ISSN:
3005-8961(Print), 3005-897X (Online)
Vol. 1, Issue 2
(July - December 2023)

UCP Journal of Business Perspectives (UCP-JBP)

Volume 1
Issue 2

Faculty of Management Sciences
University of Central Punjab, Lahore, Pakistan

Subscription Charges National: PKR 1000 per issue
International: US$ 200 per issue

Editorial

Organizations in the dynamic global business world encounter many obstacles that require creative solutions and thoughtful analysis. To stay competitive in today's ever-changing marketplace, businesses must constantly adapt to new technologies and evolving consumer preferences. This editorial presents a comprehensive overview of the various research articles showcased in this volume. Each article offers valuable insights into important issues and emerging trends within business studies. From examining the influence of digital transformation in the banking industry to studying the impact of different rewards on employee job satisfaction, the accepted papers encompass a broad range of subjects pertinent to modern business settings. The study by Ullah et al. explores the shift from conventional banking practices to integrating digital financial services, explicitly emphasizing the implementation of RAAST by the State Bank of Pakistan. This study reveals detailed insights into customer perceptions and identifies the crucial factors that impact the adoption of digital financial services in Pakistan. Anwar et al. investigated the effects of intrinsic and extrinsic rewards on job satisfaction within manufacturing and services companies. Their thorough analysis offers valuable insights for senior management to improve employee job satisfaction and enhance organizational performance by implementing effective reward systems. The study by Latif and Kashif provides a comprehensive analysis of the 2008 financial crisis and its effects on Islamic banks in Pakistan. They shed light on these banks' financial performance and resilience in economic turbulence. Their study enhances our comprehension of the dynamics and performance of Islamic banking in challenging economic conditions. Likewise, the study by Iqbal analyzes the influence of conversion on deposits and operational costs of Faysal Bank, offering valuable insights into the consequences of shifting from conventional to Islamic banking. This study provides significant insights for banks worldwide going through similar conversion processes. Finally, Shahid et al. delve into Pakistan's economic theory of crime, examining the correlation between socioeconomic factors and crime rates. Their research findings provide valuable insights into the factors influencing criminal behavior and offer essential considerations for policymakers addressing social and economic challenges.

Readers are encouraged to go through the intellectually stimulating articles presented in this volume and actively engage with our esteemed contributors' wide range of perspectives. We greatly appreciate your ongoing support and active involvement with the Journal of Business Perspectives.

Dr. Muhammad Athar Siddiqui
Editor-in-Chief
UCP Journal of Business Perspectives

Disclaimer

The views expressed in these articles are solely those of the respective authors and do not necessarily reflect the views of the Editorial Board or the management and staff of the University of Central Punjab. While every effort has been made to ensure the accuracy of the information provided by the authors, the Editorial Board does not accept any responsibility for any errors or omissions or breach of copyrights, if any.

Table of Contents

UCP Journal of Business Perspectives
Vol. 1, Issue 2 (July - December 2023)
Journal website: http://ojs.ucp.edu.pk/index.php/jbp/index

Customers Experience and Perception Towards the Adaptation of Financial Services; A Special Reference to RAAST

Usman Ullah[1*], Junaid khan[1], Junaid Ali Shah[1], Rukhsar Baloch[1]

ABSTRACT

This study delves into the intricate landscape of the banking industry, specifically examining the transition from traditional banking experiences to the adoption of the newly introduced digital financial service, RAAST, by the State Bank of Pakistan (SBP) in January 2021. Despite extensive promotional efforts by commercial banks through advertisements and marketing campaigns, the study focuses on understanding customer perceptions and addressing challenges in embracing this digital transformation. The research encompasses a diverse sample of 250 respondents from various regions across Pakistan, and the data is meticulously analyzed using SPSS-26, incorporating the specialized Hayes extension for mediation analysis. Considering the multifaceted factors, the primary objective is to unravel the complex dynamics influencing customers' intention to use RAAST. Surprisingly, the findings reveal an insignificant direct relationship between customers' banking experiences and their intention to use RAAST. This intriguing outcome prompts a deeper exploration into the underlying factors contributing to this lack of correlation. The study goes beyond the surface to investigate the potential mediators that influence the adoption of RAAST. The mediation analysis highlights several crucial factors in shaping customer intentions. Notably, ease of use emerges as a powerful mediator, bridging the gap between the traditional banking experience and the allure of RAAST. Additionally, the study identifies the impact of television advertisements, point-of-purchase interactions, and direct marketing in mediating the relationship between existing banking experiences and the intention to use RAAST. The results suggest that while customers may not be directly swayed by their past banking experiences, various mediating factors significantly contribute to their willingness to embrace RAAST. This nuanced understanding provides valuable insights for policymakers and commercial banks, emphasizing the importance of targeted strategies that prioritize ease of use, effective television advertisements, strategic point-of-purchase engagement, and personalized direct marketing to facilitate the successful adoption of digital financial services in Pakistan.

Keywords: RAAST, Digital financial services, advertising tools, direct marketing, Point of Purchase, Banking customer experience, Intention

[1] Quaid-i-Azam University Islamabad
[*]Corresponding author's E-mail: usmanullah@qasms.qau.edu.pk

1. INTRODUCTION

In the modern era, it is difficult to imagine the efficiency and outreach of governmental operations on a large scale without ICT and electronic media. E-governance is diverting the traditional ways into efficient and effective services in the process of transparency, administration, and accountability in the public sector across the country. According to (Ullah & P., 2021), e-governance is worth minimising corruption, creating a highly transparent system, highly convenient and adding to a country's GDP. Introducing ICT in the system increases the information services to the public economically and effortlessly (Ullah & P., 2021). (Sandhu, 2019) suggested that Pakistan is shifting rapidly towards digitalization and is expected to be the 4th largest digital economy in 2030. According to (Sandhu, 2019) , branchless banking was introduced, with 34 percent using cell phones with a broadband connection, but just 21 percent of Pakistani use financial services. Digital wallet use is increasing, with a consumer base of 27.3 million and a growth rate of 87 percent each year.

