech in teaching. Similarly, Kashada et al.. (2018) in Kenya emphasized tech access and attitudes as vital in determining digital tech adoption.

In education, the UTAUT framework is frequently employed to comprehend factors impacting teachers' digital tech acceptance and use (Abbad, 2021; Al-Anezi & Alajmi, 2021). The UTAUT model states four factors—performance expectancy, effort expectancy, social influence, and facilitating conditions—impact the intention to use digital technology

(Venkatesh et al., 2003). This influences actual use behavior. Gender, age, experience, and voluntariness also affect behavioral intentions (Figure 1).

1. Performance Expectancy (PE): Indicates if using the system enhances job performance gains.

2. Social Infuence (SI): Measures an individual's perception of others' belief in their new system use.

3. Efort Expectancy (EE): Reflects the perceived ease of using the system.

4. Facilitating Conditions (FC): Gauges an individual's belief in organizational and technical support for system use.
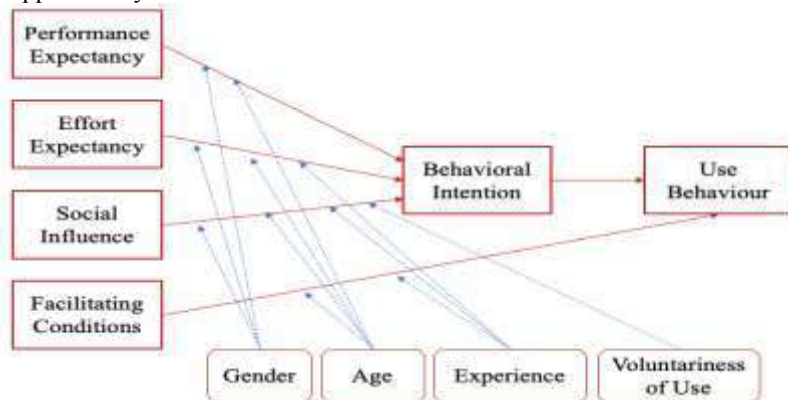
Figure 1. UTAUT model (Venkatesh et al., 2003)

The UTAUT model, widely validated, predicts tech adoption by teachers. This study employs it to explore Vietnamese teachers' digital transformation perceptions and readiness.

Dwivedi et al., (2019) noted many studies utilize a partial UTAUT model, often excluding moderators. They suggest this omission could be due to contextual consistency (Dwivedi et al., 2019). Figure 2 depicts the modified model.
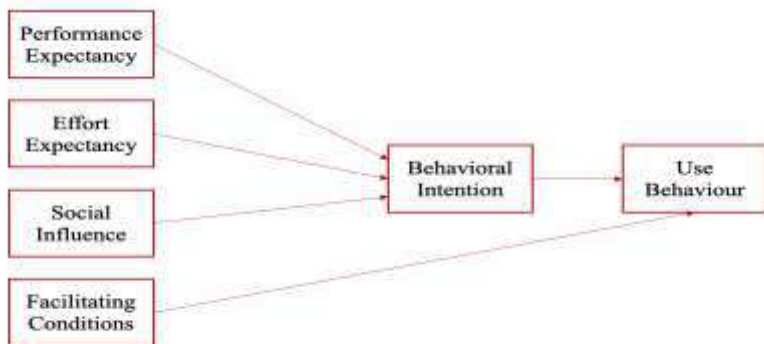
Figure 2. Modified UTAUT model (Dwivedi et al., 2019)

The UTAUT model has been modified to link use behavior to facilitating conditions. Performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) are all examples of these. PE in this study refers to teachers' belief that digital technology can help them achieve educational goals. EE refers to the usability of digital

technology. SI entails valuing educational digital transformation. FC represents teachers' faith in resources that support the use of digital technology in education.

Numerous education studies used UTAUT to explore factors affecting teachers' tech acceptance and use. Tan (2013) applied UTAUT in Taiwan, finding performance expectancy, effort expectancy, and facilitating conditions as significant predictors of tech use intentions. Empirical studies assessed tech efficacy in education areas like teaching, learning, assessment (Henderson et al., 2017; Nikou & Aavakare, 2021).

Vietnam, as a developing nation, acknowledges digital transformation's role in economic growth and social progress through education (Rhee et al., 2022; Thi et al., 2022; Vasileva et al., 2021). An overview of the educational landscape in Vietnam reveals a growing emphasis on integrating digital technology into teaching and learning practices. The Vietnamese government has implemented various policies and strategies to promote digital literacy and integrate digital technology into its education system (Tran & Tran, 2022). These efforts aim to prepare students for the digital era and create more innovative and effective educational experiences. Government policies and initiatives play a crucial role in driving digital transformation in Vietnamese education. The government has launched programs and initiatives to enhance digital infrastructure, provide digital resources, and support teacher training in digital pedagogy. These policies promote nationwide classroom digital technology integration.

In Vietnam, Tinh et al., (2022) conducted studies on digital technology's role in education, including challenges and opportunities in higher education. The study found that while there were challenges in terms of infrastructure and resources, there were also opportunities for innovation and collaboration among educators. Similarly, Thuy and Qalati (2020) examined Vietnamese teachers' attitudes toward digital tech in education. Positive views existed, but training and support gaps hindered integration. Challenges in digital transformation include tech access, infrastructure, and teacher training (The Vinh & Thi Thu Huong, 2021). Investigating teachers' readiness is vital to identify gaps and design interventions.

This study addresses gaps by comprehensively exploring teachers' digital transformation readiness in Vietnamese education. With a larger sample, regional diversity, and cultural factors, it offers a holistic view of tech acceptance. Its findings will enhance literature, guiding effective digital transformation strategies for policymakers and educators in Vietnam.

Method
Research Design
This study employed a cross-sectional survey design to explore Vietnamese teachers' digital transformation perceptions and readiness in education (Chiv et al., 2022). The survey approach was selected as it is an effective method for collecting large amounts of data quickly and efficiently. An online questionnaire was distributed to teachers across 22 provinces in Vietnam, allowing for a broad representation of teachers across the country.

Sample Size
The sample was chosen through probability sampling. A sample size of 385 was determined via statistical power analysis for 95% confidence level and 5% margin of error. A total of 403 teachers participated in the study, exceeding the required sample size.

Data Collection Methods

Data was collected through an online questionnaire aligning with UTAUT constructs. This model, often used in tech acceptance research, comprehensively explains individuals' tech use intentions.

To develop the questionnaire, we first identified the constructs of the UTAUT that were relevant to research questions, then developed a set of items that measured each of these constructs. Subsequently, a small group of teachers pretested the questionnaire for question clarity, response appropriateness, and content relevance. Based on the feedback received, we revised the questionnaire to ensure that it was clear, concise, and relevant to the study's research questions.

The questionnaire's final version had two parts. Part one gathered teachers' demographics (age, gender, education, experience). Part two included 24 items measuring UTAUT constructs (performance expectancy, effort expectancy, social influence, facilitating conditions).

Table 1

The items of the factors in the UTAUT model

Performance Expectancy

1	- I see digital tech as useful in teaching;
2	- It accelerates teaching tasks;
3	- Teaching productivity grows with tech use;
4	- Tech usage betters teaching quality.

Effort Expectancy

5	- I understand and interact with digital tech well;
6	- I am skilled in using digital tech;
7	- Teaching digital tech usage is easy for me;
8	- Getting digital tech to do what I want is easy.

Social Influences

9	- People significant to me advise tech use;
10	- Influential people believe I should use digital technologies;
11	- Students in my classes find digital tech usage helpful;
12	- In general, the school backs digital tech use.

Facilitating Conditions

13	- I possess essential resources for using digital tech;
14	- I possess the necessary knowledge for digital tech use;
15	- Digital tech compatibility with other systems is an issue;
16	- Help is available for digital tech challenges.

Behavioural Intentions

17	- I intend to use digital tech in the future;
18	- I foresee using digital tech in the future;
19	- I have definite tech usage plans in the future;
20	- I'd suggest digital tech to my colleagues.

Use Behaviour

21	- I'm a regular digital tech user;
22	- I prefer digital tech when available;
23	- I use digital tech for most teaching tasks;
24	- I tend to use digital tech whenever I can.

The items were measured on a 5-point Likert scale (1 = strongly disagree, and 5 = strongly agree), with response options ranging from strongly disagree to strongly agree. The questionnaire was administered online using Google Forms, and respondents were able to complete it at their convenience.

Reliability of the instrument

For instrument reliability, a pilot test on a small teacher sample assessed item internal consistency. Cronbach's alpha coefficient calculated per construct revealed values from 0.78 to 0.92, signifying strong internal consistency.

Besides reliability, a factor analysis assessed questionnaire validity. Factor analysis results indicated items aligned with expected factors, affirming questionnaire's construct validity.

Data Analysis Techniques

Data from the survey were studied using descriptive and inferential statistics. Descriptive stats examined participant demographics, digital transformation perceptions, and readiness. Inferential stats tested hypotheses and UTAUT construct relationships.

Before the online survey, participants received study details and a consent form. Their confidentiality was ensured, and data used solely for research.

Results

To assess Vietnamese teachers' digital transformation readiness, descriptive statistics were applied. Analysis covered teachers' views on digital transformation, readiness, performance, effort, social influence, and conditions. The data were analyzed using SPSS software, and the results are presented below.

Table 2
Descriptive Statistics of Teachers' Readiness and Acceptance of Digital Transformation

Variables	Mean	Standard Deviation
Readiness	3.67	0.56
Acceptance	3.65	0.51
Performance Expectancy	3.28	0.62
Effort Expectancy	3.42	0.57
Social Influence	3.15	0.48
Facilitating Conditions	3.58	0.54

The results in Table 2 indicate that teachers in Vietnam have a moderate level of readiness to implement digital transformation in education (M = 3.67, SD = 0.56). Similarly, they exhibit a moderate level of acceptance of digital transformation (M = 3.65, SD = 0.51). This suggests that teachers in Vietnam are open to adopting digital technology in their teaching practices.

Table 3
Correlations between Teachers' Readiness and Acceptance, and Factors Influencing Digital Transformation

Variables	Readiness	Acceptance	Performance Expectancy	Effort Expectancy	Social Influence	Facilitating Conditions
Readiness	1.000	0.861	0.684	0.712	0.546	0.625
Acceptance	0.861	1.000	0.578	0.672	0.512	0.593
Performance Expectancy	0.684	0.578	1.000	0.625	0.467	0.568

Effort Expectancy	0.712	0.672	0.625	1.000	0.501	0.609
Social Influence	0.546	0.512	0.467	0.501	1.000	0.502
Facilitating Conditions	0.625	0.593	0.568	0.609	0.502	1.000

Correlation analysis investigated teacher readiness, acceptance, and digital transformation factors (Table 3). Notably, readiness and acceptance displayed significant positive correlations ($r = 0.861$, $p < 0.001$). This indicates that teachers who were more ready to implement digital transformation also had a higher level of acceptance.

Moreover, we discovered substantial positive connections between readiness and factors impacting digital transformation. These factors encompass performance expectancy ($r = 0.684$, $p < 0.001$), effort expectancy ($r = 0.712$, $p < 0.001$), social influence ($r = 0.546$, $p < 0.001$), and facilitating conditions ($r = 0.625$, $p < 0.001$). Similar positive correlations were observed between acceptance and the factors influencing digital transformation, including performance expectancy ($r = 0.578$, $p < 0.001$), effort expectancy ($r = 0.672$, $p < 0.001$), social influence ($r = 0.512$, $p < 0.001$), and facilitating conditions ($r = 0.593$, $p < 0.001$).

Results indicate positive associations between teacher readiness, acceptance, tech benefits perception, ease of use, important others' influence, and organizational/technical support availability.

Likewise, descriptive stats assessed Vietnamese teachers' digital transformation perceptions (Table 4 summarizes findings).

Table 4
Perceptions of Vietnamese Teachers towards Digital Transformation in Education

Perceptions	Mean	Standard Deviation
Usefulness	3.28	0.76
Ease of Use	3.42	0.81

The results indicate that Vietnamese teachers perceive digital transformation in education as moderately useful (mean = 3.28, SD = 0.76) and relatively easy to use (mean = 3.42, SD = 0.81). Findings show Vietnamese teachers acknowledge digital tech's teaching benefits and feasibility.

Furthermore, a one-sample t-test compared Vietnamese teachers' perceptions (Table 5 displays results) with a hypothetical moderate agreement score of 3.

Table 5
One-Sample T-Test Results for Perceptions of Vietnamese Teachers

Perceptions	t-value	p-value
Usefulness	5.69	<0.001
Ease of Use	6.93	<0.001

The results of the one-sample t-tests reveal that both the perceived usefulness ($t = 5.69$, $p < 0.001$) and ease of use ($t = 6.93$, $p < 0.001$) of digital technology in education significantly exceeded the hypothetical average score of 3. This indicates positive perceptions among Vietnamese teachers regarding digital transformation in education.

The results offer evidence that Vietnamese teachers view digital transformation in education positively. They acknowledge digital technology's utility and user-friendliness, revealing a favorable stance toward its incorporation into teaching methods.

Inferential stats assessed usefulness, ease of use, and readiness effects on Vietnamese teachers' digital transformation acceptance. Acceptance was gauged on a Likert scale, with higher scores indicating stronger acceptance. Table 6 displays results.

Table 6
The Influence of Constructs on Vietnamese Teachers' Digital Transformation Acceptance

Constructs	B	SE	β	t-value	p-value
Usefulness	0.678	0.098	0.392	6.898	<0.001
Ease of Use	0.437	0.102	0.232	4.284	<0.001
Readiness	0.541	0.112	0.274	4.830	<0.001

Regression analysis demonstrates the substantial influence of usefulness, ease of use, and readiness on Vietnamese teachers' acceptance of digital transformation. The standardized regression coefficients (β) offer insights into the relative significance of each construct.

Usefulness exerts the most potent influence on acceptance ($\beta = 0.392$, $p < 0.001$). Perceived usefulness significantly impacts teachers' acceptance of educational digital technology implementation.

Ease of use similarly exerts a significant impact on acceptance ($\beta = 0.232$, $p < 0.001$). Perceived ease of use in digital technology contributes to teachers' acceptance of integration.

Moreover, readiness significantly influences acceptance ($\beta = 0.274$, $p < 0.001$). Teachers' readiness, involving their preparedness and willingness for digital transformation, plays a pivotal role in determining technology acceptance in education.

These results reveal that usefulness, ease of use, and readiness collectively impact Vietnamese teachers' acceptance of digital transformation in education. Perceived usefulness holds the highest influence, followed by ease of use and readiness.

The research delved into the difficulties Vietnamese teachers encounter when incorporating digital technology into their teaching. We analyzed data collected from an online questionnaire using descriptive statistics. Participants rated their agreement on a Likert scale concerning several challenges they faced. The challenges identified include:

Table 7
Challenges Faced by Vietnamese Teachers in Integrating Digital Technology

Challenges	Mean	Standard Deviation
Limited access to technology resources	3.87	0.62
Inadequate technical support	3.45	0.78
Insufficient training and professional development	3.62	0.71
Resistance to change and lack of digital pedagogical skills	3.78	0.66
Integration challenges in the curriculum and assessment	3.54	0.72

Results reveal that Vietnamese teachers encounter various challenges in integrating digital technology into teaching. The most significant challenge is limited access to technology

resources (mean = 3.87), followed by inadequate technical support (mean = 3.45), insufficient training and professional development (mean = 3.62), resistance to change and lack of digital pedagogical skills (mean = 3.78), and curriculum and assessment integration difficulties (mean = 3.54).

The results underscore the importance of tailored interventions and support for addressing these challenges. Strategies, including improving technology resource access, offering sufficient technical support, enhancing training and professional development, fostering digital pedagogical skills, and addressing curriculum and assessment integration, can facilitate successful digital technology integration in the classroom.

To address the final research question, the study examined interventions and support options to assist Vietnamese teachers in overcoming challenges related to digital transformation in education. We analyzed participants' responses using descriptive statistics to calculate mean ratings and standard deviations for each intervention or support measure. The following interventions and support measures were identified:

- Enhanced technology access and infrastructure received a mean rating of 4.21 (SD = 0.55) from Vietnamese teachers. This underscores the importance of offering teachers improved access to digital devices, dependable internet connectivity, and updated technology infrastructure to support their classroom integration of digital technology.

- Comprehensive training and professional development received a mean rating of 4.15 (SD = 0.59). This indicates that teachers highly appreciate ongoing training and professional development programs aimed at enhancing their digital skills, pedagogical knowledge, and instructional strategies for effective use of digital technology in teaching and learning.

- Technical support and assistance garnered a mean rating of 4.07 (SD = 0.67) from Vietnamese teachers. This underscores the significance of offering timely and dependable technical support to resolve any issues or challenges teachers encounter while utilizing digital tools and applications in their instructional activities.

- Cultivating a culture of innovation and collaboration received a mean rating of 3.92 (SD = 0.71). This indicates that establishing a supportive environment that promotes experimentation, the sharing of best practices, and collaboration among teachers can enhance their confidence and motivation in integrating digital technology into their teaching practices.

- Policy support and guidance earned a mean rating of 3.84 (SD = 0.64) from Vietnamese teachers. This underscores the significance of having clear and supportive policies at the national, regional, and school levels that offer guidance, incentives, and resources to promote digital transformation in education.

These results emphasize the vital interventions and support measures for assisting Vietnamese teachers in addressing challenges related to digital transformation in education. Policymakers, educational leaders, and stakeholders can create an enabling environment. This environment will empower teachers to seamlessly integrate digital technology into their teaching practices by emphasizing these areas.

Discussion

This study aimed to investigate Vietnamese teachers' readiness for digital transformation in education. Results showed moderate readiness and acceptance, along with a positive view of its utility and user-friendliness. These findings are consistent with prior research outcomes (Hero, 2020; Kumar et al., 2008; Zou et al., 2021). These findings suggest Vietnamese teachers intend to incorporate digital transformation into their teaching practices, with the potential to benefit Vietnam's education system. These results are in line with earlier research on teachers' readiness for digital transformation in education (Bond et al., 2018; Latifah et al., 2022; Suárez-Guerrero et al., 2016). The moderate readiness and acceptance among Vietnamese teachers indicate their awareness of digital transformation's importance in education. They are willing to include it in their teaching approaches. Positive correlations between readiness, acceptance, usefulness, and ease of use imply that teachers valuing digital transformation's utility and user-friendliness are more prepared to integrate it into their teaching methods (Amorim et al., 2018; Santos et al., 2019). The study's findings provide valuable insights into how Vietnamese teachers perceive and prepare for digital transformation in education.

However, the moderate levels of readiness and acceptance suggest that Vietnamese teachers recognize the significance of digital transformation in education. They might face challenges when implementing it in their teaching practices. This aligns with past studies on barriers to digital transformation, including technology access, insufficient training, and limited administrative support (Aditya et al., 2021a, 2021b, 2022b, 2022a; Bingimlas, 2009).

Positive correlations among readiness, acceptance, usefulness, and ease of use imply targeted interventions. These should enhance teachers' perceptions of digital transformation's usefulness and user-friendliness in education (Hong et al., 2021; Kumar et al., 2008; Santos et al., 2019; Thi et al., 2022). Results highlight the need for targeted support. Strategies include tech access, training, innovation culture promotion. Policymakers should consider these findings for digital tech integration in Vietnam's education.

A notable strength is the study's large, diverse teacher sample spanning 22 Vietnamese provinces. This offers a comprehensive perspective on digital transformation readiness. Furthermore, the study applied the established Unified Theory of Acceptance and Use of Technology as its guiding theoretical framework for research and analysis.

Nonetheless, the study depended solely on self-reported data, susceptible to biases and social desirability effects. Future research may consider adopting a mixed-methods approach, incorporating self-reported data with observations or interviews, for a more comprehensive understanding of teachers' digital transformation perceptions and readiness in education.

The study did not explore demographic factors' impact on teachers' digital readiness. Investigating age and teaching experience in future research could provide valuable insights. Future research should also assess digital transformation's influence on student learning outcomes.

This study offers insights on Vietnamese teachers' readiness for digital transformation. Findings show potential benefits, but targeted support is crucial to overcome challenges. The study has policy implications for Vietnam's education system and adds to global digital transformation literature in developing nations.

Conclusion

In conclusion, this study explored Vietnamese teachers' readiness for digital transformation in education, using the Unified Theory of Acceptance and Use of Technology. The results revealed moderate readiness and acceptance (mean = 3.67 and 3.65). Teachers found digital transformation useful (mean = 3.28) and user-friendly (mean = 3.42). Moreover, 86.1% of acceptance depended on readiness, perceived usefulness, and ease of use. These findings indicate teachers' interest in digital transformation but highlight the need for tailored support to address associated challenges.

The implications of this study for policy and practice in the education sector in Vietnam and other developing countries are significant. To support teachers get ready to use information technology easily for personalized teaching, learning, and enhanced experiences, it is especially important to develop and deploy an online teaching and learning digital platform with advanced features. At the same time, it is necessary to strengthen testing, computer-based exams, online exams, online teaching platforms linked with school administration platforms, and IoT networks to form a digital transformation ecosystem in institutions. education. There is also a need to develop a platform to deliver MOOCs, as well as increase recognition of online course credits among higher education institutions. On that basis, it is possible to pilot the digital higher education model at a number of higher education institutions. The study's results offer valuable insights into teachers' attitudes toward digital transformation in education. They underscore the necessity of enhancing technology access, expanding training and professional development, and fostering a culture of classroom innovation and experimentation. The study's outcomes could guide the formulation of policies and strategies for integrating digital technology into the education system and enhancing the quality of education in developing nations like Vietnam.

This study addressed the readiness of Vietnamese teachers to implement digital transformation in education. It contributes to the literature by offering empirical evidence on Vietnamese teachers' perceptions and readiness for digital transformation in education. These findings bridge a gap in the literature, shedding light on the attitudes of teachers in developing countries regarding digital transformation in education.

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Nexus Between Credit Risk, Liquidity Risk, Corporate Governance and Bank Performance During Times of Crisis

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Bank-specific risks along with corporate governance mechanisms are an important consideration for measuring bank performance. Therefore, this study aims to explore the role of credit and liquidity risk along with bank governance for the performance of banks. The present study included a sample of 116 banks operating within Asian emerging nations, spanning the period from 2012 to 2022. It utilizes static and dynamic panel methods for testing the main hypothesis and for confirming robustness. This study finds that credit risk (Z-score, Non-performing loans), liquidity risk (Current ratio, Loan to deposit ratio) and corporate governance (Board size and CEO duality) significantly influence the performance of banks in Asian emerging economies. Banking management should maintain procedures for loan granting and timely repayment of loan instalments from consumers to control credit risk. Managers of banks should keep a close eye on their banks' liquidity conditions and implement appropriate governance systems to help them operate and earn better .

***Keywords*:** *credit risk; liquidity risk; corporate governance; bank performance; Asian emerging economies*

Financial institutions play a crucial function in a country's economic prosperity. Similarly, banks supply financial information on the economy. Banks, in particular, exist to generate profit to continue operating, growing and expanding. Bank stability has been threatened over the previous two decades due to political involvement, nonperforming loans (NPLs), and interest rate changes. For banks and other financial institutions, risk and return management is critical to being profitable in the long run. Abdelaziz, Rim and Helmi (2020) risks into three categories: financial, operational, and strategic. Hussain and Al-Ajmi (2012) asserted that credit and liquidity are the most severe concerns that banking institutions experience.

Since the GFC of 2008, the risk of liquidity has emerged as one of the most pressing concerns for decision-makers as well as scholars. As a response to the need to prevent the recurrence of such a crisis, regulators have adopted many steps to strengthen bank liquidity and capital. These new changes are being implemented to maintain stability in the financial sector (Hamdi & Hakimi, 2019; Hunjra *et al.,* 2020a). The poor quality of assets has been at the centre of catastrophic financial crises in economies both in the developing world and the industrialised world (Nikolaidou & Vogiazas, 2017). It is generally believed that credit risk, which is measured by the loans that are considered to be nonperforming (NPLs), is the

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primary factor in determining whether or not a bank would collapse, which in turn led to a crisis in the banking industry (Reinhart & Rogoff, 2011; Hunjra *et al.,* 2020b). Banks that have a high percentage of non-performing loans (NPLs) may pose a danger to the stability of the banking sector as a whole as well as the whole financial system. According to Cornett *et al.,* (2011), liquidity is an essential component of banking operations, and credits are one of the most important assets in terms of the amount of profit they bring in for the bank (Lassoued, 2018).

Credit and liquidity risks, according to Hussain and Al-Ajmi (2012), are the most difficult ones for financial institutions to manage. According to Naili and Lahrichi (2022), well-performing companies are suddenly exposed to enormous losses as a result of credit risks. Borrowers are the primary cause of commercial banks' default risk. Because credit risk is considered as the most difficult challenge in the banking sector. Credit risk loss, according to Hassan, Khan and Paltrinieri (2019), is more severe than other categories of risk. Banks may be able to prevent credit risk losses by assessing credit risk and making appropriate preparations for questionable debts. Because of this, banks must effectively monitor and manage the credit risk they face. Ryu, Webb and Yu (2022) claim that a bank's ability to pay its debts quickly diminishes over time. To ensure long-term viability, banks must successfully manage liquidity risk.

In addition to credit and liquidity risk, the GFC of 2007–09 has prompted serious questions regarding the efficiency of board characteristics in a bank's internal supervision (González-Fernández & González-Velasco, 2020). Bank's board of directors has a significant influence on its success. However, banking institutions experienced particular governance issues that set them apart from other types of companies. Adverse selection and high levels of regulation in the financial sector are some of the issues that are faced by the banking industry (Becht *et al.,* 2011; Laeven, 2013). These challenges may hinder bank boards from completing their responsibilities to appropriately supervise management operations, while maximising shareholders' and other stakeholders' interests, resulting in associated agency conflicts (Acharya *et al.,* 2009; John *et al.,* 2016).

Theoretically, an effective bank board places a strong emphasis on coordinating the interests of the company's management with those of its shareholders (Coles *et al.,* 2008). According to agency theory, a bank board will be more efficient if it has a relatively small number of directors, a larger share of outside directors, and separate persons holding the post of CEO and chairman (Fama, 1980; Fama & Jensen, 1983). This notion, however, is not entirely tested in economies that are still in the process of emerging and in financial institutions where concentrated ownership structures are very usual (La Porta *et al.,* 1999). The resource dependency hypothesis is an alternate viewpoint that says larger boards will have more resources, will be more informed, and will have more incredibly competent directors. This position suggests that larger boards will have more highly competent directors (Pfeffer & Salancik, 1978). The twin roles of CEO and chairman are supported by the stewardship idea, which proposes that both roles should be combined into a single critical point of leadership for management and governance (Donaldson & Davis, 1991). Because these varied theoretical rationales give contradicting insights into the efficiency of certain features of board governance, scholars have been motivated to study the significance of bank boards and the accompanying agency problems. This in turn implies the necessity to research

how board governance influences the success of banking firms, particularly the various consequences that different board attributes have on bank performance.

The majority of the research that has been done up until this point has concentrated on a single category of risk (Munangi & Bongani, 2020). According to Hussain and Al-Ajmi (2012), the three kinds of risks that are the most significant for financial institutions to deal with credit and liquidity risks. It is entirely up to the management of the bank to deal with any risks related to credit, liquidity, or operations because these are all regarded to be bank-specific hazards that apply to banks in their capacity as enterprises. Because of this, it is essential to combine the investigation of these three categories of risk and the influence that they have on the operation of the bank in a single research, particularly in emerging economies of Asia. Banks' risk vulnerability is exacerbated further by poor corporate governance. According to Raouf and Ahmed (2020), financial institutions with effective corporate governance systems strengthen control through proper risk-taking incentives to maximise shareholder value. An ideal risk level, according to Stulz (2015), allows banks with sound governance procedures to maximise shareholder value. Emerging nations' corporate governance systems, despite increased regulatory and governance changes following the 2008 financial crisis, remain mostly inadequate (Mehmood *et al.,* 2019). Some researchers find that the marketplaces of emerging economies are appealing because they provide prospects for investing in such areas. However, they are also associated with a wide variety of hazards, both for the company and the country. Because it serves as a vital conduit for economic expansion and progress in emerging nations, the banking industry is of paramount significance to the overall economy in these nations.

The objective of this research to determine the impact of credit and liquidity risk and corporate governance on bank performance in selected Asian emerging economies. This study has chosen listed commercial banks of 10 emerging economies in Asia such as China, India, Pakistan, Philippines, Lebanon, Indonesia, Malaysia, Turkey, Thailand, and Vietnam. All of the selected countries have rather advanced financial systems. In addition to this, these nations frequently face unpredictability as a result of economic and political instability, which affects the expectations of investors and lenders, particularly banks. This research aims to resolve the issue of the credit and liquidity risks that are encountered by banks. Also, it considers the role of banks' governance in the performance of banks in emerging Asian nations. In two respects, the present research distinguishes itself from earlier research and adds to the existing literature. To begin, the study selected from a diverse pool of Asian emerging economies banks. In extent studies, banks in one nation have been the centre of attention. The second aspect is that the study looks at credit risk, liquidity risk, and corporate governance together at once. Most prior studies have only evaluated one of these factors in their examination of the bank performance.

Literature Review

Credit risks and liquidity risks are the primary forms of risk that are encountered by financial organisations. Credit risk is a risk that is faced by banks since the majority of banks' asset portfolios are mostly comprised of illiquid loans. Information asymmetries theorists argue that achieving purposeful monitoring has become crucial when it comes to collecting authentic data from potential new borrowers. Because of these issues, banks have a significant accumulation of accounts that are considered to be nonperforming. According to Richard *et al.,* (2008), difficulties start to occur at the level of the application and continue to do so throughout the phases of approval, monitoring, and controlling because credit risk

management rules are either inadequate or lacking in some way. Hughes *et al.,* (2019) reveal that smaller community banks have a lower capacity for efficient credit appraisal and loan management, which leads to a higher percentage of nonperforming loans (NPLs). Tan and Floros (2018) provide evidence that Chinese banks have been effective in strengthening their competence and abilities to verify, monitor, and manage loans, and that this improvement has led to increased profitability. The unsustainable growth of credit, concerns with the quality of lending, and incorrect management of credit risk were the primary causes of the global financial crisis that happened in 2008 and 2009. Leung *et al.,* (2015) provide evidence that during the economic crisis that occurred in 2008–2009, financial institutions that had lower profitability had greater levels of risk.

To effectively manage credit risk, banks must first create an appropriate environment for credit risk management. This environment must guarantee dependable credit granting as well as proper credit administration, which includes monitoring and controls over credit risk. According to Derban et al., (2005), monitoring the behaviour of borrowers is of utmost significance to address the moral hazard issue. Problems with asymmetry of information need to be addressed by implementing a practical solution that ensures borrowers will repay loans and minimises losses brought on by loans, both of which contribute to the long-term performance of financial institutions. When it comes to mitigating the financial damage that can be caused by credit, banks make use of a variety of strategies, including loan structuring, security, conditions, loan syndication, and credit rationing.

A major concern for regulators and investors in fixed income is credit risk (Boubaker *et al.,* 2016). Banks have a particularly difficult time mitigating credit risk since their success is dependent on both effective management and precise monitoring. Bank loans are viewed as a source of revenue that has a beneficial impact on their bottom line. Asia's banking sector catalyses growth and development in both the private and governmental sectors (Gadzo *et al.,* 2019). Credit risk management is therefore crucial for Asian banks to avoid bank failure. The literature shows that banks' financial performance is significantly impacted by credit risk (Saleh & Abu Afifa, 2020). NPLs have a adverse effect on the financial health of Chinese banks. Additionally, Munangi and Bongani (2020) show that the NPLs ratio has a negatively related to banks' performance. Therefore, the study hypothesises that:

H1: Credit risk significantly impacts bank performance in Asian emerging economies.

Several banks failed because they were overly dependent on short-term borrowing and used ineffective liquidity management practices. Liquidity risk is becoming increasingly important for many institutions in the wake of this catastrophe. An asset diversification model based on the notion of balanced portfolios claims that policy actions may assist ensure that every asset in a portfolio is held at the optimal level (Elton *et al.,* 2009). Various criteria are taken into consideration, including the portfolio's size, and the risk associated with each asset's ownership. Portfolio diversification and the makeup of the desired portfolio are critical considerations for commercial banks when making investment decisions (Atemkeng & Nzongang, 2006). Consequently, banks must be careful in managing their liquidity. Banks might face liquidity risk if they are unable to meet their financial commitments when they are due. Due to the dangers posed by this risk, bank management need to make sure sufficient funds at a reasonable cost are available to meet the future requirements of both depositors and

borrowers. A bank's liquidity position is critical because it allows them to increase customer loans when the market presents appealing possibilities.