Some key services in the wallets are U-paisa, easy paisa, UBL Omni and Jazz Cash. There have been many advantages of a cashless economy, which encourages electronic transaction operations like debit & credit cards, point of sales, mobile banking and digital wallets, which abruptly minimize massive cash and those sorts of transactions (Podile & R., 2017). Customers can use e-wallets as a substitute for wallets and stock up on electronic money when required. It is gaining popularity in both e-commerce and the transaction service industry. The example of Careem and Uber for transportation purposes appreciates the digital wallet. With the growing acceptance of e-wallets, it is a privacy and secure transaction process. However, more than 95 percent of respondents have one application at least for supporting e-payments and 30 percent are active users of e-wallets for daily transactions (Varsha & Thulasiram, 2016). Clients who have used the Internet for shopping and banking are familiar with online payment and can appreciate the value of mobile payment, which adds mobility to online payment. Clients' use of PCs and the Internet to access banking and online shopping sites familiarises them with cell phones' virtual environment. This experience allows customers to appreciate the value of online payment and encourages them to switch to mobile payment (Broderick & Pickton, 2005). The transformation to digitalization in each sphere of human proceedings is unpreventable. The consequences of this transformation have an astonishing influence on the behavior and response of customers in every sector across the globe (Rompotis, 2018). Financial institutions are attempting to safeguard their customer base and will compete for new businesses and innovations to attract more customers (Boyes & Stone, 2003). State Bank of Pakistan (SBP) introduced a new mode of transaction in mid-January 2021, of instant payment system to revolutionize banking sector based on digitalization of financial services and named it RAAST, which means the right path. Advertising is an asset and a necessary component of today's business systems for capturing and retaining a market share for a specific market. It is a new instant end to end digital payment process among businesses, government entities and consumers. It has many features including central infrastructure, widely accepted among every market and business and highly secured. RAAST is a secure operating process with highly protected data and authentication (SBP, 2021). Advance technology has created a never-ending variety of advertising techniques to capture certain audiences' attention, personality, and inventive minds, making a single definition for advertising difficult. Essentially, advertising entails formulating and disseminating messages to persuade a target audience to seek services from or for brand marketers (Barger, Peltier, & Schultz, 2016). Advertising messages are created for four primary purposes: (1) to build customer beliefs about brands (brand building); (2) to attract the attention of people who are interested in purchasing; (3) to increase the purchase of an item (driving buy); and (4) to have impact in behavioral change (Thorson & Rodgers, 2012). Researchers studied how IMC tools like ads, social media marketing and point of purchase can affect the adaptation of financial services or products. As mentioned above, the RAAST is the instant payment initiative by the State Bank of Pakistan at the start of 2021. Commercial banks are adopting and linking their existing customers to the RAAST account to implement the policy to achieve the objective of a cashless economy and bring ease to the life of the public.

However, the public is still reluctant to adopt the RAAST, which is the foundation of the study to examine the banking customers' experience with IMC tools like TV ads, social media marketing, and point of purchase. The researchers will also study the effect of privacy concerns and ease of use of RAAST. Previous research indicates that security concerns positively affect both trust and adoption of m-payments (Schierz, Schilke, & Wirtz, 2010). Privacy concerns affect customers' adoption of mobile payment services. Studies indicate that 48.2% of mobile users think mobile payment has privacy problems because mobile users are requested to provide personal when using mobile payment for any transaction without being given the reasons for providing such data and information (Chen, 2008). Therefore, it is good to say that the more secure and risk-free mobile payment services are, the more the user will adopt and use the online payment services.

Furthermore, any factors that positively impact security would also increase the adoption of online mobile payment systems. The study focuses on understanding the advertising of digital financial products and services with special reference to RAAST. The study will cover customer perception and adaptation challenges despite all the efforts made by commercial banks' advertisements and ads. The researcher will cover the customer experience with mobile payments and what could be the possible reasons for linking their accounts to RAAST. The study aims to examine the advertising of RAAST with customers' perceptions of privacy and ease of use.

2. LITERATURE REVIEW

Financial services are services rendered by financial institutions, incorporating a wide range of services to gain financial benefits and safety. Such services include banking, accounting assets management and insurance, and the title financial services signify mobilization and appropriation of savings. Even the financial industry has been a business area in recent decades (Türkeköle, 2015). The financial services industry is going through expeditious modifications and becoming potently competitive. Financial institutions are onerous about looking after their customer base and contesting business with a flourishing number of new customers (Boyes & Stone, 2003).

Traditionally, financial institutions approve the rules to avoid the authorization of a fraudulent payment, moreover, banks may take their time processing a transaction (Said & Hajami, 2022). Financial services were based on time-consuming operations, and customers were bound to maintain records of financial transactions or banking history via paper documents or receipts. Traditional payment habits based on cash and credit or debit cards are being replaced by new innovative formats of mobile instant payment among end users (P2P) and bank customers (Caparr´os & azquez, 2022). Due to digitalization in financial services, record keeping was paperless, and transactions and withdrawals were branchless (Haralayya, 2021). Digital financial service (DFS) is a financial element or service attained with technological advancement (Bristo & Brooks, 2017). Digital financial services include payment systems, remittances, and credit systems for which digital channels, including mobile devices, are used to access and deliver desired services. Previously, banks offered well-known tools such as debit and credit cards to deliver financial services (Agur, Peria, & Rochon, 2020). The profound changes in financial services are determined and characterized by digital disruption and social transformation. Financial services offered by financial institutions have been upgraded from time to time with the use of technology like the ATM (Automatic Teller Machine) took more than a decade to gain popularity. In contrast, phone and internet banking took half as long (Huili & Chunfang, 2011). The new digital solutions are built on artificial intelligence, cloud computing digital platforms and distributed ledger technologies (DLT), and person-to-person applications Agur, Peria, & Rochon (2020), which compel banking customers to replace old ones because new digital solutions performance and security measures are better and improved (Chen, Chung, & Lin, 2018).