Many business possibilities are squandered because of banks' liquidity issues. This might have a detrimental impact on the bank's reputation and performance. Depositors may lose faith in the bank if funds are not available on time. The bank's reputation may be on the line in such instances. Liquidity risk, according to Dahir *et al.,*(2018), is at the root of a bank's ability to fail. Some studies suggest that liquidity risk adversely affect banks' performance (Ly, 2015; Chen *et al.*, 2018). Likewise, financial performance is adversely affected by liquidity risk (Adelopo *et al.,* 2018). Liquidity risk is measured by the loan-to-deposit (LTD) ratio, and Marozva (2015) shows that the LTD ratio has significant detrimental influence on banks' financial performance. Liquid assets are thought to have a beneficial impact on a bank's financial results. As a result, the study provides a second hypothesis:

H2: Liquidity risk significantly impacts bank performance in Asian emerging economies.

Traditional finance literature has identified several approaches for addressing corporate governance issues (Jensen & Meckling,1976). Corporation governance systems are classified into two categories: internal and external. In terms of substance and efficacy, there is some disagreement, though. Because the field of corporate governance mechanisms is so large and diverse, no single article can cover all of the various governance mechanisms that have been established in the literature, and instead, each study focuses on a particular governance mechanism. Therefore, this study considered board size and CEO duality as governance mechanisms to explore their relationship with bank performance in Asian emerging economies perspective.

In general, there are two approaches to board size: the first suggests that larger boards can raise the board diversity needed to relieve the associated risks, while the second suggests that smaller boards are more successful. As a result, board size affects the effectiveness of the board by making it easier to distribute responsibilities among a larger number of directors, leading to better board choices (Adams & Mehran, 2012). It is suggested that board size has an adverse effect on the board's decision-making capacity, and this is due to misunderstandings and miscommunications caused by big director groups, which weaken corporate governance and lower performance (Yermack, 1996). Adams and Mehran (2012) found that the size of a bank's board of directors had a beneficial impact on the bank's financial performance. In contrast, a study by Naushad and Abdul (2015) found a negative correlation between board size and bank performance metrics, showing that smaller board sizes improve Gulf banks' profitability. According to another study by Batra and Wondem (2016), bank performance measurements are negatively correlated with the board size of a bank (ROA and ROE). In Kenya, Nyamongo and Temesgen (2013) and Nigeria, Hassan and Farouk (2014) have also corroborated this. However, Elbannan and Elbannan (2014) have shown that big boards of directors impede resource allocation and decision-making.

The CEO of a bank typically also serves as the board chairman. This is referred to as "CEO duality." There are two distinct schools of thought that compete with one another over CEO duality. The stewardship hypothesis asserts that effective leadership would be to the company's advantage, while the agency theory, on the other hand, asserts that having two CEOs would strengthen the organization's ability to oversee performance. Claiming that an

individual who occupies these two prominent positions would offer a centralised authority that provides strong leadership for the bank, and it is predicted that the bank would reap the rewards of uniformity of central control as a result of this claim (Donaldson & Davis, 1991). Naushad and Malik (2015) demonstrate that having two CEOs at a bank is beneficial to the institution's overall performance. In a similar vein, Chang, Chou and Huang (2014) report a strong positive connection between CEO duality and bank performance. They argue that banks with CEO duality would be supposed to perform more effectively than banks where the two positions are dominated by different persons due to the increased speed with which decisions can be made in the former. However, agency theory asserts that the connection between the CEO and the chairman improves the performance of the bank owing to greater monitoring and control, and that role of duality probably decreases the capacity of the board to supervise management, which results in increased agency costs. On the other hand, several researchers, including Elbannan and Elbannan (2014), Batra and Wondem (2016), and Nyamongo and Temesgen (2013), have investigated this connection and conclude that CEO duality has no substantial bearing on bank performance as assessed by ROA and ROE. As a result of the information presented above, the following hypothesis is made:

H3: Bank governance significantly impacts bank performance.

Method

This research uses of panel data, and to accomplish the aforementioned aim, the study selected 116 banks located in Asian emerging nations and obtained the data from DataStream for the years 2012 through 2022. The performance of banks in terms of their finances serves as the dependent variable, while credit risk, liquidity risk, and corporate governance serve as the independent factors. In addition, it employs bank size, age, and growth all of which have an impact on the performance of banks as control variables. As a representation of a Bank's financial performance, this study uses the accounting measurements known as return on assets (ROA) and return on equity (ROE). The Z-score and the percentage of NPLs to total loans are two additional accounting metrics of credit risk that Iutilise. Kabir et al., (2015) make use of the Z-score to determine the number of standard deviations away from depleting the capital base a bank currently is. The Z-score is determined by the following formula:

$$Z - Score = \frac{(ROA + CAR)}{SD\ of\ ROA} \qquad (1)$$

Where ROA stands for return on assets, CAR stands for capital-to-asset ratio and SD of ROA is for the standard deviation of ROA. CAR is computed by dividing total equity by total assets. Because of the inverse relationship that exists between Z-scores and the likelihood of a bank going bankrupt, it can be deduced that a bank is more secure when its Z-score is higher. Following the methodology employed by Noman *et al.,* (2015), the study makes use of the NPL ratio when calculating credit risk. To get an accurate picture of the liquidity risk, present study uses the current (CR) and the long-term debt ratios. Measures of corporate governance in this study include board size and CEO duality. Board size refers to the total number of directors, while CEO duality assigns a value of 1 if the CEO also serves as the chairman of the board or else 0. The description of the variables can be found in Table 1.

Table 1
Variables Description

Variables	Abvr.	Formula	Reference
Dependent Variable: Bank Performance			
Return on Assets	ROA	Operating profit/average total assets	Hunjra et al. (2020a)
Return on Equity	ROE	Net profit/average total equity	Zou and Li (2014); Hunjra et al. (2020a)
Independent Variables			
Credit Risk			
Z-Score	ZS	Natural logarithm of return on assets (ROA) þ capital-to-asset ratio / SD of ROA	Kabir et al. (2015); Hunjra et al. (2020b)
Non-Performing Loan Ratio	NPLs	Nonperforming loans/total loans	Noman et al. (2015); Hunjra et al. (2020b)
Liquidity Risk			
Current Ratio	CR	Current assets/current liabilities	Alzorqan (2014), Hunjra et al. (2020a)
Loan to Deposit Ratio	LTD	Loans/deposits	Marozva (2015), Hunjra et al. (2020a)
Corporate Governance			
Board size	BS	Total No. of the board of directors of the organization	Abed et al. (2012); Hunjra et al. (2020b)
CEO Duality	CEOD	If the CEO is also the board chairman, this dummy variable will be 1, otherwise it will be 0.	De Massis et al. (2013); Hunjra et al. (2020b)
Control Variables			
Bank Size	BSZ	Natural log of total assets	De Massis, Kotlar, Campopiano and Cassia (2013),
Bank Age	BA	Natural logarithm of bank age since incorporation	Coad et al. (2013)
Growth	GR	Annual percentage change in sales	Lemma, Negash and Mlilo (2013)
GDP Growth	GDPG	Annual change in GDP	Egbunike and Okerekeoti (2018); Khan et al. (2023)
Inflation Rate	INF	Annual change in consumer price index	Egbunike and Okerekeoti (2018); Khan et al. (2023)

This study uses the following equation to analyze the results:

$$BP_{i,t} = \alpha_0 + \beta_1 (ZS)_{i,t} + \beta_2 (NPL)_{i,t} + \beta_3 (CR)_{i,t} + \beta_4 (LTD)_{i,t} + \beta_5 (BS)_{i,t} + \beta_6 (CEOD)_{i,t} + \beta_7 (BSZ)_{i,t} + \beta_8 (BA)_{i,t} + \beta_9 (GR)_{i,t} + \beta_{10} (GDPG)_{i,t} + \beta_{11} (INF)_{i,t} + \varepsilon_{i,t}$$
(2)

Where *BP* is bank performance, α_0 is a constant, and *ZS* and *NPL* are the credit risk proxies. Liquidity risk is assessed with *CR* and the *LTD* ratio. *BS* and *CEOD* represent board size and CEO duality proxies used for measuring bank governance. BSZ is bank size, *BA* is bank age, GR is bank growth, GDPG is GDP growth, INF is inflation rate, and ε is the error term. This study uses descriptive statistics to determine whether or not the data are normally distributed, and correlation analysis to determine whether or not there is multicollinearity among the independent variables. The project used panel regression to analyze the connection between credit risk, liquidity risk, and CG and the financial viability of the banking sector. In panel regression, the most common models are those with fixed and random effects. Since the p-values from the Hausman test were somewhat high, it was decided to use a fixed-effect model for the data analysis. In addition, current study examines the soundness of the hypotheses by employing the generalised method of moments (GMM), which checks for robustness. because this method is capable of performing reliable parameter estimation over a

broad cross-section in a short amount of time. Arellano and Bond (1991) argue that the GMM estimators enable asymptotically efficient inferences because they employ a relatively minimal set of assumptions when performing their estimations.

Results

Table 2 contains the findings that have been obtained by the descriptive statistics. According to the average value of the banks' financial performance, the banks are doing well and making profits. In addition, the banks' Z-scores indicate that, on average, they are a long way from being in default. The mean values of NPLs have only a very small portion, which indicates that the intensity of the credit risk they face is relatively low. According to the results of the CR, the banks have enough current resources to fulfil their current obligations. In addition, the fact that the banks have a relatively low risk of failing to meet their required levels of funding is demonstrated by the median value of the LTD ratio. On the other hand, this also indicates that the banks are not earning as much money as they possibly could be. The number of board members can range anywhere from six to thirteen, with nine being the typical number. The CEO of a bank does not typically serve as the board's chairman.

Table 2
Descriptive Statistics

Variables	Mean	Median	Std. Dev.	Maximum	Minimum	VIF
ROA	0.012	0.010	0.012	0.057	-0.059	---
ROE	0.107	0.101	0.175	0.465	-2.047	---
ZS	3.553	3.053	1.182	6.423	-2.819	1.22
NPL	0.092	0.087	0.071	0.196	0.012	1.17
CR	1.108	1.080	0.088	1.366	0.663	1.19
LTD	0.735	0.702	0.118	1.119	0.301	1.15
BS	9.028	8.643	0.039	13	6	1.14
CEOD	0.342	0.307	0.483	1	0	1.12
BSZ	7.395	6.904	1.806	13.245	0.936	1.09
BA	3.593	3.504	0.864	5.037	0.693	1.08
GR	9.442	8.963	0.178	1.089	-0.890	1.05
GDPG	0.058	0.054	0.026	0.012	0.004	1.18
INF	0.065	0.061	0.035	0.215	-0.029	1.15

Note: ZS and NPL are the credit risk proxies. Liquidity risk is measured with CR and the LTD ratio. BS and CEOD represent board size and CEO duality proxies used for measuring bank governance. BSZ is bank size, BA is bank age, GR is bank growth, GDPG is GDP growth, and INF is inflation rate

The correlation matrix, as well as the multicollinearity diagnostic tests, are presented in Table 3. Both the correlation analysis and the values for the variance inflation factor (VIF) that are presented in Table 2 are providing evidence that there is no problem with multicollinearity.

Table 3

Correlation Matrix

Var.	ROA	ROE	ZS	NPL	CR	LTD	BS	CEOD	BSZ	BA	GR	GDPG	INF
ROA	**1**												
ROE	0.757	1											
ZS	0.154	0.091	1										
NPL	-0.415	-0.249	-0.047	1									
CR	0.357	-0.098	0.228	-0.051	1								
LTD	-0.086	-0.075	-0.229	-0.031	0.079	1							
BS	-0.038	-0.044	-0.059	-0.042	0.055	0.054	1						
CEOD	0.119	-0.018	0.041	-0.034	0.047	-0.027	0.085	1					
BSZ	0.041	-0.028	0.024	-0.251	0.022	-0.023	0.431	0.028	1				
BA	0.095	-0.036	0.038	-0.021	-0.017	-0.029	0.034	0.004	0.304	1			
GR	0.152	-0.102	0.016	-0.112	0.032	0.062	0.027	-0.091	0.071	0.317	1		
GDPG	0.181	-0.286	-0.086	0.281	0.116	0.083	0.075	0.192	-0.057	0.058	0.142	1	
INF	-0.218	-0.193	0.275	-0.098	-0.195	0.157	-0.096	0.143	0.183	-0.127	0.068	0.046	1

Note: ZS and NPL are the credit risk proxies. Liquidity risk is measured with CR and the LTD ratio. BS and CEOD represent board size and CEO duality proxies are used for measuring bank governance. BSZ is bank size, BA is bank age, and GR is bank growth, GDPG is GDP growth, and INF is inflation rate.

Table 4 makes it quite evident that the fixed-effect model is better than the random effect models when applied to panel data based on Hausman test. This table provides a concise summary of the findings obtained from this research. The outcome of the Hausman test determines fixed-effect model serves as the basis for subsequent research. The results provide that p-values of the Hausman test are less than 0.05, therefore, the study uses the fixed-effect model as applied by Abbassi et al., (2021). All of the models that have an adjusted R^2 that is higher than 0.60 show that the explanatory variables relate to banks' performance.

Table 4

Results of Fixed Effect Estimation

Variables	ROA		ROE	
	Model I	Model II	Model III	Model IV
ZS	0.358** (2.184)	---	0.914** (2.278)	---
NPL	---	-0.286*** (-4.186)	---	-0.398*** (-3.791)
CR	0.005* (1.758)	---	0.161*** (3.185)	---
LTD	---	-0.174*** (-3.294)	---	-0.321*** (-3.085)
BS	-0.618*** (-3.316)	---	-0.495*** (-3.828)	---
CEOD	---	0.564*** (3.877)	---	0.198*** (3.109)
BSZ	0.021** (2.114)	0.007*** (3.142)	0.038*** (4.125)	0.002** (2.103)
BA	0.137*** (3.216)	0.184*** (3.120)	0.218*** (3.153)	0.175*** (4.395)
GR	0.295*** (4.364)	0.171*** (3.356)	0.154*** (3.459)	0.139*** (3.012)

GDPG	0.513*	0.279**	0.415*	0.516*
	(1.813)	(2.165)	(1.751)	(1.912)
INF	-0.086***	-0.186**	-0.176**	-0.076***
	(-5.036)	(-2.296)	(-2.318)	(-4.925)
C	0.416**	-0.759*	-0.286***	0.713**
	(2.411)	(-1.897)	(-4.213)	(2.154)
Country Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
R-squared	0.648	0.614	0.636	0.628
Adj. R-squared	0.624	0.607	0.604	0.601
F-statistic	14.578	15.165	14.105	15.489
Prob. (F-statistic)	0.0000	0.0000	0.0000	0.0000

Note: ZS and NPL are the credit risk proxies. Liquidity risk is measured with CR and the LTD ratio. BS and CEOD represent board size and CEO duality proxies used for measuring bank governance. BSZ is bank size, BA is bank age, and GR is bank growth, BSZ is bank size, BA is bank age, and GR is bank growth, GDPG is GDP growth, and INF is inflation rate. The model I estimates the role of ZS, CR and BS on ROA. Model II assesses NPL, LTD's and CEOD's influence on ROA. Model III determines ZS, CR and BS influence on ROE. Model 4 evaluates NPL, LTD, and CEOD's impact on ROE.

The findings show that banks' financial performance is highly impacted by credit risk. The model I and Model II are estimated with ROA and Model III and Model IV is estimated with ROE. Further, Models I and III are estimated using Z-score, Current ratio and board size. While Model II and Model IV are estimated using NPL, Loan deposit ratio and CEO duality. Models I to Model IV show that the Z-score has a positive effect on bank financial performance, supporting Hypothesis 1. Banks in this continent have strict regulations concerning loans so that debtors are in a position to revert loans to banks on time and follow their terms and conditions. As a result, banks are enforcing their loan policies and customers are adhering to them. As a result, banks are making money off of their savings. Both models show that the NPL ratio has a negative impact on a bank's financial performance, supporting H1 of present study. A decrease in bank performance might be caused by increased provisioning for non-performing loans (NPLs). To prevent unwanted choices and moral hazards caused by information asymmetry, banks must monitor their customers to avoid credit risk. H1 of the study is supported by all of the findings. These outcomes are aligned with findings from the studies documented by Gadzo *et al.,* (2019), and Munangi and Bongani (2020).