RAAST is Digital financial services (DFS) of an instant payment system (Kazmi, 2021) and posterior payment system similar to one link, which creates interoperability between the central bank and other banks of the country and offers the public the most favourable digital payment experience (Akhtar, 2021). Pakistan's advanced and faster payment system will be utilized to clinch small-value market payments in real time and simultaneously offer free and universal access to all stakeholders in the financial industry. It will allow end users to make digital payments between person to person, business to business, and among government entities instantaneously (SBP, 2021). Currently, Pakistan's financial articulacy stands at 13%, confronted with narrow banking infiltration and customer trust deficiency of secure transactions, which is related to high transactions fees, low-cost interoperable infrastructure and platforms will present its own challenges (Kazmi, 2021). The number of digital banking users increases daily, currently 13.22 million, which raises the value of digital financial transactions (Sidaqi, 2020). According to Handayani, Yunus, & Putri (2018), advertisement is significant in brand awareness. There is a case in Indonesia where T-cash was the first mobile payment versatile wallet application that transfers and withdraws cash. For T-cash, the company went through many advertising channels such as social media advertisement, refunds & cashback, sale promotions through discounts, personal selling, mobile sales & sales stands, direct marketing via SMS, events & experiences and also through public relations, socialization & mass media advertisements were used to form brand awareness (Handayani, Yunus, & Putri, 2018). B-cash, a mobile financial service provider in Bangladesh, became the world's second largest financial service provider, targeting low-income masses and covering 77% of the market share. B-cash used marketing mix strategies, advertising through TV, radio, word of mouth and billboards to promote its business (Yesmin, Paul, & Mohshin, 2019), which can be an example for RAAST to go through these strategies and promotional channels to cover up market shares.

According to stakeholders Bandpey S., Imankhan, Gorji, & Akhavanfar (2021), The IMC model comprises two principal structures (marketing communication method and tools). (Bandpey S. , Imankhan, Gorji, & Akhavanfar, 2021), claimed that the company could not work effectively on IMC without a marketing communication system between tools. In previous studies, various marketing communication methods can be used regarding brand awareness: personal sales, public relations, e-marketing, sales promotion, direct marketing, and advertising. However, in Personal sales, according to Bandpey S. , Imankhan, Gorji, & Akhavanfar, (2021) there should be training to increase awareness of new shareholders, which could be done in person and online too. There can also be consultation with shareholders and customers, and there should be sales meetings and customer clubs to interact with customers and shareholders in person (Bandpey

S. , Imankhan, Gorji, & Akhavanfar, 2021). Public relations in PRs include channels such as news, conferences, social networks, reports, scientific publications, and articles to make public relations. There can also be important and specialized conferences or lectures with a targeted audience using their firsthand experiences in stock market affairs (Bandpey, Imankhan, Gorji, & Akhavanfar, 2021). Moreover, in e-marketing, we use different platforms to spread awareness to our targeted audience about brands and stock affairs, such as messaging by mobile applications, using multiple social media means and websites and sending them messages through these channels.

Emailing and marketing in chatrooms and newsgroups (Bandpey S. , Imankhan, Gorji, & Akhavanfar, 2021). Sale promotion collateral of the individual shares' assets and providing customers low-cost credit facilities. By providing discounts on stock trading (in exchange for discounts). Dedicated trader or trading assistants, promoting sales by customer clubs (Bandpey, Imankhan, Gorji, & Akhavanfar, 2021). Direct marketing communication by phone and SMS, communication by voice mail and communication by Email Installing brochures in specific places, such as counter offices and many others (Bandpey, Imankhan, Gorji, & Akhavanfar, 2021).

Meanwhile, there are several advertising tools which includes, such as planning a portable application effortlessly of purpose for web-based trading, planning the organization's site, easily of purpose for web-based trading, planning virtual entertainment to distribute significant reports and news, planning an SMS warning board for clients which are used as advertising tool and for RAAST we can also use these tools for customer engagement. In management tools the executives of all areas of promoting correspondence planning, implementing, and coordinating all areas of marketing communications, the utilization of various advertising specialized techniques and apparatuses that are sound, the utilization of various advertising specialized techniques and devices that are consistently connected, the utilization of various showcasing specialized techniques and instruments that are predictable with one another and sending reliable and consistent support messages to the interest group. Meanwhile, the effectiveness of marketing communications improves the cooperative energy of the different components of promoting correspondences and passes clear and incorporated messages on to clients. It will expand client and partner fulfilment and further develop execution, prompt viability, and proficiency in promoting correspondence exercises, take a uniform picture of the association, and upgrade the brand position and it also reinforces productive associations with staff and different partners.

2.1. Ease in Use

Consumers and business experts have expanded the utilization of mobile devices; individuals have also expanded mobile commerce (m-commerce) everywhere.

Advances in mobile devices and remote advancements have liberated consumers from the limitations of customary commerce, and m-commerce has profoundly diminished the expense and time-concentrated delays from conventional business processes (Balasubramanian, & Jarvenpaa, 2002). One hopeful area of mobile trade that is receiving a good deal of attention internationally is mobile payment. Online mobile payment methods, like digital cash and e-wallet, emerged to help consumers execute with accessibility, confidence, and easy use of the mobile payment in the practical marketplace. Consumers' demand for the capacity to execute anywhere and at any time is increasing (Laukkanen, 2007). The latest survey of consumers showed that 49 percent of the users could use mobile banking and payment applications whenever offered in the market. In the conventional banking system, checks and credit cards are manually used for payments, which is time-consuming and troublesome for consumers (Sraeel., 2007). Users will avoid the technology, assuming they see it as troublesome to use or that it sabotages execution or productivity. Both ease of use and usefulness influence users' goal to use online m-payment. Different mobile applications and services that are too mind boggling and tedious will deter purchasers structure 'going mobile'. The ease of use and usefulness additionally drive the move from PCs to advanced cells while making online m-payments (Chang, Y. F., & Zhou, 2009). The payment industry trusts that mobile payments in the financial framework will convey the comfort, high speed exchanges and adaptability expected in the complex commercial centre. The payment framework in the financial industry is encountering a combination of innovations and exchange processes. The combination of payment frameworks and mobile gadgets is a reality as mobile gadgets are powerful in empowering secure and simple payment exchanges (Herzberg & A., 2003). The principal objective of integrating banking services and innovations is to make their clients feel effortless. Ease of use means the degree to which the planned users anticipate that mobile payment should be liberated from exertion (Chen D. L., 2008). The clients can easily use the new services and products when the new products are connected or similar to products and services with which they are quite similar. (Punj & Staelin., 1983). The experience of utilizing related products and comparative technologies upgrades users' impression of the usefulness and the ease of use connected with new products (Agarwal & Prasad., 1999). That is why RAAST is an innovative technology used in banking systems which is quite like Easy Paisa and connect payment system. RAAST is immensely helpful in making banking transactions quite easy for the customers and lowering the transaction effort of the customers.

2.2. Privacy

Privacy issues mean concern about collecting and using individual data and information by others (Burke, Smith, & Milburg, 1996). Mobile payment users likewise have concerns about privacy and security. Users' Internet experience could relieve their nervousness and fear about privacy issues. Users might observe that individual data is protected in web-based exchanges, assuming they encountered internet shopping and banking. Most users might understand that the spilling and leaking of data or the hacking of records is a low-recurrence occasion. The trust in these stages might move to their aim to use mobile payment (Au & Kauffman, 2008). Security is the biggest barrier to mobile payment adoption in banking services. One more obstruction to mobile payment adoption is the different elective payment systems, as of now accessible like banking applications. The different alternatives to m-payment services are familiar and well-known to users, and they benefit from a well-established infrastructure. This especially concerns vicinity payment services such as credit cards, debit cards, checks, and even cash payment systems, which are well-established (Slade, William, & Dwivedi, 2013).

3. CONCEPTUAL MODEL

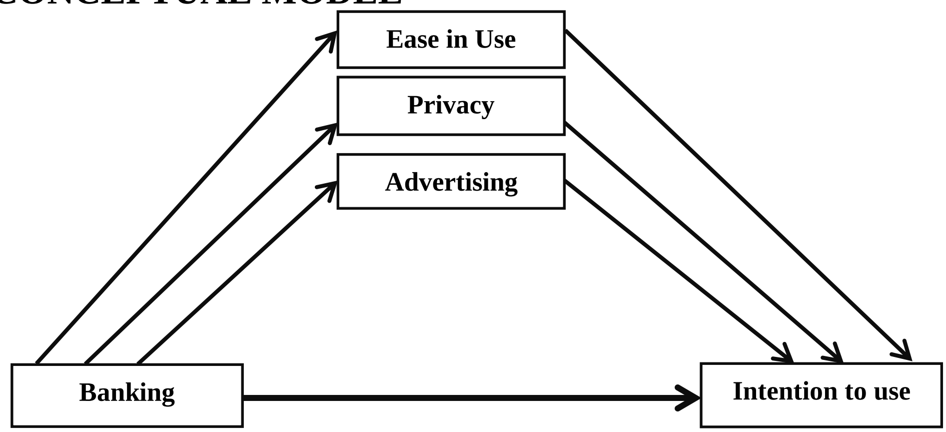

Figure 1: *Theoretical framework*

4. HYPOTHESES

H1: Banking experience significantly affects the intention to use RAAST.

H2: Ease of use mediates the relationship between banking experience and intention to use RAAST.

H3: Privacy concern mediates the relationship between banking experience and intention to use RAAST.

H4: Advertisement tools (TV-adv, social media, point of purchase & direct marketing) mediate the relationship between banking experience and intention to use RAAST.

5. METHODOLOGY

The study primarily focused on advertising tools used for the RAAST and its awareness and perception among banking customers experience. The targeted respondents of the study were all account holders of commercial banks, as this initiative has been implemented for all commercial banks across Pakistan, including national banks. The primary data were collected through a semi-structured questionnaire adopted from the literature. They were distributed to the respondents across Pakistan via WhatsApp groups, emails, and Facebook to get a better sample for better population representation.

According to the rule of thumb, 24 questions need 240 sample respondents for analysis. However, researchers distributed 260 questionnaires, of which 250 respondents were valid for the study. The study uses simple random sampling for the data collection across the country using social media platforms. The 7-scale Likert questionnaire asked different questions to get respondents' responses, including demographic sections. This research study design was based on an explanatory study approach to examine the IMC tools used in advertising financial products and services with special reference to the new initiative of SBP (RAAST). The researcher followed the ex post facto design for this study. The questionnaire reliability and validity were checked through Cronbach's alpha while using the SPSS-26. For reliability and consistency among the questionnaire items, the reliability test of Cronbach Alpha is utilized. The Cronbach alpha value of 0.8 and above showed that the questionnaire was reliable and excellent and below that was good and normal. Researchers first examined the independent variable with the dependent, and then the mediating effect of variables was examined through HAYES process statistical tests. All the constructs used multi-scales, which were adapted from research that had previously been conducted. Questionnaires with a 7-point Likert scale, 1 from (strongly disagree) to 7 (strongly agree). There are 24 questions; each variable has three items that respondents answered. Overall, 250 responses were collected, and all the responses were changed in SPSS. The Hayes process is used for mediation, a built in multiple regression model.

Table 1: *Variables Description*

Variables	Types	No. of items	Adapted from
Intension to use RAAST	Dependent	3	(Su, Wang, & Yan, 2018)

Banking experience	Independent	3	(Su, Wang, & Yan, 2018)
Ease of use	Mediator	3	(Su, Wang, & Yan, 2018)
Privacy concern	Mediator	3	(Su, Wang, & Yan, 2018)
Tv advertising	Mediator	3	(Ramaprasad & Thurwanger, 1998)
Social media marketing	Mediator	3	(Jia Huang, 2011) (Rawal, 2013)
Point of purchase	Mediator	3	(Sinha, 2010)
Direct marketing	Mediator	3	(Ramish, 2020)

6. ANALYSIS

The researcher has done the reliability of the questionnaire in two steps. As for the dependent and independent variables, the Cronbach alpha value is .817; approaching excellence means there is good consistency between questions. For the mediating variables, the Cronbach alpha value is .868, which means both are in considerable range as the range is between .6 and .9 for Cronbach reliability.

Table 2: *Reliability Analysis*

Variables	Type	No of items	Cronbach alpha
Intention to use RAAST	DV	3	.817
Banking experience	IV	3	

Variables	Type	No of items	Cronbach alpha

Ease of Use	MV	3	.868
Privacy concern	MV	3	
Tv advertisement	MV	3	
Social media advertisement	MV	3	
Point of purchase	MV	3	
Point of purchase	MV	3	

6.1. Demographics

The histogram diagram in figure 1 shows the age of respondents we have covered for the study. The researcher distributed questionnaires to people of different age groups and collected 250 responses. From the total, 71 respondents were from the age 21 to 23, 57 were from the age group of 19 to 21, 50 were from 23 to 25, 26 were from 25 to 28, and 26 were from the age group of 18 to 19. Meanwhile, we had fewer respondents from the age groups of 27 to 30, approximately 12. We collected six responses from the 32 to 34 and 2 responses from the 36 to 37 age group. Our responses are mostly between 19 to 25 because the questionnaires were mostly distributed to students and job professionals.