The economic performance of banks is seen to be significantly affected by liquidity risk. Banks' financial performance is positively influenced by the CR. It suggests that banks can effectively manage liquidity risk and improve their performance if they have adequate current assets. Furthermore, in both models, the LTD ratio negatively influences banks' performance, supporting our H2. Based on this research, it is clear that banks need to apply a balanced portfolio theory to satisfy the needs of their customers. Keeping a proper balance between loans and savings is also helped by this. In addition, banks must stay updated on their liquidity situation, which is critical. According to hypothesis of this study, liquidity risk has a considerable impact on the performance of banks and validates findings obtained by Chen et al., (2018), Onsongo et al., (2020), and Hunjra et al., (2022).

Further, the outcomes of BS and CEOD indicate a substantial impact on banks' performance where board size negatively influences bank performance and CEO duality is positively associated with the performance of banks in Asian emerging economies. These outcomes support the views of agency theory of Jensen and Meckling (1976) that small boards are more efficient in improving the performance of banks due to less possibility of agency problems and are aligned with the studies of Nyamongo and Temesgen (2013),

Hassan and Farouk (2014), and Yameen et al., (2019), while findings of CEO duality and bank performance are in line with the study of Bunget et al., (2020). Thus, third hypothesis is accepted. Bank growth has significant and positive influence on performance which is consistent to the findings of Mehmood *et al.* (2019). Further analyses reveal that GDP growth significantly improves financial performance as found by Trujillo-Ponce (2013), whereas inflation rate significantly and inversely affects financial performance of banks which are aligned with study of Egbunike and Okerekeoti (2018).

Table 5

Robustness Test with GMM Estimation

Variables	ROA		ROE	
	Model I	**Model II**	**Model III**	**Model IV**
L1	-0.042**	0.084***	-0.104***	-0.048***
	(-2.395)	(4.261)	(-3.844)	(-4.485)
L2	-0.278**	0.812***	-0.395***	-0.084**
	(2.441)	(3.416)	(-3.776)	(-2.275)
ZS	0.351**	---	0.751**	---
	(2.152)		(2.395)	
NPL	---	-0.356***	---	-0.381***
		(-4.132)		(-3.772)
CR	0.017*	---	0.192**	---
	(1.825)		(2.431)	
LTD	---	-0.161***	---	-0.316***
		(-3.234)		(-2.986)
BS	-0.524***	---	-0.425***	---
	(-3.112)		(-4.249)	
CEOD	---	0.506***	---	0.228***
		(3.436)		(3.042)
BSZ	0.014**	0.007***	0.037***	0.012*
	(2.142)	(3062)	(4.457)	(1.913)
BA	0.108***	0.157**	0.227***	0.216***
	(3.269)	(2.175)	(3.689)	(4.397)
GR	0.238***	0.139***	0.141***	0.158**
	(4.490)	(3.184)	(3.175)	(2.377)
GDPG	0.158**	0.315*	0.248*	0.155**
	(2.261)	(1.759)	(1.826)	(2.325)
INF	-0.251**	-0.051***	-0.153***	-0.578**
	(-2.416)	(-5.765)	(-3.895)	(-2.185)
C	0.495**	-0.827**	-0.325***	0.718**
	(2.276)	(-2.162)	(-4.128)	(2.213)
Sargan (*P-value*)	8.586	8.037	7.412	7.824
	(0.157)	(0.161)	(0.169)	(0.165)
AR$_1$ (*P-value*)	0.039	0.025	0.037	0.014
AR$_2$ (*P-value*)	0.421	0.427	0.341	0.467
Country Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes

Note: ZS and NPL are the credit risk proxies. Liquidity risk is measured with CR and the LTD ratio. BS and CEOD represent board size and CEO duality proxies used for measuring bank governance. BSZ is bank size, BA is bank age, and GR is bank growth, GDPG is GDP growth, and INF is inflation rate. The model I estimates the role of ZS, CR and BS on ROA. Model II assesses NPL, LTD's and CEOD's influence on ROA. Model III determines ZS, CR and BS influence on ROE. Model 4 evaluates NPL, LTD, and CEOD impact on ROE.

The testing of hypotheses for the whole sample of banks in Asian emerging economies is presented in Table 5, and it is done using a two-step dynamic panel regression. This is done to ensure the robustness of the results. The Sargan test is used to determine whether or not the instruments are reliable. Because the conclusions of this study are negligible, the tools that Iemployed to conduct it are legitimate. The study continues by putting the Arellano–Bond test to use to validate autocorrelation. AR1 is found to be

considerable, whereas AR2 is shown to be insignificant. This suggests that there is no autocorrelation.

Findings show that credit risk affects banks' financial performance. Models I to IV show the Z-score improves bank performance, supporting Hypothesis 1. This continent's banks have strict loan regulations so debtors can repay loans on time and follow terms. Banks are enforcing loan policies, and customers are complying. Banks profit from their savings. Both models show that NPL ratios hurt bank performance, supporting H1 of current study. Increased provisioning for non-performing loans may reduce bank performance (NPLs). Banks must monitor their customers to avoid credit risk caused by information asymmetry. Study findings support H1. The findings of this research are consistent with other emerging regions (Gadzo *et al.,* 2019). Liquidity risk affects bank performance. In both models, CR positively affects bank financial performance, supporting H2 of this stduy. With enough CR, banks can successfully control liquidity risk and improve their performance. In both models, the LTD ratio hurts bank performance, corroborating H2 of present study. A lower LTD ratio suggests that banks are liquid and can handle unexpected financial needs. Banks withhold deposits to reduce liquidity risk and enhance financial performance. According to this research, banks must use a balanced portfolio theory to satisfy clients. This helps balance debts and savings. Critically, banks must monitor their liquidity. Ihypothesise that liquidity risk affects financial performance, which verifies Chen *et al.,* (2018) and Onsongo *et al.,* (2020). Board size negatively affects bank performance, but CEO duality favourably affects bank performance in Asian emerging economies. These results support the assumption that small boards are more effective in increasing bank performance due to fewer agency difficulties. They are in line with the research of Nyamongo and Temesgen (2013) and Hassan and Farouk (2014), and Yameen et al., (2019), while findings of CEO duality and performance are consistent with results of Bunget et al., (2020). Therefore, third hypothesis of this study is also approved. Bank growth and GDPG rate have significant and positive, while inflation has significant and negative effects on financial performance of banks.

Conclusion

Financial institutions are often regarded as being among the most important players in the expansion of any nation's economy. In a similar vein, banks, which are a subset of financial institutions, contribute significantly to the functioning of an economy. In economies that are still in the process of growing and developing, the financial sector is essential to the economy's overall growth and progress. However, the operation of banks is not without its challenges because the financial risk is one of the most significant obstacles that must be overcome by financial institutions for them to remain in business. If the bank is unable to maintain its operations, it will have repercussions that are seen across the economy.

As a result, this study investigates the effect that two bank-specific risks and corporate governance have on the financial performance of the banks. These risks include credit and liquidity concerns and board characteristics. This study evaluates listed banks in ten Asian nations that are still growing economies. To analyse the data, it uses a static and dynamic panel model with two steps. According to the findings, credit risks and liquidity risks all significantly impact the financial performance of banks. When it comes to credit risk, the Z-score positively while the NPL ratio negatively impacts the performance of banks. However, when it comes to the risk of liquidity, the CR positively and the LTD ratio negatively influence the performance of banks. Likewise, board size is negatively related to bank performance while CEO duality positive impacts bank performance.

A key finding from this study is that Asian nations' banking systems should focus on lending and liquidity, as well as corporate governance mechanisms for better outcomes. For the benefit of all stakeholders, bank management must assess, manage, and mitigate bank-specific risks. To properly manage credit risk, banks' top management must issue clear and understandable rules to risk managers. Furthermore, the study documents that bank management provide timely monitoring and supervision of long-term borrowers to prevent credit risk. Banking administration and practitioners and policymakers are also encouraged to set clear procedures for providing loans and timely repayments by clients. A liquidity crisis might ensue if banks fail to properly manage their long-term debtors. Managers of banks should monitor their liquidity situation frequently to ensure that they have enough current assets to pay for the bank's current liabilities and that the ratio of loans to deposits stays in the proper range. As a result, the banks' liquidity positions will improve. Management will be able to avoid the negative consequences of credit and liquidity risk by properly implementing these policies, and they may even boost their financial performance. Risk management is critical in emerging economies, where the financial environment is more unpredictable, therefore, it is challenging for banks to sustain profitability and avert bank failure.

Although current study presents broad analyses concerning risk, governance and financial performance of banks in Asian emerging economies, it might be noted that there are still some rooms available for future research. It may be worthwhile to conduct the same research comparing developed and developing nations in the future, as the focus of this study is on developing countries. Research might be done to analyse bank risk by comparing it to other financial institutions. Using the same factors, a conventional and Islamic banking comparison may provide different outcomes. Further, independent directors may be added with other corporate governance proxies because they play effective roles in monitoring the acts of board.

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Appendix

	China		
Sr.	Bank Name	Sr.	Bank Name
1	Bank of China Limited	5	Huishang Bank Co Ltd
2	Bank of Jiangsu Co. Ltd.	6	ICBC
3	China Construction Bank Corp.	7	Haitong Securities Co. Ltd
4	Chonging Rural Commercial Bank		

	India		
Sr.	Bank Name	Sr.	Bank Name
1	Allahabad Bank	11	ICICI Bank Limited
2	Bank of Baroda	12	Kotak Mahindra Bank Limited
3	Canara Bank	13	Lakshmi Vilas Bank
4	Central Bank of India	14	Mahindra & Financial Services Ltd
5	Choalam Investment & Finance Co.	15	South Indian Bank
6	City Union Bank	16	Standard Chartered India
7	Corporation Bank Ltd.	17	Syndicate Bank
8	Dcb Bank	18	UCO Bank
9	Federal Bank Ltd. (The)	19	Union Bank of India
10	HDFC Bank Ltd	20	YES BANK

	Indonesia		
Sr.	Bank Name	Sr.	Bank Name
1	Bank Bumi Arta Tbk	10	PT Bank BTPN Tbk
2	Bank Mandiri (Persero) Tbk	11	PT Bank China Construction Bank
3	Bank Negara Indonesia (Persero)	12	PT Bank CIMB Niaga Tbk
4	Bank Pan Indonesia Tbk PT	13	PT Bank Ganesha Tbk
5	Bank Pembangun Jawa Tbk	14	PT Bank jRrust Indoseia Tbk
6	Bank Rakyat Indonesia Tbk	15	PT Bank Tabungan Nasional Tbk
7	Bank Victoria International Tbk	16	PT Bank Woori Indonesia Tbk
8	PT Bank Maspion Indonesia	17	PT Bank Yudha Bhakti Tbk
9	PT Bank BRI syariah Tbk		

	Lebanon		
Sr.	Bank Name	Sr.	Bank Name
1	B.L.C. Bank S.A.L	4	Banque BEMO Sal
2	Bank Audi SAL	5	BLOM Bank s.a.l.
3	Bank of Beirut S.A.L.	6	Byblos Bank S.A.L.

	Malaysia		
Sr.	Bank Name	Sr.	Bank Name
1	Affin Holdings Berhad	5	Hong Leong Financial Group Bhd
2	CIMB Group Holdings Berhad	6	OSK Holdings Berhad
3	Hong Leong Bank Berhad	7	Public Bank Berhad
4	Hong Leong Capital Berhad	8	RHB Capital Berhad

	Pakistan		
Sr.	Bank Name	Sr.	Bank Name
1	Allied Bank Limited	11	Habib Metropolitan Bank Limited
2	Apna Microfinance Bank Limited	12	JS Bank Limited
3	Askari Bank Limited	13	MCB Bank Limited
4	Bank Al Habib	14	Meezan Bank Limited
5	Bank Al-Falah Limited	15	National Bank of Pakistan
6	Bank Of Khyber Limited	16	Samba Bank Limited
7	Bank Of Punjab Limited	17	Silkbank Limited
8	BankIslami Pakistan Limited	18	Standard Chartered Bank (PK)
9	Faysal Bank Limited	19	Summit Bank Limited
10	Habib Bank Limited	20	United Bank Limited

	Philippines		
Sr.	Bank Name	Sr.	Bank Name
1	Asia United Bank Corporation	10	Philippine Bank of Communications
2	Bank of The Philippine Islands	11	Philippine Business Bank

Sr.	Bank Name	Sr.	Bank Name
3	BDO Leasing and Finance Inc	12	Philippine National Bank
4	BDO Unibank Inc	13	Philippine Saving Bank
5	China Banking Corporation	14	Philippine Trust Company
6	Citystate Savings Bank, Inc.	15	Rizal Commercial Banking Corp.
7	Col Financial Group, Inc	16	Security Bank Corporation
8	First Metro Investment Corporation	17	Union Bank of the Philippines
9	Metropolitan Bank & Trust Co.		

Thailand

Sr.	Bank Name	Sr.	Bank Name
1	Bangkok Bank Public Co. Limited	6	MFC Asset Management Co. Ltd
2	CIMB Thai Bank Public Co. Limited	7	Siam Commercial Bank Co. Ltd
3	Kiatnakin Bank Public Co. Limited	8	Thanachart Capital Public Co. Ltd
4	Krung Thai Bank Public Co. Limited	9	TISCO Financial Group PCL
5	Kim Eng Securities Public Co. Ltd	10	TMB Bank Public Co. Ltd

Turkey

Sr.	Bank Name	Sr.	Bank Name
1	Akbank T.A.S.	5	Koçbank
2	Denizbank A.S.	6	Sekerbank T.A.S.
3	Finansbank A.S.	7	Turk Ekonomi Bankasi A.S.
4	HSBC Bank (Turkey)	8	Yapi Ve Kredi Bankasi A.S.

Vietnam

Sr.	Bank Name	Sr.	Bank Name
1	Asia Commercial Bank	3	Saigon Thuong Commercial JS Bank
2	Saigon - Hanoi Commercial JS Bank		

A Study of Islamic Portfolio Diversification Opportunities for Investors of Pakistan in various stock holding periods

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This study attempts to find out the possible opportunities for the investors of Pakistan Islamic market to maximize the benefits of divergence. Dow Jones Islamic market returns (DJIMR) of four different regions named as Dow Jones Islamic Americas, Dow Jones Islamic European, Dow Jones Islamic Asian Pacific and Dow Jones Islamic Middle East and North Africa Regions across the Pakistan Karachi Meezan Index-30 have been used to capture the approach of diversification benefits. According to objectives, Multivariate GARCH—Dynamic Conditional Correlation (DCC) model is applied and it is suggested that local investors of Pakistan should prefer to invest in Asian pacific region, then to Americas region and further Middle East and North Africa region and least preference should be given to European region to maximize benefits from diversification. In order to capture the change in diversification benefits during various stock holding horizons, Continuous wavelet transformation-CWT is applied and results have indicated insignificant relationship/correlation between two markets (local and international markets of all regions) for short period of holdings rather medium and long term holdings period. Indeed, this study has focused on advance concept of incorporating the role of stock holding horizons while determining the benefits of diversification which has greater implications in the field of portfolio diversification .

Keywords: Dow Jones, diversification, multivariate, dynamic conditional correlation, continuous wavelet transformation, Karachi Meezan Index-30.

This study aims to explore the opportunities of investment for pkaistani invesotrs of Shari'ha complaince returns in multiple dimensions by highlighting the benefits of diversification in various international markets of Islamic returns. In order to capture the approach of diversification in broader prospect, Islamic return markets of different regions of world are taken into consideration across the local Islamic return market of Pakistan. Application of concept of stock holding periods, for which invetors can hold the investment with them, has also been explored in relation to benfits of diversification.

Islamic financial market is reflecting 15-20 % growth rate annually from 2000-2010 which is a basic reason of preferring it in global financial sector by investors (International *Islamic Financial Market*, 2010). Many financial institutions have attracted towards Islamic financial products due to this high growth rate. Major countries which are considered as pioneers of this industry are Egypt, Saudi Arabia, Sudan, Malaysia, and Pakistan. Divine Principles for investment, asset backed financing modes and profit-loss investment tools are considered as strength for the industry (Hakim & Rashidian, 2002). However, still

performance of Islamic stock is doubtful as compare to conventional (Ghazali, Lean, & Bahari, 2013; Mensi, Hammoudeh, Reboredo, & Nguyen, 2015), (Ho, Rahman, Yusuf, & Zamzamin, 2014), (Shamsuddin, 2014), (Alkhazali & Zoubi, 2020; Al-Khazali & Mirzaei, 2017), (Rejeb & Arfaoui, 2019).