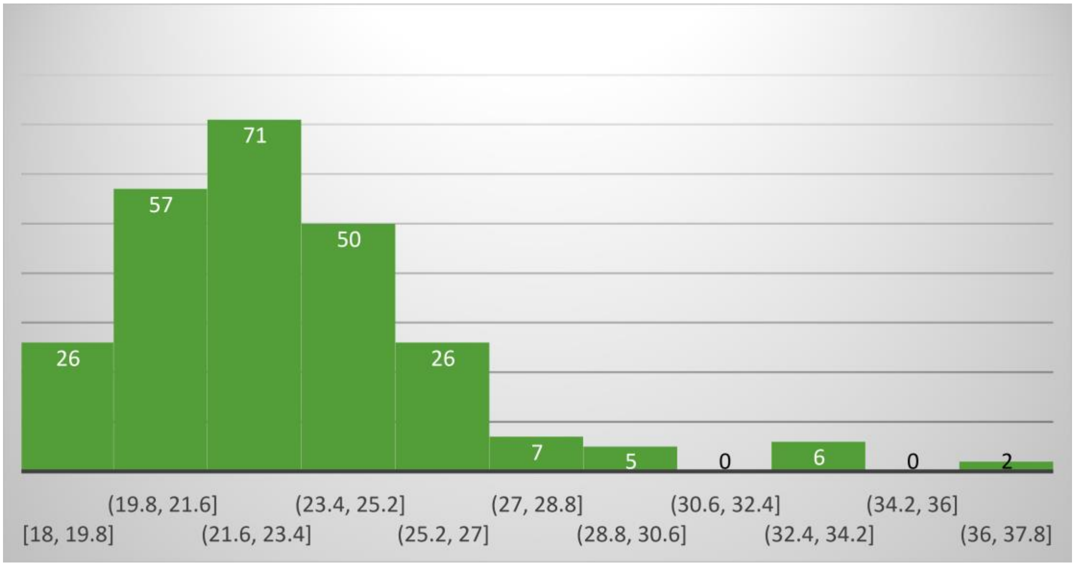

Figure 2: *Age of respondents*

Questionnaires were distributed to male and female diversity. Male respondents covered 63.20%, while female respondents were 36.80% of the total respondents as shown in figure 2 . These respondents also mentioned which commercial bank they are using, and we have customers from all commercial banks across Pakistan. Coming to the variable analysis, we have the following result after Hayes's mediation process.

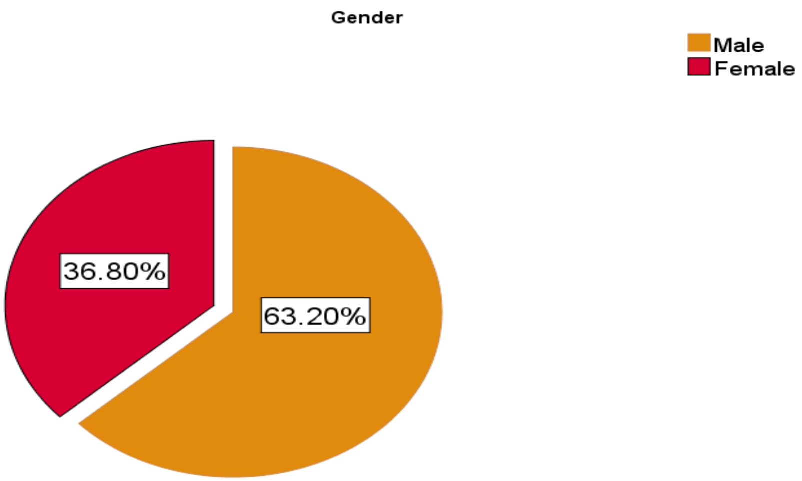

Figure 3: *Percentage of gender distribution*

7. MEDIATION EFFECT

The Hayes model-4 is used for data analysis as the study considers only mediators in the study model. The intention to Use RAAST is taken as the dependent variable and the banking experience of existing digital app users as the independent variable. However, we have taken the ease of use and privacy concerns with advertising as mediators on intention to use RAAST. The value of R squared in the multiple regression shows 38 percent of the variation in intention to use RAAST due to the banking experience and the mediation variables. Like the other variables, the lower and upper-level confidence intervals are important for interpreting the Hayes process. There is zero in the LLCI and ULCI, which determines the total significance of the other values in the model.

A 0.936 effect of banking experience has been on changing the customer's intention to use RAAST. The direct effect of existing banking experience on the intention of customers to use RAAST is insignificant. The significant value is higher than .05, meaning that the banking experience does not affect the customer's decision to shift or link their accounts to RAAST. However, the ease of use significantly impacts the adaptation of RAAST. However, privacy concerns are insignificant among existing banking users. The values of significance are .1453, 0.000 and .08, respectively.

7.1. Hayes Process Results

The 42 % variation is observed in the case of TV Advertisement, social media advertisement, point of purchase, and direct marketing as mediators to examine the indirect banking effect on the intention to use RAAST. The total indirect effect of advertisement on the intention to link the accounts to RAAST is .1730. Among the advertisement tools, the TV advertisement significantly impacts the adaptation of RAAST. At the same time, social media advertisement is insignificant, with a p-value of .487.

Table 3: *Direct Effects*

Effect	Independent Variable	Mediator	Dependent Variable	Beta	T	Sig.
0.0936	Banking Experience		Intention to Use RAAST	0.094	1.461	0.145
		Ease in Use		0.653	8.573	0
		Privacy concern		0.099	1.742	0.083

However, the point of purchase (p-value .0360) and direct marketing (p-value 0.000) significantly affect the customer's intention to adopt RAAST. The mediating effect of TV advertisement, point of purchase, and direct marketing is .0393, -.0465, and .2012, respectively. The TV advertisement, direct marketing, and point of purchase significantly mediate the intention to use RAAST, and full mediation was observed. The interesting result is that point of purchase has a negative value effect on the intention to use RAAST.

Table 4: *Indirect Effects*

Effec t	Independent Variable	Mediator	Dependent Variable	Bet a	T	Sig.
0.17 3	Banking Experience		Intention to Use RAAST	0.2 662	4.779 5	0
0.03 93		TV advertisement		0.3 294	4.344 6	0

-0.021	Social media advertisement	-0.0735	-0.6949	0.4878
-0.0465	Point of purchase	-0.1753	-2.1084	0.036
0.2012	Direct Marketing	0.5339	69350	0

The H1 of the study is rejected as it shows an insignificant relationship. The H2 hypothesis of the study is accepted as it significantly mediates the relationship between banking experience and intention to use RAAST. H3 of the model is rejected and shows insignificant values that do not mediate the relationship between the dependent and independent variables. The H4 of the study is interesting as 3 of the advertising tools support the hypothesis, but one social media advertising does not mediate the relationship between the banking experience and adaptation or intention to use RAAST.

8. CONCLUSION

The overall finding of the research indicates that banks should focus more on the advertisement of RAAST as customer awareness is limited, which affects the adaptation of these digital financial services. The existing digital banking experience does not significantly impact customers' intention to link their accounts to RAAST. The social media credibility and information related to RAAST are observed to be setbacks in the study findings, which need to be highly considered as most of the population uses social media. However, the ease of use of RAAST, TV advertisements about RAAST, and direct marketing of RAAST significantly impact the intention of using RAAST. The study has collected data from 250 respondents nationwide for analysis through a structured questionnaire. The State Bank of Pakistan and commercial banks must be more creative in advertising RAAST on social media, point of purchase, and direct marketing, as respondents are more concerned about these factors.

This study will help researchers in the future to understand advertising tools and their impact on financial services and product promotion. It will help the researchers add new variables and factors or examine the cognitive behaviours of customers and their perception regarding financial institutions' advertising tools and their setbacks in adopting new policies for a cashless economy. It will provide more insights for multi-disciplinary researchers to link marketing with finance soon. By conducting this study, the public will understand RAAST and how it benefits them in transactions across the country. This research study will help practitioners and managers understand customers' behaviours and perceptions when adopting new initiatives like RAAST. It will contribute to the existing ads of RAAST, their social media marketing, and point of sales methods, which makes it difficult for them to link accounts to RAAST.

8.1. Implications

This study will help researchers understand advertising tools and their impact on financial services and product promotion in the future. It will help the researchers to add new variables and factors or examine the cognitive behaviors of customers and their perception regarding financial institutions' advertising tools and their setbacks to adopting new policies for a cashless economy. It will provide more insights for multi-disciplinary researchers to link marketing with finance soon. This study gives the public an idea of what RAAST is and how it is beneficial for them while conducting transactions across the country. This research helps practitioners and managers understand customers' behaviours and perceptions when adopting new initiatives like RAAST. It contributes to the existing ads of RAAST, their social media marketing, and point of sales methods, which makes it difficult for them to link accounts to RAAST.

8.2. Limitations

This study has focused on the mediation effect on the intention to use RAAST, a digital financial service newly introduced by the State Bank of Pakistan. The limitation of the study is the small number of respondents and moderation variables. Future researchers should add more variables in the context of moderation, such as how banks can increase or change customers' decisions to link their accounts to RAAST. The researcher must cover a large data set and use a qualitative approach to conduct semi-structured interviews.

REFERENCES

Agarwal, R., & Prasad., J. (1999). Are Individual Differences Germane to the Acceptance of new Information Technologies? . 361–391.

Agur, I., Peria, S. M., & Rochon1, C. (2020). Digital Financial Services and the Pandemic: Opportunities and Risks for Emerging and Developing Economies. *International Monetary Fund*, 1-13.

Akhtar, R. (2021, January 26). Raast optimal digital payment experience. Karachi, Sindh, Pakistab.

AttaUllah, & P., C. (2021). The Role of E Governance in Combating COVID 19 and Promoting Sustainable Development: A Comparative STudy of China and Pakistan. *Chinese Political Science Review,*, 86-118.

Au, A, Y., & Kauffman, R. J. (2008). The Economics of Mobile Payments: Understanding Stakeholder Issues for an Emerging Financial Technology Application. *Electronic Commerce Research and Applications*, 141–164.

Balasubramanian, S., P., R.A., & Jarvenpaa, S. (2002). Exploring the implications of m-commerce for markets and marketing. *Journal of the Academy of Marketing Science*, 348–361.

Bandpey, S., Imankhan, N., Gorji, M., & Akhavanfar, A. (2021).

Bandpey, S., Imankhan, N., Gorji, M., & Akhavanfar, A. (2021). Design of an IMC Model for Financial Services. *International Journal of Finance & Managerial Accounting*, 93-109.

Barger, V., Peltier, J. W., & Schultz, D. E. (2016). Social media and consumer engagement: a review and research agenda. *Journal of Research in Interactive Marketing*.

Boyes, G., & Stone, M. (2003). E-business opportunities in financial services. *Journal of finance and services marketing*, 176-189.

Broderick, A., & Pickton, D. (2005). Integrated marketing communications. *Pearson Education UK*.

Burke, S. J., Smith, & H.J. Milburg, S. J. (1996). "Information Privacy: Measuring Individuals' Concerns about Organizational Practices. 167-196.

Chang, Y. F., C. S., & Zhou. (2009). Smart Phone for Mobile Commerce. *Computer Standards & Interfaces*, 740-747.

Chaouali, W., Lunardo, R., Yahia, I. B., Cyr, D., & Triki, A. (2019). Design aesthetics as drivers of value in mobile banking: does customer happiness matter? *International Journal of Bank Marketing*, 219-241.

Chen, D. L. (2008). A Model of Consumer Acceptance of Mobile Payment. *International Journal of Mobile Communications*, 32–52.

Chen, L. D. (2008). A Model of Consumer Acceptance of Mobile Payment. *International Journal of Mobile Communications* , 32-52.

Chen, M.-P., Chung, D.-T., & Lin, Y.-H. (2018). Assessing international financial integration: do industry and firm-specific characteristics matter? Evidence from the Japanese market. *Economic Research-Ekonomska Istraživanja* , 860-879.

Fu, Q., Abbas, J., Alarif, G. B., Sial, M. S., Brugni, T. V., & Adamwal, N. (2023). I act in an environmentally responsible fashion since my firm is socially responsible: A pathway for transition to a responsible society. *Journal of Cleaner Production*, *414*, 137523. https://doi.org/10.1016/j.jclepro.2023.137523

GaborBristo, D., & Brooks, S. (2017). The digital revolution in financial inclusion: international development in the fintech era. *New political economy vol 22*, 423-436.