Principles of the Islamic Financial Market

Like all other human activities, Islamic Financial activities are governed by shari'ah. Quran and Sunnah (religious text) work as basic regulations for the performance of financial activities within an Islamic framework. Along with preventing specific goods and services, Islam also elaborates/ teaches its followers not to exploit the rights of others while making economic transactions concerning the production, distribution, and exchange of goods and services and their consumption (Alam, Akber, Shahriar, & Elahi, 2017) and (Kassim, Ramlee, & Kassim, 2017). An Islamic theory of Economics and Finance is concerned not with religious success but with personal gains" as (Tatiana, Igor, & Liliya, 2015).

The significant difference between these two markets is that; conventional economic market agents focus on material gains only, while Islamic financial activity agents simultaneously work for endless and material benefits (Mumtaz, Usman, & Nasir, 2014). Therefore, Islamic investor portfolios pay attention to various Shariah-compliant securities to diversify their holdings

Pakistan Islamic Financial Stock Market

According to the American International rating agency, Atlantic Media Company (AMC) ranked Pakistan as one of the stronger economies in South Asia and declared an Emerging economy (Farwa, 2006). Pakistan is chosen as the base country within the framework of the Islamic financial system (Shoaib, 2015).

The Islamic index of Pakistan, known as the Karachi Meezan Index (KMI-30), consists of 30 companies from 12 industries registered on the KMI-30 index in Pakistan. All thirty 30 companies fulfill the criterion of Hilal business and according to Shari'ah Compliance, up to 33% of non-Shari'ah compliant investment is permissible; one company Nishat Mills has above 33% of non-Shariah Compliance investment, as shown in the figure below (Z, U, & M, 2012).
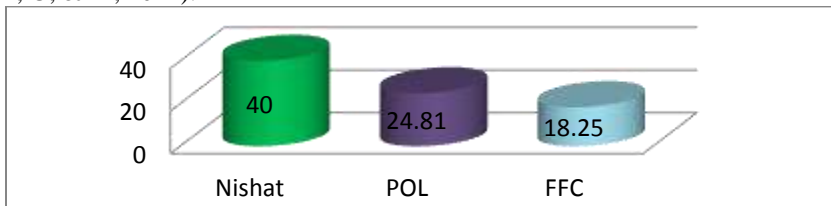

Figure 1 : Non-Shariah Compliance investment in Pakistan

Problem Statement

Recently, the growth of the Islamic financial market has expanded widely in Islamic countries, supporting the argument of options for investors in conventional and Islamic stocks. For four decades, the theory of international portfolio diversification has been widely recognized after seminal work of Grubel (1968) and, most notably, the work of Levy and Sarnat (1970).

The interaction among international stock markets is critical to fund managers and international investors deeply concerned with identifying and creating a well-diversified minimum-risk portfolio mix and lower correlations is essence of international diversification (Dajcman, Festic, & Kavkler, 2012).

However, empirical estimation generates mixed results concerning portfolio diversification, with some literature supporting the argument (Chatti, Kablan, & Yousfi, 2013; Rana & Akhter, 2015) and another side of literature reporting strong correlations (Kamil, Bacha, & Masih, 2012), strong correlation reported by Anwer and Raza (2016). In-spite of expanding its financial market in Islamic domains still, investment in local Islamic stocks seems to be little risky which make them to think they look for the zone comparatively safe which ensure them to have lesser risks and secure environment of high returns adopting the choice of "don't put all eggs in one basket".

The empirical and theoretical background of the literature reviewed until now has generated mixed and contradictory reviews within the framework of international portfolio diversifications. Simultaneously, the significance/worth of current "investment holding periods" (like short, medium, and long periods), a new emerging dimension in literature, helps understand the strength of instabilities and relationships for stock market returns. This aspect is relatively new as less empirical work has been found (to our knowledge), and being the 6th Islamic state of the world, Pakistan is chosen as a base country (Hasan, Latif, & Al-Za'tari, 2017).

This study empirically and Theoretically explores the impacts of various investment horizons on opportunities for international portfolio diversification in Islamic equities using Pakistan as a base country within context of Markowitz's theory,

Research Objectives
The research aims the follwing:
1. To study whether Pakistani Islamic stock investors should avail the opportunity to invest in European region markets   or Americas, Middle East and North Africa (MENA), or Asia-Pacific regions.
2. To evaluate the importance and connection of different stock-holding periods with international diversification gains for all returns in relation to Investors of Islamic shari'ah Pakistan.

Literature Review
 Some studies are conducted in similar context of importance of Islamic capital market and Dow Jones, Portfolio Diversification opportunities for Islamic Investors in various markets and stock holding periods' contribution in diversification gains which are highleted in this study.

Unique value of Islamic capital market
The Fundamentals of Islamic Finance, better known as the rules of Sharia, are based on five basic principles: Riba, extreme uncertainty, hypothesis, risk and profit sharing and to invest in "unethical" entities (Hayat & Kraeussl, 2011). Islamic stocks have a lower leverage ratio than conventional stocks (Hoque, Kabir, Abdelbari, & Manahov, 2016) and have distinctive features of Islamic Finance (Hassan & Mollah, 2018). Shari'ah supports leasing, profit-sharing, and enterprise, whereas it strictly prohibits the fixed interest rate and profit (Mumtaz, Usman, & Nasir, 2014). key factor is determined for the development of any

financial market (Rizvi & Arshad, 2018). Investments in Islamic stocks are in high demand since the company's financial position is more reliable in the face of uncertain global economic conditions (Budiandru, 2021). Various studies conducted on the performance of Islamic equity markets, (Hussein, 2007) (Kok, Giorgioni, & Laws, 2009) (Rana & Akhter, 2015), (Amyulianthy & Ritonga, 2016), (Deep, 2021) and (Aarif, Rafiq, & Wahid, 2020).

Islamic Portfolio Diversification and Dow Jones

Abbes and Trichilli (2015) discovered that Islamic stock indexes have the possible feature of diversification benefits for less period of time in crisis situations. The benefits of Islamic equities for diversification in Islamic developing and emerging countries, have recently been investigated in a few studies looked into the significance of the stock market in Islamic investing and diversification (Alkhazali & Zoubi, 2020), (Arfaoui & Rejeb, 2020). Raza et al., (2016) capture the diversification of Dow Jones Islamic returns as well. Due to lesser risk feature of Islamic returns, academics believed that high level of potential exist as a means of portfolio diversification (Shamsuddin, 2014) In addition, Saiti et al., (2014) argued the same as (Al Rahahleh, Akguc, & Abalala, 2021). Maghyereh et al., (2019) worked on Dow Jones Citigroup Sukuk index and demonstrated the short-term diversification benefits of portfolios that include both conventional and Islamic shares. Recently, researchers in Islamic stocks have also looked into the significance of the stock market in Islamic investing (Alkhazali & Zoubi, 2020). Al Shugaa and Masi (2014) and Mansourfar, Didar, and Jodatnia (2017) also studied financial integration at industry level and found benefits from international diversification, however somehow there was evidence of increased interdependence across markets in turbulent period (Majdoub & Mansour, 2014).

Many studies have analyzed the importance and features of Dow Jones Islamic returns to find out diversification and due to the reason, in the instant study, researcher has also used Dow Jones Islamic returns (DJIR) of different regions across Pakistan. Researchers have also found that the risk is associated with the Dow Jones Islamic Index (DJII) but significantly lower than the Dow Jones World Index (DJWI) which has made Islamic Dow Jones more attractive for investors (Al-Zoubi, A., & Maghyereh, 2007; Al-Khazali and Mirzaei, 2017).

Time changing and Scale-Dependent Relationships

Above mentioned studies, nevertheless particularly talks about this association of markets from the constancy point of view, yet numerous new studies have established the fact that across nation, these correlations are changing with time and may not be unvarying (Longin & Solnik, 1995). Multivariate GARCH-DCC for capturing time varying correlations, (CWT) the continuous wavelet transform (a new study in literature) and the maximal overlap discrete wavelet transform based on DWT for stock-holding periods are applied to incorporate hlding periods role in diversification gains (Ali & Masih, 2016; Buriev & Masih, 2015). Correlation in financial markets and its time scaled dependency of returns were initially supported by Dajcman (2012) and Ilhan and Masih (2014). In addition, a joint examination of investor recognition and institutional holding reveals a significant role of investor recognition in explaining long-term returns was conducted (Amédée-Manesme, Baroni, Barthélémy, & Mokrane, 2015; Poretti & Das, 2020).

Theoretical Framework

Theoretical foundations fare derived from Modern theory, developed by Markowitz (1952) Nobel Prize winning a theory of how investors avoid risk by constructing a portfolio which is expected to yield maximum or optimum return within given level of market risk.

Markowitz (1952) Tobin (1958) agreed on the statement that investors are risk averse, so risk and expected returns of portfolio depend mainly on correlation among stock returns. It means no correlation among stocks give benefit of diversification and reduces the risk factor. No doubt stock market has much risk but it can be reduced or minimized to certain extent. Instead of investing in single stock, unsystematic associated risk can be avoided by diversifying portfolios. Moreover, Investors prefer to have diversified portfolios to avoid risk attached to individual home security as suggested by (Grubel, 1968; Grauer & Hakansson, 1987). Markowitz diversification can capture reduction in unsystematic risk. Portfolio diversification can be helpful in building investors' confidence and achieving goal to be as developed country in 2020 (Lee, Fan-Fah, & Cheng, 2016). Hence, application of MPT for Islamic investment in various regions and countries provide theoretical implication through this study.

Method

The methodology of this study has helped to explain the overall research framework developed based on underpinned theories and supporting literature. The Philosophy of Positivism has been used with quantitative approach by utilizing secondary data sources.

Data Summary Statistics

For all research objectives, KMI-30 Shari'ah index (Karachi Meezan Index-30) is used for finding diversification opportunities for Islamic investors of Pakistan. To capture regional market Islamic returns, Dow Jones Islamic for Europe, Americas, Asia-Pacific and indexes for Middle East and North Africa region are used in study (Islamic Finance,2013). For this study, a sample of adopted indices could be evident from Table 1.

Table 1
Sample Indexes

Sr No.	Symbols	Indexes
1	KMI-30	Karachi Meezan Index-30
2	DJIA	Dow Jones Islamic America
3	DJIEU	Dow Jones Islamic Europe
4	DJIAP	Dow Jones Islamic Asia-Pacific
5	DJIMENA	Dow Jones Islamic Middle East and North Africa

Descriptive Analysis and Diagnostic tests

All the series of closing prices of data have been computed as a logarithmic difference of closing prices of stock indexes. First of all descriptive analysis of the series would be done and then basic diagnostic tests for the justification of GARCH parameterization for conditional variance development.

Multivariate GARCH (MGARCH)

The Autoregressive conditional heteroscedasticity process demonstrated by (Engle, 1982), known as ARCH and Generalized ARCH formulation (GARCH), was developed by (Bollerslev, 1986). These are highly known volatility models having conditional volatilities which vary over time. Multivariate GARCH, commonly known as (MGARCH-type models, construct a framework that shows the probability of interactions within conditional mean value and time-varying conditional variance of two or more observed series (Ahmed & Farooq, 2017).

Multivariate GARCH (MGARCH)—Dynamic Conditional Correlation (DCC) model

Multivariate GARCH-DCC Model has been used to capture the behavior of correlations and volatilities and between returns of assets over a period along with size (weaker or more substantial) and directions (positive or negative) both for local and international stockholders for diversifying their portfolios against unseen risks. Hence, Dynamic Conditional Correlation DCC's well-known framework under M-GARCH have enabled to determine whether shocks to return volatilities are complementary or substitutes in facing risk factors. It helped find out both the changes (when and how they occur)in the interdependence between financial market variables as suggested by (Buriev & Masih, 2015). The reason for using DCC over CCC (constant correlations model)is that correlations and co-movements are not considered constant, and returns are time-varying, as suggested by (Dajcman, Festic, & Kavkler, 2012).

$$r_t = B_0 + \sum_{i=l}^{k} \beta_i r_{t-i} + u_t = \mu + u_i$$

$$\mu_1 = E\left[r_t \mid \Omega_t - 1\right]$$

$$\mu_t \mid \Omega_{i-1} \square \; N(0, H_t)$$

$$G_t = \text{diag}\left\{\sqrt{h_{ii,t}}\right\}$$

$$H_t = G_t R_t G_t$$

In the above formulation, hii,t exhibits estimated conditional variance which is derived from the univariate (GARCH) Model, and Gt stands for the diagonal matrix of conditional standard deviations

Continuous Wavelet Transformation (CWT)

The Continuous Wavelet Transform (CWT) has recently become popular among financial and economic scholars. like (Ferrer, Bolós, & Benítez, 2016;; Madaleno & Pinho, 2012; Saiti, 2016; Saiti, Bacha, & Masih, 2014) and many others as well. Continuous wavelet plots the single variable time series data into the function of two variables known as frequency and time. Hence, this transformation sketches the two-dimensional diagram of correlation series that helps in the interpretation of hidden information and patterns of series. This type of correlation analysis between the two series is called Wavelet coherence. Applying the CWT technique in this study for the desired objective diversification change benefits stock holding time would indicate the degree of correlation among series considering both scale and time changing.

The continuous wavelet transform (CWT) $W_x(u,s)$ is calculated using the below eq.

$$W_x(u,s) = \int_{-\infty}^{\infty} x(t) \frac{1}{\sqrt{s}\psi}\left(\frac{t-u}{s}\right)dt.$$

u and s stand for an explanation of the location of wavelet in specific time and frequency domains, respectively. Hence, bivariate framework are identified as wavelet coherence. Here, wavelet coherence is stated as follows:

$$R_n^2(S) = \frac{|S(s^{-1}W_n^{xy}(s))|^2}{S(s^{-1}|W_n^x(s)|^2.S(s^{-1}|W_n^y(s)|^2)}$$

Above S is the smoothing operator of the series; $W_n^x(s)$ denotes (CWT) continuous wavelet transformation of X time series; s represents wavelet scale; $W_n^y(s)$ stands for continuous series at Y time series; $W_n^{xy}(s)$ indicates cross wavelet transformed series of Y and X (Madaleno & Pinho, 2012).

Results

From 13th June 2013 to 10th September 2021, time series data sets have been obtained using the Thomson-Reuters Data Stream database. The returns from the stock index have been estimated as logarithm differences in indexes' day-to-day closing prices, {ln(pt)—ln(pt-1)}, here p denotes an index value. A few outputs of descriptive statistics can be evident in Table 2.

The diagnostic tests for the justification of GARCH parameterization for conditional variance development are applied. On the basis of results, we may argue that at the 1% level of significance, the hypothesis of normal distribution, observed time series could be rejected. In addition, the author has also tested for Ljung Box Q statistics with ten lags and a serial correlation concerning the squared returns series. Based on the obtained results, we may argue that the null hypothesis could be rejected, resulting from the absence of autocorrelation at the 1% level of significance. The author has also indulged with heteroscedasticity measures through Engle's ARCH effects and lag five. Based on the obtained results, we may argue that the null hypothesis resulting from an absence of ARCH (Autoregressive Conditional Heteroscedastic) effects could not be accepted at 1% significance level of for all. Hence, GARCH could be sufficient for the processes of conditional variance (see Table 2).

Table 2
Descriptive statistics

Indices	KMI30	DJIA	DJIEU	DJIAP	DJIMENA
Mean	0.000148	0.000131	0.000127	0.00015	0.0000527
Maximum	0.038503	0.038357	0.030605	0.019845	0.0379944
Minimum	-0.05602	-0.05006	-0.05116	-0.0252	-0.0645318
Std. Dev.	0.005792	0.004463	0.004224	0.003712	0.0036538
Skewness	-0.606**	-0.983**	-1.119**	-0.482**	-3.248**
Kurtosis	12.094**	23.771**	16.793**	6.943**	64.196**
Coeff. of Var.	39.2037	34.17317	33.40087	24.69578	69.36042
Jarque-Bera	195.71**	173.09**	212.61**	138.16**	22062**
Modified L-B (10)	8.05001	7.86336	7.82714	15.4999	18.5025
Modified L-B (20)	20.6297	13.2466	12.2842	23.2883	29.1882
ARCH Effects (5)	37.687**	304.583**	43.23**	185.785**	133.547**
Observations	2152	2152	2152	2152	2152

Do the investors of KMI-30 invested in international markets and can they enjoy the benefits of diversification?