Handayani, D. P., Yunus, U., & Putri, D. A. (2018).

Haralayya, B. (2021). How Digital Banking has Brought Innovative Products and Services to India. *Journal of Advanced Research in Quality Control and Management Volume 6, Issue 1* , 16-18.

Haralson, L. E. (2007, December 31). *"Fringe" Lenders: Traditional Institutions Search for Alternatives*. Retrieved May 15, 2022, from Federal Reserve Bank of St. Louis: https://www.stlouisfed.org/publications/bridges/winter-20072008/fringe-lenders-traditional-institutions-search-for-alternatives#:~:text=Traditional%20financial%20services%20are%20typically,and%20payday%20and%20title%20loans.

Herzberg, & A. (2003). Payments and banking with mobile personal devices. *Communications of the ACM*, 53–58.

Huili, Y., & Chunfang, Z. (2011). The Analysis of Influencing Factors and Promotion Strategy for the Use of Mobile Banking. *Canadian Social Science Vol. 7, No. 2*, 60-63.

Jia Huang, J. O. (2011). Analysis and optimization of fault-tolerant task scheduling on multiprocessor embedded systems.

Kazmi, M. (2021, March 2). Raast set to revolutionise digital payments in Pakistan. Karachi, Sindh, Pakistan.

Laukkanen, & T. (2007). Measuring mobile banking customers' channel attribute preferences in service consumption. *Int. J. Mobile Communications*, 123–138.

Mossberger, B. K., Tolbert, C. J., & McNeal, R. S. (2007). *Digital Citizenship: The Internet, Society, and Participation.* United States Of America: MIT Press.

Podile, V., & R., P. (2017). Public Perception on Cashless Transactions in India. *Asian Journal of Research in Banking and Finance, 7*(7), 63-77.

Punj, G. N., & Staelin., R. (1983). A Model of Consumer Information Search Behavior for new Automobiles. *Journal of Consumer Research*, 366–380.

Ramaprasad, J., & Thurwanger, M. L. (1998). South Asian Student Attitudes Toward and Beliefs About Advertising: Measuring Across Cultures. Paper presented to International Communication Division. *AEJMC National Convention in Baltimore.*

Ramish, M. S. (2020). *Visual Appeal of Stock Photography Used in Advertisements Affecting the Customers' Attitude and Determining the Overall Brand Equity: Evidence from Banking Sector in Pakistan.* Karachi: Institute of Business Management, Karachi.

Rana, N. P., Luthra, S., & Rao, H. R. (2020). Key challenges to digital financial services in emerging economies: the Indian context. *Information Technology & People vol 33*, 198-229.

Rompotis, N. (2018). *Target Instant Payments (T.I.P.S.).* Athens, Greece: UNIVERSITY OF PIRAEUS.

Said, M. A., & Hajami, A. (2022). AI Methods Used for Real-Time Clean Fraud Detection in Instant Payment. *International Conference on Soft Computing and Pattern Recognition*, 249–257.

Sandhu, A. S. (2019). *Can the future of Pakistan be cashless?* Karachi: Website.

SBP. (2021, January 15). *State Bank of Pakistan*. Retrieved June 10, 2022, from State Bank of Pakistan: https://www.sbp.org.pk/dfs/Raast.html

Schierz, P., O.Schilke, & B.W.Wirtz. (2010). Understanding consumer acceptance of mobile payment Services: An empirical analysis. *Electronic Commerce Research and Applications*, 209-216.

Sidaqi, S. (2020, December 4). Online banking users surge 36% to 13.22m. Islamabad , Islamabad Capital territory, Pakistan.

Sinha, D. D. (2010). *Point of Purchase Communication: Role of Information Search, Store Benefit and Shopping Involvement.* Ahmedabad: Indian Institute of management Ahmedabad.

Slade, E., M.William, & Y.Dwivedi. (2013). Mobile payment Adoption: Classificationand review of existant lituraturre. *The marketing Review*, 103-123.

Sraeel. (2007). Hold the phone: mobile commerce’s here. *117*, 8.

Su, P., Wang, L., & Yan, J. (2018). How users’ Internet experience affects the adoption of mobile payment: a mediation model. *Technology Analysis & Strategic Management*, 186-197.

Thorson, E., & Rodgers, S. (2012). What does “theories of advertising” mean. *Advertising theory*, 3-17.

Türkeköle, T. (2015). *Strategic Approach to Financial Services Industry* . Istanbul: Bogazici University.

Varsha, R., & Thulasiram, M. (2016). Acceptance of e-wallet services: A study of consumer behavior. *International Journal of innovative Research in Management Studies*.

Visconti-Caparr´os, J. M., & Campos-Bl´azquez, J. R. (2022). The development of alternate payment methods and their impact on customer behavior: The Bizum case in Spain. *Technological Forecasting & Social Change*, 1-12.

Yesmin, S., Paul, T. A., & Mohshin, M. (2019). bKash: Revolutionizing Mobile Financial. *Business and Management Practices*, 1-24.

Yurdakul, E., & Bozdağ, A. (2018). IMC: Integrated Marketing Communication. *Marketing Management in Turkey*.

Appendix

Survey on digital initiative of state bank of Pakistan (RAAST)

SECTION-I: Demographics [Please fill up blank spaces]

1. Name of Respondent (optional): ……….………………………………………..……. ………

2. Age (in years): ……....…………………………………………………………………

3. Educational Qualification: …………………………………………………………………

4.Occupation Status: …….……...……………………………………………………………...

5.Gender: ……………………………...……………………………………………………… …...