The author has also adopted a test, namely, the M-GARCH-DCC test on the various global returns, including the KMI-30 index (see table 2). It has been confirmed in Figures 2 and 3, the time-varying attributes of correlations and volatilities. Figure 2, indicate the movement of daily closing prices of selected indexes while figure 3 indicate the volatility in daily returns of selective indexes for the period 13th June 2013 to 10th September 2021. Nevertheless, the KMI-30 returns demonstrated greater instability from June 2015 to 2016 followed by the second quarter of 2018 for a shorter period before submerging afterward in 2020 due to Covid-19. However, the instabilities of the entire indexes in the era of the post-Covid are more or less identical or move together.
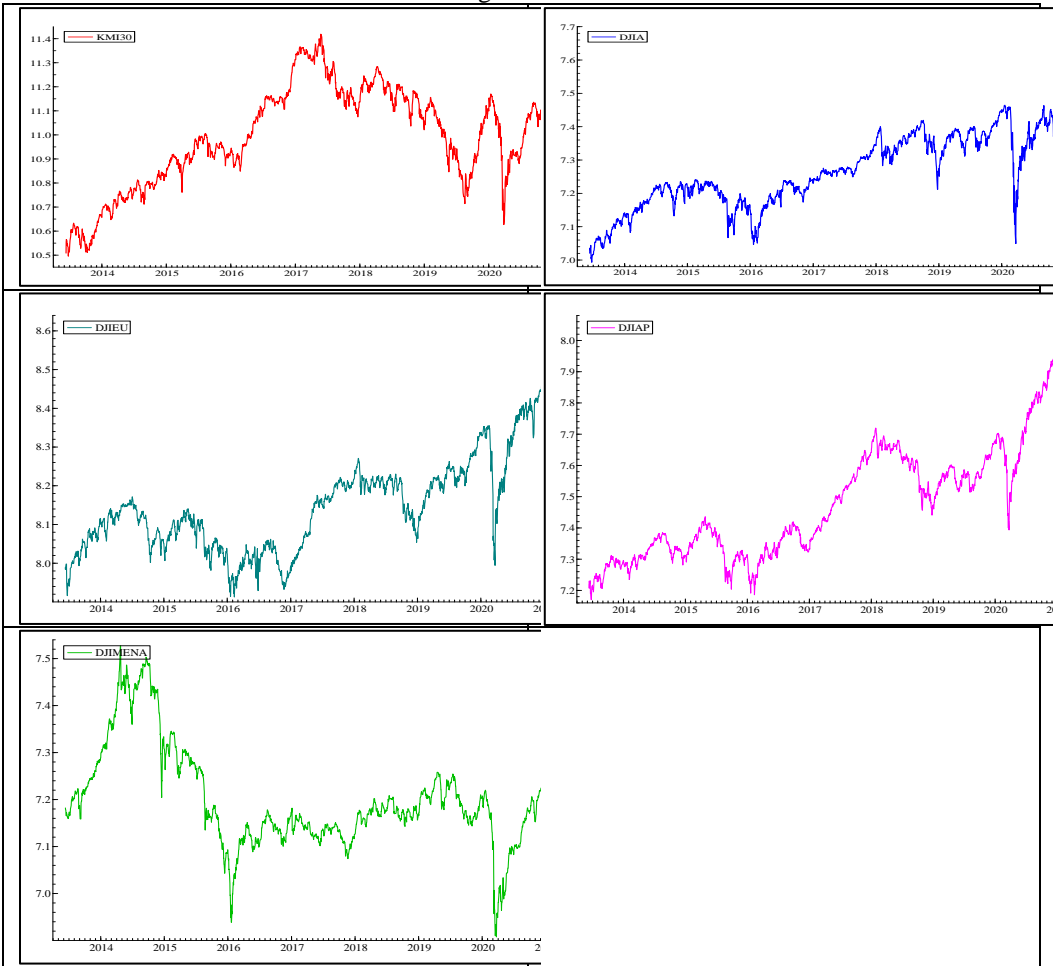

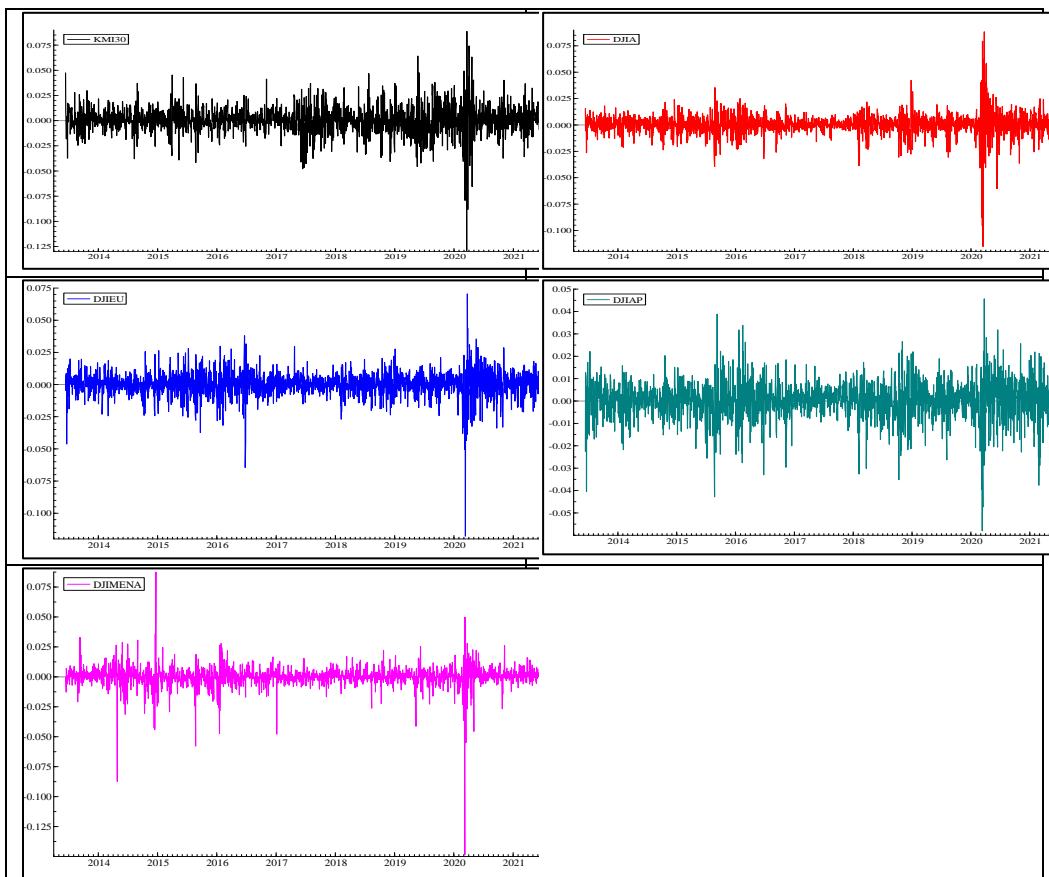Figure 2 Daily closing prices of all five series

Figure 3: An overview of Daily log-return series of all concerned indexes

Table 3 indicate the estimation association among the Islamic Dow Jones Islamic indexes of developed and developing economies. The findings indicate that returns of KMI-30 are significantly and positively associated with the returns of DJIA (β= 0.245, t=10.71, p=0.000), between returns KMI-30 (PSX) and DJIEU (Dow Jones Islamic European Union) (β = 0.433, t= 22.50, p=0.000), and DJIAP (Dow Jones Islamic Asia Pacific) (β = 0.055, t= 2.494, p=0.012). Moreover, the KMI-30 indicates a significant and positive association with DJIMENA (Dow Jones Islamic Asia Pacific) (β = 0.263, t= 11.180, p=0.000. The findings of the present study reveal that KMI-30 (PSX) indicates a significant and positive association with the DJIA, DJIEU, DJIAP, and DJIMENA. However, Pakistani investors should diversify their stocks in different markets rather to one and should prefer Asian Pacific region, then americas markets, next to MENA market and least preference to the European market on the basis on t- value below table. It can be further identified that investors of other regions can diversify their stocks from their local market to international markets like investors in Asian Pacific have the opportunity to invest in European and MENA. Islamic indexes to gain the benefits of portfolio diversification while the Asian Islamic index indicates a negative and insignificant association with the DJIA and European region. Abbes and Trichilli (2015) investigated that similar economic groups present the long run relationship among Islamic stock returns while partial difference has been found in regions belonging to different group through VECM and captured short term integration between various segments of Latin

American vs MENA, European vs Asian emerging and Latin American vs Eurpean Islamic return markets, however, investors of Islamic shariah can achieve by diversification in different economic groups like in emerging and developed countries. Similarly, investors from the DJIEU can get the benefit of diversificationas previously by Kassim, Ramlee and Kassim (2017), Kafou and Chakir (2017) worked on shariah indecies and diversification.

Table 3

Parameter estimation of the DCC-MGARCH Model for KMI30, DJIA, DJIEU, DJIAP, and DJIMENA

Parameter	Coefficient	Std. Error	t-value	t-prob
$Y_{\text{KMI30-DJIA}}$	0.245038***	0.022881	10.71	0.000
$Y_{\text{KMI30-DJIEU}}$	0.433451***	0.019264	22.50	0.000
$Y_{\text{KMI30-DJIAP}}$	0.055787***	0.022365	2.494	0.012
$Y_{\text{KMI30-DJIMENA}}$	0.263330***	0.023552	11.18	0.000
$\Phi_{\text{DJIA -DJIEU}}$	0.499802***	0.017585	28.42	0.000
$\Phi_{\text{DJIA -DJIAP}}$	-0.012739	0.023503	-0.542	0.587
$\Phi_{\text{DJIA -DJIMENA}}$	0.113720***	0.024205	4.698	0.000
$\beta_{\text{DJIEU- DJIAP}}$	-0.020417	0.022117	-0.923	0.356
$\beta_{\text{DJIEU- DJIMENA}}$	0.216331***	0.022774	9.499	0.000
$€_{\text{DJIAP-DJIMENA}}$	0.042951**	0.024083	1.783	0.074
DCC $_{\text{alpha}}$	0.012895**	0.0061651	2.092	0.036
DCC $_{\text{beta}}$	0.869038***	0.10428	8.34	0.000
V	6.496409***	0.34874	18.63	0.000
Log-like.	46436.436			
AIC	-43.111			
SBC	-42.985			
Shibata	-43.112			
Hannan-Quinn	-43.065			
Hosking(5)	500.454***			
Hosking(10)	657.970***			
Hosking(20)	840.489***			
Hosking(50)	1647.19***			
Li-McLeod(5)	500.068***			
Li-McLeod(10)	657.424***			
Li-McLeod(20)	840.454***			

How would international portfolio diversification benefits change with various stock- holding time periods like, short, medium, and long period?

As discussed earlier, the researcher has applied the M-GARCH-DCC test to quantify how investors across Pakistan could obtain advantages from their diversified portfolio in the markets of the Americas, European, Asian, MENA regions as previously, DCC approach of

M-GARCH has been applied in study to investigate the corridors for investment in Islamic returns by US based investors and it is found better diversification opportunities can be availed by investing in Islamic return markets (Saiti, Bacha, & Masih, 2014). In the subsequent part, the researcher has indulged with contemporary wavelet transformations to measure the repercussions on the benefits of the diversified portfolio as a result of various horizons of investment as Dajcman et al., (2012), also supported scale dependence for returns in stock market in their latest research regarding co-movement dynamics among Austria, Germany, France and Britain developed stock markets of Europe against developing markets by incorporating Hungery, the Czech Republic and Slovenia (CEE markets) through application of Rolling approach of wavelet and MODWT and it has been found that short term investors get different benefits from long term investors as short term investors are more concerned to higher frequency in comovements among returns due to time scale interdependence.

Figure 5 presents the estimated wavelet coherence and phase difference of Karachi Meezan index-30 (KMI-30) returns with four Dow Jones Islamic regional series. The predicted phase difference and wavelet coherence across Islamic returns in Pakistan markets with the market returns in regions is based on CWT (Continuous Wavelet Transformations). The horizontal axis shows the time i.e years which covers study periods alternatively, from 6/12/2013 to 9/10/2021. The vertical axis shows frequency bands, based on daily units which range from 4- to 2152-day scales. The scales are further categorized into three holding periods as 4-day to 256-day scale (high frequency) relates to the short term dynamics, 256-day to 512-day scale relates to medium-term dynamics and 512-day to 2152-day scale (high frequency) relates to the long dynamics.

Drawing from the results mentioned above, we may argue that time is evident on the horizontal axis concerning the number of working (business days) throughout the FY 2013-2021 (sample years), the vertical axis, on the other hand, refers to the horizon of investment concerning the stockholding periods such as 4-8 days, 8-16 days, 16-32 days, 32-64 days, 64-128 days, 128-256 days, 256-512 days, 512-1024 days, and 1024-2152 days. A 5% level of significance from below mentioned curved line has been evident, which is predicted based on Monte Carlo simulations at the 95% level of significance. Color codes have been followed by figures as demonstrated on the right with ranges of power of correlation with different colors.

It can be seen undoubtedly that each market has practiced both short-term, medium-term, and long-term volatility. These existences are connected with the interaction of the overlapping effects of financial shocks. Similarly, to ease the interpretation, arrows indicate the phase differences between the considered series. In all the images of CWT, → and ← represent phase in and phase out for both stock returns and housing prices respectively. Moreover, ↗ and ↙ capture the leading trend and while ↘ and ↖ denote lagging trend between housing prices and returns.

(DJIA and KMI-30)

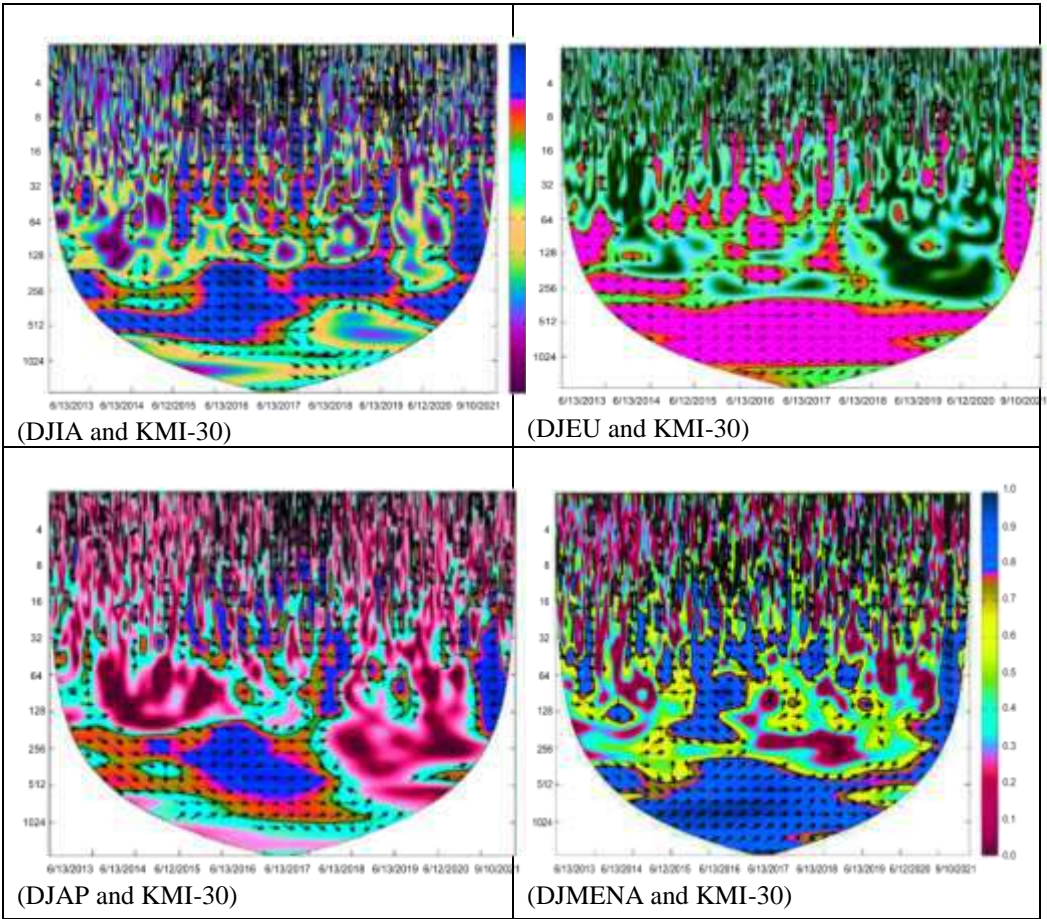(DJEU and KMI-30)

(DJAP and KMI-30)

(DJMENA and KMI-30)

Figure 5: Continuous wavelet transform between four regions and KMI-30

Figure 5, as far as the short investment periods are concerned, these periods comprise 16-32 days, 32-64 days, and 64-128 days of holding periods. Hence, it has been again evident that the correlations are relatively said to be insignificant across the all -region based markets and KMI-30, which demonstrate relatively greater levels of returns in terms of interdependence. Hence, businesspersons have global-level horizons in portfolio diversification across the markets. However when we move forward to medium term stock holding periods, investors a different scenario is reflected from all above, which shows slightly more correlations of all four regional series with KMI-30 return series, hence reducing benefits of diversification to some extent for investors of Pakistan like Abbes and Trichilli (2015) found that the Islamic stock index has possible diversified returns in the short-term crisis period. Last but not least, as far as long-run holding periods are concerned, these comprise of 512 to onward holding periods, are highly significantly related to returns across entire markets, consequently mitigating any potential global portfolio diversification in all of these four regional markets DJIAM, DJIEU, DJIAP and DJIMENA. Overall, local investors can diversify their stock in following regions in order of preference as on priority basis in Asian Pacific region, then in MENA region and third preference for diversification could be European markets and finally last preference would be Americas region keeping in view "don't put all eggs in one basket" to get the benefits of diversification keeping in view stock holding periods results derived

from Continuous wavelet transformation series (CWT) above more specifically. Comovements and relationship among Islamic returns of US and other partner countries named as: Mexico, Germany, Japan, China and Canada. For capturing diversification opportunities, three techniques of volatility and correlation, first one- GARCH- DCC, then for time scale interdependence used wavelet transmissions as CWT along with MODWT. Application of DCC has shown greater independence among US and its partner countries especially after 2018 till 2020. Further wavelets transmission results have enabled to identify that benefits can be availed by investing in Mexico and China but in specific horizons only and Mexico can provide for long run and China can give benefit of diversification in short run only (Jin, 2020).

Conclusions

The above study investigates the possible opportunities for the investors of Pakistan Islamic market in multiple dimensions and in various markets to maximize the benefits of divergence considering international regional markets and investment holding periods.

On the basis of diagnostic test, GARCH-DCC model has applied to capture the correlations which are time varying and moving continuously. Finding of study revealed that KMI-30 (PSX) indicates a significant and positive association with the DJIA, DJIEU, DJIAP, and DJIMENA due to correlation between two series for all regions. In a study, US Islamic returns have been studied by applying three models (GARCH CCC, DCC and BEKK) against five Islamic markets named as: Qatar, Indonesia, Turkey, Malaysia and Pakistan in order to find out the relationship in terms of conditional correlations and results have shown weak correlation of US Islamic returns with the emerging markets of the five **countries** (Majdoub & Mansour, 2014)**.** The present study concludes that Pakistani investors should diversify their stocks in different markets rather to one and should prefer Asian Pacific region, then Americas markets, next to MENA market and least preference to the European market on the basis of results derived from GARCH-DCC application. This study also opens new doors for investors of other regions to for diversification from their local market to international markets.

The results are surprisingly consistent with previous evaluations of continuous wavelet transforms (Najeeb, Bacha, & Masih, 2015). Based on the discussion about might Islamic diversification argue that DM exhibits more dynamic horizons in republic-held portfolio shortened diversification, for short period? However, for long-term investment opportunities, it has been observed that the relationship between international markets returns and Pakistan market is so significant that it reduces any potential prospects for Pakistani investors with respect to portfolio diversification. Overall, Asian Pacific and MENA region present more dynamic opportunities for Pakistani entrepreneurs across the time series. Americas markets, on the other hand, offer opportunities for portfolio diversification may be least preference while taking into account holding periods. Very similar results were obtained from DCC-MGARCH Model and CWT analyses except for the Americas region which was not least preference in GARCH-DDC model. Furthermore, it is obvious that in the mid-term period after the outbreak of COVID-19, compared with the index return behavior after the collapse of Lehman Brothers in the global financial crisis of COVID-19, higher returns and lower volatility (Zaimovic & Dedovic, 2021).

Implications and limitations of the Study

This study has focused not only investment opportunities for local but international investors, regulators and fund managers with minimum risk profile because with passage of time both and Islamic and even non-Islamic countries also considering the development of

Islamic Financial Products in order to reduce risk factor and to attract investment from Islamic perspective as well. Hence, this study finds that causal connection between the different Sharia indices of different countries motivates portfolio managers to foresee Sharia-compliant funds in their portfolios and thus activates them to diversify their funds and provides an understanding of the Islamic International portfolio of diversification benefits change with various stock-holding time periods like short, medium, and long periods. Although the study attempted to find out the effect of the financial meltdown on the market of Sharia indices and others in COVID-19 of economies of the world. But there may be another reason which can influence the market integrations, like investor behavior, macro-economic variables, investment channels, and technology usage, etc. are not included in the present study.

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Situationally Appropriate Leadership Styles and Team Performance: Is Trust Really Important

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This study aims to examine the impact of shared leadership and emergent leadership on team performance, with the moderating role of trust by employing Adaptive theory. To understand this, we conducted a cross-sectional study. Rooted within positivist philosophy, we employed quantitative method. Data was collected via questionnaire from 252 individuals from software and IT sector employees of Pakistan. Sample adequacy tests were applied before conducting multi-variate analysis. Using SPSS, we ran regression analysis and process macro for moderation analysis. The Harman test is applied to enquire about any existence of common method biases. Findings indicate that shared and emergent leadership are the key drivers of agile team performance. When leadership functions as a team process, it instills a sense of collective identity, increasing engagement and yield enhanced levels of team performance. Moreover, trust did not moderate the relationship between leadership styles and team performance. This study enhances our understanding of the differences between the interchangeably used leadership styles and their contribution to team performance in a digital setting.

*Keywords***:** shared leadership, emergent leadership, trust, team performance, agile,

Continuous improvement in digital technologies and communication systems has enabled organizations to work with greater flexibility, save resources and go beyond the local context. However, at the same time, it has made it difficult for organizations to remain competitive. In this dynamic environment, organizational achievements are contingent upon teamwork. The comprehension of the way they work and how to improve their performance is becoming increasingly important. For accomplishing the team's goal, the team should work as a whole and in this process of making the team, the leader plays a crucial role (Carsonson *et al.,* 2007; Larson & DeChurch, 2020). Leaders encourage, persuade, and guide team members toward achieving team goals. Conventional leadership models stress a hierarchical approach with a single designated leader at the helm, however, the need of the hour is a 'situationally appropriate' leadership style to overcome the challenges associated with agile, diverse and dispersed teams (Larson & DeChurch, 2020). Shared and emergent leadership styles are gaining currency in the scholarly community as effective approaches that disseminate leadership roles across team members, instead a single leader given the formal authority to lead a group of individuals (Hadi & Chaudhary, 2021).

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Carvalho *et al., (*2022), argue for exploring specific leadership styles in relation to team performance in a digital context, while Peeters et al., (2022) propose diverse leadership styles should be explored within the context of agile teams. This research aims to contribute in the existing body of knowledge by investigating into the theme of organizational culture of team-based structures that are adaptable and agile. In the current literature, Shared Leadership (SL) has become an organizational imperative (Shoukat & Muneeb, 2023). However, there is still some controversy and gaps in the academic field relating to the concept of SL and its performance benefits (Han *et al.,* 2021; Pourrajab & Ghani, 2016). Furthermore, studies on SL in Pakistani context are limited to the telecommunications (Hadi & Chaudhary, 2021) and information technology sectors (Imam & Zaheer, 2021), Hadi and Chaudhary (2021) called for the exploration of SL and team performance in other sectors. In response to the call, current research is housed in digital agile teams in software companies.

The process of emergent leadership (EL) has also become quite relevant for organizational performance (Spark & O'Connor, 2021). Studies on teams propose that EL, "that is, group members exert significant influence on other group members without holding formal authority" (Schneier & Goktepe, 1983). Previous research addressed the novelty of EL; however, it has been mostly studied from an 'individual's' perspective through a gender or 'race specified' lens (Han *et al.,* 2021) than team. This research extends our understanding of leadership styles (i-e shared and emergent) in relation to team performance in a digital context. We do not aim to list the differences between the two styles but their role in creating team effectiveness. Han et al., (2021) proposed to study the role of moderating variables as a link between leadership style and team performance. Here we propose the moderating role of trust in this study.

Theoretical Background and Hypotheses Development
Adaptive Leadership Theory
Traditional team design theories and models, entitled leadership responsibilities to single individuals, have long been questioned by academics (Siangchokyoo & Klinger, 2021). Organizations today have become more complex and knowledge-intensive, and scholars stress that teams now require more informal leadership behaviors (Xu *et al*., 2021). Most leadership theories are based on the preconceived notion of a hierarchal structure, but adaptive leadership theory challenges those traditional authoritative and formal behaviors that once highlighted the roles of a leader (DeRue, 2011) which makes it more appropriate lens for the current study.

Heifetz's (1994) adaptive leadership (AL) theory proposes that leadership emerges when interacting agents achieve adaptive outcomes (Young, 2016). The theory proposes AL as a relational phenomenon formed through interpersonal interactions in which individuals not only claim leadership roles and responsibilities but are also willing to acknowledge and grant leadership roles to others (Siangchokyoo & Klinger, 2021; DeRue & Ashford, 2010). The theory strengthens the foundation of emergent leadership by proposing that emergent leadership structures emerge dynamically over time as a result of continuous interactions between leaders and followers (D'Innocenzo et al., 2021), such that teams that do allow leaders to emerge thus are able to better coordinate team processes and are more likely to outperform those that do not (Hanna et al., 2021).

Shared Leadership and Team Performance

Organizations are increasingly relying on virtual teams to accomplish work across diverse geographic regions and different time zones (Hoch & Dulebohn, 2017). With this type of work arrangements organizations have realized that formal leadership structures are not helpful and horizontal lead processes such as SL (Zhu *et al.,* 2018) have gained currency. Although in the field of research SL is almost 20 years old, there is still room for further research to understand its application in diverse settings and fields (Kukenberger and D'Innocenzo, 2020). SL has been defined as *"....an emergent and dynamic team phenomenon whereby leadership roles and influence are distributed among team members aiming to lead each other to achieve team goals"* (Zhu *et al.,* 2018; Imam a& Zaheer, 2021).

SL is a team-level phenomenon (Hoch & Dulebohn, 2017), where leadership is shared among multiple team members (Lyndon *et al.,* 2020). This does not necessitate that all team members exercise influence at the same time, rather influence varies among team members based on the talents required for various tasks to be performed (Cook *et al.,* 2020). Cohesion and trust, team members have in each other enhances team's ability to adapt and shift leadership role while coping with unanticipated situations resulting significant impact on team's performance. Imam and Zaheer (2021), highlighted SL as successful in settings where interdependence among members is strong, creativity is fundamental and task complexity is high. Teams that established greater SL during in earlier stages of their formation have an edge over other (He & Hu, 2021). Teams with SL have greater autonomy in decision making and carrying out activities. The possession of specialist knowledge by diverse team members and trust in each other's knowledge results in effective knowledge coordination to overcome the challenges imposed by virtual environments (Liang *et al.,* 2021).

SL takes time to develop, and as teams create successful SL techniques, they witness significant improvements in team performance (D'Innocenzo *et al.,* 2021). While SL has a significant impact on team outcomes, there is still paucity of research about the underlying factors driving team outcomes and processes (Bhayana *et al.,* 2021; Lyndon *et al.,* 2020; Zhu *et al.,* 2018). Furthermore, the putative mediation processes linking SL to team performance remain unexplored (Han *et al.,* 2021). Further no new information about SL has been identified to provide a nuanced approach to examining the impact of SL in a digital team context, and the available material appears to have reached a saturation point. Based on the evidence provided above, we hypothesize that

H1: Shared leadership is positively related to team performance.

Emergent Leadership and Team Performance

EL emerges within teams (Przybilla *et al*., 2020). An informal style of leadership, where team members possess a significant influence on fellow members without exercising any formal authority (Biehler *et al*., 2022). EL is a relational process that evolves with time through interactions among team members (Gerpott *et al*., 2019). Today's ever evolving and competitive business environment necessitates this informal leadership style for being able to coordinate team processes (Hanna *et al*., 2021) leading to team success (Eseryel *et al*., 2021, Udin et al, 2022). Moreover, ELs exhibit supporting and collaborating behaviors to achieve higher performance while lowering team conflict (Purvanova *et al*., 2021). Although there is no consensus on the definition of the EL. However, for this research we take sides with (Hanna et al, 2021: 7) and define EL *"....as the degree to which an individual with no formal*

status or authority is perceived by one or more team members as exhibiting leader like influence".

Emergent leaders are highly skilled individuals who integrate informal structures within communication channels and adapt to emerging circumstances (Obrenovic *et al.*, 2020). In present era of high technological consumption, emergent leaders play a crucial role in facilitating teams towards success despite challenges (Larson & DeChurch, 2020; Purvanova *et al.*, 2021) suggesting a positive relationship of EL and digital team performance (Morrison-Smith & Ruiz, 2020). Emergent leaders provide an emotional response to events that drives team performance (Eseryel *et al.*, 2021, Utomo et al, 2022.). Emergent leaders also provide structure to the digital team's activities ensuring the alignment of team efforts with the directed goals (Hickman & Akdere, 2018). Moreover, emergent leaders add to the team performance by structuring social interaction among the team (Biehler *et al.*, 2022). Literature acknowledges high-performance teams in a digital context have EL (Hoch & Dulebohn, 2017). Thus, in conjunction with the findings, we conclude the following hypothesis:

H2: Emergent leadership is positively related to team performance.

For the current research following Costa et al., (2001), we also took three dimensions of team performance as
  i.   quantity and quality of team outputs
  ii.   team members' attitudes, expressing for instance the satisfaction, commitment, and stress of the team members
  iii. behavioral team outcomes.

The Moderating Role of Trust

"*Trust is a psychological state that manifests itself in the behaviours towards others, is based on the expectations made upon behaviours of these others, and on the perceived motives and intentions in situations entailing risk for the relationship with those others*." (Costa et al., 2001:228) Trust is a multifaceted construct that encompasses willingness to put oneself in a precarious position, since the other individual can be relied upon (Paul *et al.*, 2016), irrespective of monitoring ability the other party carries. The trustor accepts the possibility of losing something valued in interpersonal relationships (Jaakson *et al.*, 2019). Trust in teams is crucial for team goals. Nonetheless, empirical studies acknowledge the association between trust and digital team performance, as trust appears to have direct and indirect effect (Jaakson *et al.*, 2019). Consequently, trust is treated as a moderator that influences team performance within the digital context (Paul *et al.*, 2016).

According to previous research, employees develop trust, based on their assessment of their supervisors or leaders' trustworthiness embedded in their interactions with employees (Jiang & Luo, 2018). Trust plays a key role in managing difficulties associated with the deployment of formal and informal controls in digital teams through effectively addressing the pitfalls of interdependent tasks (Flavian *et al.*, 2019). Literature unveils that teams with SL exhibit high levels of team trust and willingness to trust their teammates (Robert & You, 2018). Similarly, stimulation of SL and moderating influence of trust increases employees' willingness towards knowledge sharing (Coun *et al.*, 2019), thereby impacting team performance. Employee's trust in their leader is a psychological resource that helps them in achieving team goals in challenging environment (Wu & Chen, 2018) like digital settings (Flavian *et al.*, 2019), characterized with lack physical interactions of team

members (Ford *et al.*, 2017) posing threat to team's efficiency and performance. In agile setting, this fragmentation of communication encourages the role of shared and emergent leadership styles, to allow efficient knowledge and information sharing in presence of employee trust. In a recapitulation of the above-stated findings, we content the following hypotheses:

H3: Shared leadership will increase the team's performance when trust is present.

H4: Emergent leadership will increase team's performance when trust is present.
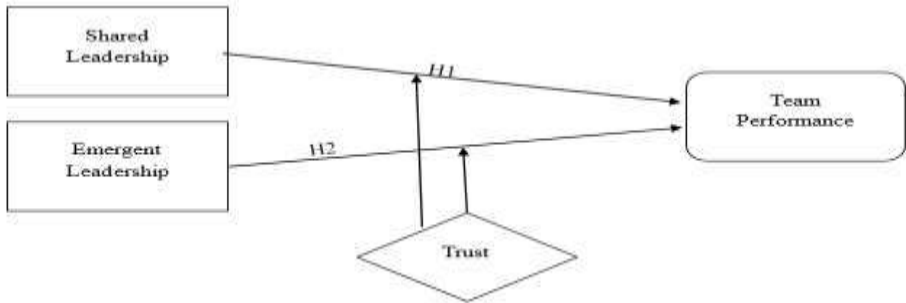

Figure 1: Research Framework

Method

This study uses cross-sectional design with a positivist approach (Robson, 2002) to understand the relationship of SL and EL with team-performance in the presence of trust. The following instruments were used.
Instruments
A 7-item scale of *shared leadership,* adopted from Muethel *et al.,* 2012, reliability Cronbach's α 0.90. Sample items included "All team members-initiated actions to bring out improved procedures for the team".

An 8-item scale of *emergent leadership*, adapted from Cogliser *et al.,* (2012), reliability Cronbach's α as 0.91 (Cogliser *et al.*, 2012). Sample item included "This person provides direction for the team".

A 3-item scale of *team performance,* adapted from Schaubroeck *et al.,* (2007), reliability Cronbach's α 0.90. Sample item included "The team is very competent".

A 4-item scale of *trust,* adapted from Imam and Zaheer (2021), reliability Cronbach's α 0.87 (Imam and Zaheer, 2021). Sample item consisted of "My team members had a high degree of trust between each other".

All 22 items are rated using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Moreover, the instrument was pretested with translation validity (face and content) before proceeding with the actual data collection in order to avoid any confusion or offensive questions.
Sampling and data collection and accuracy of data
For this cross-sectional study, nonprobability and convenience sampling is used. The unit of analysis is individual, employee from software and IT sector of Pakistan. Memon *et al.*, (2020), suggests the sample size between 160 and 300 yield valid observations. For this research, a total of 300 questionnaires were circulated. 260 were returned and 252 stood

valid after scrutinized resulting in response rate of 84%. Protected google questionnaires were sent through emails, LinkedIn, Facebook, and WhatsApp business accounts with yield time of one month. To check the appropriateness of the sample KMO and Bartlett's test is applied (table 1). Results show a value of 0.858 adequacies and Bartlett's significance of 0.000. The value confirms the data fitness to conduct further analysis.

Table 1
KMO and Bartlett's Test

		Chi-Square	df	sig
Kaiser-Meyer-Olkin Measure Sampling Adequacy	.858			
Bartlett's Test of Sphericity		2449.410	231	.000

Respondent's Demographics

The demographic composition includes 197 (78.2%) males and 55 (21.8%) females. 216 respondents aged 20-30 years (85.7%), 34 between 31-40 years (13.5%), and 2 between 41-55 years (0.8%). Statistically 131 (52%) respondents with less than 1 year, 102 (40.5%) respondents with 2-5 years, and 12 (4.8%) respondents with 6-9 years, and 7 respondents (2.8 %) with10 or above years of work experience. The same details are tabulated in table 2 below.

Table 2
Demographic information (n=252)

Variable	Category	Frequency	Percentage
Gender	Male	197	78.2
	Female	55	21.8
Age	20 to 30 years	216	85.7
	31 to 40 years	34	13.5
	41 to 55 years	2	0.8
Work Experience	Less than 1 year	131	52.0
	2 to 5 years	102	40.5
	6 to 9 years	12	4.8
	10 or above 10	7	2.8

Common method bias

The survey is self-reported and accumulated data is driven from only one source, therefore a possibility of risk concerning common method bias exists (Memon *et al*., 2021). To negate this bias, procedural and statistical methods are considered. Participants provided with clear instructions and ensuring their anonymity and confidentiality during data collection. Moreover, use of complicated or ambiguous words is avoided and validated, ensuring all responses are equal (Reio, 2010). A scree plot, plotted below (figure 2) shows a normal downward trend and number of factors right before the elbow of the curve.
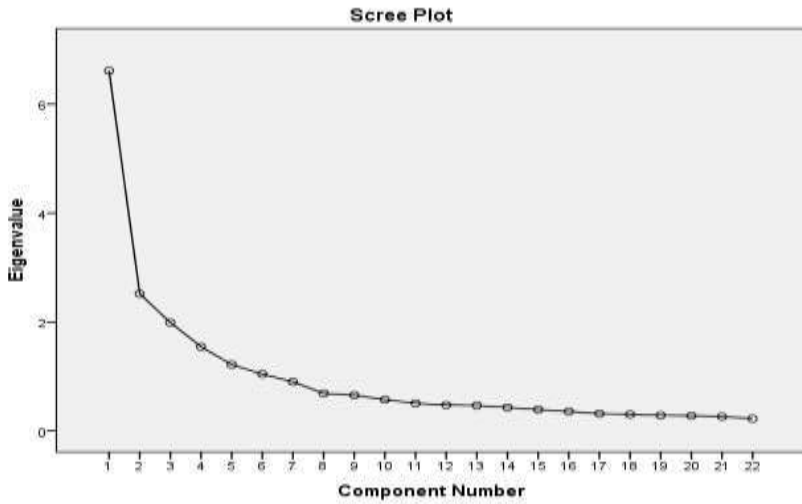
Figure 2: Scree Plot

One factor extracted shows maximum variance showing possibility of common method variance (CMV). Harman one-factor test is considered for this (Podsakoff *et al.*, 2003). Exploratory factor analysis is applied to all the research items. The results suggested that approximately 13% of a single factor is explained in terms of the probability of maximum variance table 3. According to existing body of knowledge, any single factor showing cumulative loading less than 40% turns down the presence of any biases and confirms the data fit for further analysis (Babin *et al.*, 2016).

Table 3
Common Method Variance

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.614	30.065	30.065	2.933	13.331	13.331
2	2.516	11.438	41.503	2.579	11.723	25.053
3	1.987	9.033	50.536	2.561	11.641	36.694
4	1.545	7.023	57.558	2.559	11.631	48.325
5	1.215	5.523	63.082	2.313	10.516	58.841
6	1.041	4.734	67.815	1.974	8.974	67.815
7	.899	4.087	71.902			
8	.686	3.118	75.020			
9	.654	2.974	77.994			
10	.571	2.596	80.590			
11	.506	2.298	82.888			
12	.473	2.150	85.038			
13	.464	2.108	87.147			

14	.428	1.948	89.094
15	.389	1.768	90.863
16	.354	1.608	92.471
17	.314	1.427	93.898
18	.300	1.362	95.260
19	.285	1.294	96.555
20	.276	1.255	97.809
21	.260	1.180	98.989
22	.222	1.011	100.000

Extraction Method: Principal Component Analysis.

Results

The descriptive statistics are represented in table 4. This data analysis approach assists in describing and comparing numerically listed research variables (Genot *et al.*, 2018). The mean and standard deviations of each variable are as follows*:* Shared leadership (3.72, 0.59), Emergent leadership (4.00, 0.55), Team performance (4.12, 0.58), and Trust (3.88, 0.62) respectively. The mean score and standard deviation reflected the degree to which respondents' perceptions of these items are consistent (Rawashdeh *et al*., 2021).

Reliability analysis

Reliabilities of each variable are quoted in the parenthesis diagonally in Table 4 Shared leadership (0.786), Emergent leadership (0.825), Team performance (0.868), and Trust (0.831). Cronbach α provides a measure of the internal consistency of a scale. To ensure validity Tavakol and Dennick (2011) suggested that internal consistency be determined before a test is used for analysis or evaluation. Furthermore, reliability estimates indicate the amount of measurement error in a test (Schmidt & Hunter, 1999). This interpretation of reliability is the test's correlation with itself. As the reliability of all the variables is above the conventional standard, which is 0.70, they all are accepted (McNeish *et al*., 2018).

Structural model

Table 4 illuminates the linear correlation among the research variables with the existence of significance level and value of the correlation coefficient. Shared leadership has a significant moderate positive correlation with emergent leadership, team performance, and trust with values $p<0.01$, $r = 0.364, 0.374, 0.446$. A linear correlation identified between emergent leadership and team performance which is weakly positively correlated with a level of $p < 0.01$ and coefficient values of 0.378 and 0.299. On the contrary, a moderate positive correlation is observed in the relationship between team performance and trust. This relationship is statically significant with $p < 0.01$ and a correlation value of 0.606. To conclude, the positive correlation coefficient indicated that an increase in the first variable was followed by an increase in the second variable, thus showcasing that the variables have a direct relationship.

Table 4
Correlation Analysis

	Mean	Sd	SL	EL	TP	t
SL	3.72	0.59	(0.786)			
EL	4.00	0.55	.364**	(0.825)		
TP	4.12	0.58	.374**	.378**	(0.868)	
T	3.88	0.62	.446**	.299**	.606**	(0.831)

Note(s): **Correlation is significant at the 0.01 level, *Correlation is significant at 0.05 level, n=252, ( ) = Cronbach alpha, SL = Shared leadership, EL = Emergent leadership, TP = Team performance, T = Trust

Multiple linear regression scores in table 5 depict emergent leadership ($\beta = 0.273$, $p < 0.05$) and shared leadership ($\beta = 0.279$, $p < 0.05$) are significantly related to the team performance. The beta values of 0.273 and 0.279 indicate that a change of one standard deviation in these independent variables (EL and SL) results in 0.273 and 0.279 standard deviations increase in the dependent variable (team performance) respectively. Thus, research hypotheses H1 and H2 are supported, indicating the existence of a significant relationship among variables. The value of R^2 indicates that 20.7% of the variance in team performance is explained by the presence of emergent and shared leadership styles.

Table 5
Results of hypotheses testing (direct effect)

Construct	Beta	R²	STDEV	t value	p value	Decision
H1: EL → TP	0.273	0.207	0.059	4.505	0.000	Supported
H2: SL → TP	0.279		0.279	4.601	0.000	Supported

Note(s): SL = Shared leadership, EL = Emergent leadership, TP = Team performance, T = Trust

Effect size (f^2) [is] defined as "the change in the R2 when a specified exogenous construct is omitted from the model which could be used to evaluate whether the omitted construct had a substantive impact on the endogenous variable" (Hair *et al*., 2014, p. 177). Cohen (1988) defines f^2 values of 0.02, 0.15, and 0.35 as small, medium, and large effect sizes, respectively. The results of f^2 indicate that trust has a large effect ($f^2 = 0.207$) on the relationship between emergent leadership and team performance. On the contrary, trust has a medium effect ($f^2 = 0.178$) on the relationship between shared leadership and team performance. To identify the moderating effect of trust within the research framework, process analysis applied. Contrary to our expectations, exhibited in **Table 6**, informed that trust does not place any moderating impact on the relationship of emergent and shared leadership with team performance ($p = 0.191, 0.205$). Thus, research hypotheses H3 and H4 are not supported, indicating that the existence of trust does not strengthen the relationship between the independent and dependent variables.

Table 6

Results for Moderation

Construct	R²	f^2	Effect size	p value	Decision
H3: EL→T → TP	0.414	0.207	large	0.191	Not Supported
H4: SL→T → TP	0.385	0.178	medium	0.205	Not Supported

Note(s): SL = Shared leadership, EL = Emergent leadership, TP = Team performance, T = Trust

The direct and indirect effects of the relationship as discussed above are depicted in the figure below
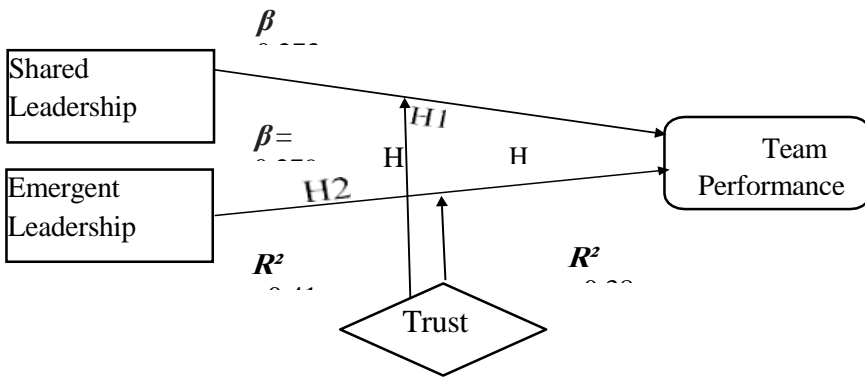
Figure 3. Data Analysis Results

Discussion and Conclusions

21st century is the "post heroic" age of leadership (Gerpott *et al.*, 2019) where traditional leadership conceptualizations as "heroes", are now being replaced by those who recognize that leadership practices as inherently embedded in systems of interdependencies (Siangchokyoo & Klinger, 2021). Previous research has concentrated on leadership styles that are only suitable for the formal and top-down approach in organizations that are only based on a hierarchy of authority (Hanna *et al.*, 2020). However, the recent decade has followed the organizational culture of team-based structures that are adaptable and agile. The overarching purpose of this research is to put new leadership styles (i.e., shared and emergent leadership) to the test to provide novel insight into their impact on team performance in Pakistan's software/IT sector.

Findings confirm that SL has a favorable effect on team performance. When leadership functions as a team process it instills a sense of collective identity, increasing engagement and yield enhanced levels of team performance (Kocolowski, 2010; Zhu *et al.*, 2018). Furthermore, employees are comfortable taking initiatives, stepping up to lead others and accept sharing leadership positions and ideas with team members. This is the first step toward liberation from the legitimate authoritarian and hierarchical systems that have dominated working dynamics for centuries. Similarly, a positive relationship exists

between EL and team performance. This demonstrates the importance of leadership emergence process and less formal leader role for organizational performance (Hanna *et al*., 2021; Spark & O'Connor, 2021). Correspondingly, this dominant informal leadership style emerging through social interactions results in increasing team performance (Biehler *et al*., 2022). This structuring of interaction as mentioned by Biehler *et al.* (2022), considers the grounds for traits of emergent leaders, their competencies, perceptions and behaviors of team members.

Furthermore, the results of H3 and H4 were rejected, implying that trust did not moderate the relationship between SL, EL and team performance. While a higher level of trust between team members does exude a higher level of team performance, there are two likely explanations for this rejection. Firstly, in a highly sensitive sector such as the software/IT sector, the activities are highly information-intensive and are characterized by greater task interdependence; however, due to the nature of work, a higher degree of trust may lead to groupthink, particularly in the case of shared leadership (Imam & Zaheer, 2021). This concern of halting innovation may have contributed to team members displaying reduced trusting behaviors toward their teammates (Arif, Zubair & Manzoor, 2012). Secondly, in most circumstances, a country like Pakistan, whose influences are strongly matched with its culture (Gohar & Abrar, 2016; Gohar *et al*., 2022), follows a top-down hierarchical strategy. While culture was not included in this study, it cannot be denied that it plays a significant effect in how most firms operate in Pakistan (Gohar, Basit & Abrar, 2018; Gohar *et al*., 2022). Poses a limitation and future research direction. Such a culture still strongly supports the leader and subordinate concept, and it is because of this social distance aspect that an important component such as trust was negatively associated with the two relatively new leadership styles in Pakistan's IT/software sector.

Theoretical contributions

We contribute to the previous work on SL and EL in the context of digital agile teams. Both SL and EL are studied as two distinct leadership styles which are used as synonyms in previous research. We proposed SL as a relational phenomenon catering to the mutual influence between team members while working towards achieving their goals (Carson *et al*., 2007). EL is where an individual informally acts as team lead, without any formal leadership responsibility (Hoch & Dulebohn, 2017; Riaz & Sultan, 2017). In line with existing research, we conclude that both leadership styles have a significant impact on team performance. The study also strengthens the notion that while EL and SL share conceptual space but are distinct, whereby EL being an individual level leadership phenomenon, does not in any form encapsulate the leadership structure of a group (Zhu *et al.*, 2018). Previously, little if any research has combined the two leadership styles in the same sector (i-e IT/Software sector). Studying two different leadership styles for the same sector not only adds to the literature but helped us to come up with nuanced explanations of why the moderating role of trust was not accepted, which is missing in the previous studies.

Limitations and Future Directions

Even though the research entails in-depth understanding of each leadership style and its impact on team performance, however as with all research, we also have several limitations. For starters, the population from which the data was taken may not be representative of the entire IT/Software sector in Pakistan. Future research may strive to validate the current model by conducting additional research by undertaking comparative analysis of leadership styles and team performance across different sectors and countries (Arif, Zubair & Manzoor, 2012). We investigated the impact of leadership styles on team performance in digital agile-teams, where both leadership styles and team performance,

including the moderating effect of trust were measured by self-reported statements. This approach might lead to bias in the results as participants might overestimate or minimize their actual performance in teams. Along with that we collected data from individuals working in teams which might have an impact on achieving the significance of leadership styles' impact on team performance. Future studies may consider collecting data from all individuals in a team and measuring their actual team performance to get a more accurate evaluation of the construct and make the study more robust. Further other leadership styles like servant and transformational leadership can also be studied in the context of agile team performance.

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