6. Bank you are connected to ……………………………………………………………….

SECTION-II: Digital financial services [Please put tick mark (√) on respective boxes]

[Scale: Strongly disagree (1), Disagree (2), Somehow disagree (3) Neither Agree nor Disagree (4), Somehow Agree (5), Agree (6), Strongly disagree (7)]

Indicators of Digital Financial Services	**Scale**						
1. Intention to use RAAST							
a. Given a chance, I intend to link my account to RAAST.	1	2	3	4	5	6	7
b. Given a chance I will frequently use RAAST for my transactions.	1	2	3	4	5	6	7
c. I strongly recommend that others use RAAST for digital transactions.	1	2	3	4	5	6	7

2. Banking experience							
a. I often use digital wallets to shop online.	1	2	3	4	5	6	7
b. I often use mobile apps to look at my account management.	1	2	3	4	5	6	7
c. I often use a mobile app to complete my transactions.	1	2	3	4	5	6	7
3. Ease of Use							
a. It is easy to use while doing transactions on mobile apps.	1	2	3	4	5	6	7
b. is it easy in the current time to learn how to use mobile App digital wallets (RAAST)?	1	2	3	4	5	6	7
c. The process will be clear and understandable when I use mobile payment with RAAST.	1	2	3	4	5	6	7
4. Privacy concern							
a. My personal information stored in the databases for mobile payment with RAAST will not be protected.	1	2	3	4	5	6	7
b. My personal information stored in the databases for mobile payment with RAAST will not be accurate.	1	2	3	4	5	6	7
c. The personal information I provide for mobile payment with RAAST will not be used only for the purposes I authorize.	1	2	3	4	5	6	7

SECTION-III: Impacts of advertising Tools [Please put tick mark (√) on respective boxes]

[Scale: Strongly disagree (1), Disagree (2), Somehow disagree (3) Neither Agree nor Disagree (4), Somehow Agree (5), Agree (6), Strongly disagree (7)]

Advertising	**Scale**						
1. TV advertisement							
a. TV advertisement is valuable source of information about financial services.	1	2	3	4	5	6	7
b. TV advertisements provide complete information regarding financial services?	1	2	3	4	5	6	7
c. The characters in TV advertisements affect my decision regarding financial services (RAAST).	1	2	3	4	5	6	7
2. Social media advertisement							
a. It is believable claims regarding financial services?	1	2	3	4	5	6	7
b. social media advertisement is not a way of gimmick (way of attention) regarding financial services.	1	2	3	4	5	6	7
c. social media marketing increases product awareness? (Financial products/services)	1	2	3	4	5	6	7
3. Point of purchase							

a. Materials at point of purchase attracted my attention.	1	2	3	4	5	6	7
b. The information displayed at Point of purchase made me feel the benefit of its usage.	1	2	3	4	5	6	7
c. The information helped me in taking my final decision to use digital financial services.	1	2	3	4	5	6	7
4. Direct Marketing							
a. I trust information received through message or email about digital financial services (RAAST).	1	2	3	4	5	6	7
b. Direct message and email is more convincible regarding financial services (RAAST).	1	2	3	4	5	6	7
c. The direct message and email information about financial services assist me in decision making.	1	2	3	4	5	6	7

UCP Journal of Business Perspectives
Vol. 1, Issue 2 (July - December 2023)
Journal website: http://ojs.ucp.edu.pk/index.php/jbp/index

Impact of Intrinsic and Extrinsic Rewards on Job Satisfaction of Employees: An Empirical Analysis

Aizza Anwar[1], Masooma Batool[2*], Talha Ali[3]

ABSTRACT

Within the changing business realm businesses are facing increasing pressure to ensure that their operations are meeting the industry standards and complying with customers' needs. Dynamic organizations focus on investing on their human capital to enhance overall organizational output. The current research investigates how intrinsic and extrinsic rewards impact the job satisfaction of people working at different levels in manufacturing and services firms. Using the non-probability convenience sampling technique, the authors collected data from employees in Rawalpindi and Islamabad. The statistical analyses indicate that intrinsic and extrinsic rewards are vital to workers' job satisfaction. The current research provides valuable insights to senior management of manufacturing and services firms. It explains how they can enhance the job satisfaction of their employees, leading to enhanced productivity by offering them intrinsic and extrinsic rewards.

Keywords: Motivation; Job Satisfaction; Intrinsic Reward; Extrinsic Reward; Employee Performance

1. INTRODUCTION

Organizations seek to achieve a competitive advantage in an immensely competitive business environment by improving their technologies (Qing et al., 2024), offering, operations, and management as their objectives are tailored towards achieving pre-planned and scheduled goals (Q. Nisar et al., 2016). Some research has shown that employees receive rewards in exchange for the services they provide (Beigi, 2023). The job descriptions and specifications help determine employee services and tasks (Ambad et al., 2021). Most of the organizations used two categories of rewards: intrinsic and extrinsic. Previous research works have shown that for an organization to achieve its vision and mission, it must increase the motivation of the employees through inspiration in both intrinsic and extrinsic forms (Kumari, Ali, et al., 2021).

[1] Universiti Sains Malaysia
[2] Virtual University, Pakistan
[3] Iqra University
[*]Corresponding author's E-mail: mbatool1990@gmail.com

Intrinsic rewards represent motivation, autonomy, passion, and energy, whereas extrinsic rewards represent salary, co-worker relations, job title, and security (Admassie, 2019). While most research views job satisfaction as an outcome, some have argued that job satisfaction is a motivator and can influence employee performance (Inmaculada & Juan Carlos, 2018). Extrinsic rewards such as salaries and promotions based on performance have proven to be strong motivators of employee performance (Khalizani et al., 2011; Mao et al., 2022). Some previous studies have gone on to categorize rewards into the third category, namely, social rewards. Social rewards, the third category of rewards, is similar to intrinsic rewards and result from interactions with others within the workplace (Mahmood et al., 2014).

According to recent studies, employee happiness might differ depending on several factors. Their intents and behaviors are influenced by different types of satisfaction, which can be affected by motivation and rewards (S. Nisar et al., 2018). Nevertheless, this study aims to analyze the influence of intrinsic and external incentives on the job satisfaction of employees in Pakistan. The authors have examined the managerial and non-managerial workforce employed in the manufacturing and services sectors within the Rawalpindi and Islamabad urban areas in Pakistan.

2. LITERATURE REVIEW

We thoroughly examined several previous works to establish a conceptual understanding and theoretical framework for our investigation. These studies examined several human resource management (HRM) characteristics, such as employee performance, extrinsic and intrinsic motivation, rewards, and recognition, as variables. Subsequently, they analyzed the correlation between these variables and, in certain instances, assessed their influence on aspects such as employee performance, organizational performance, and work satisfaction.

An optimal level of employee commitment and performance is the desired goal for organizations in the business environment (Qaiser Danish & Usman, 2010). Some of the studies stated that an employee's level of satisfaction is job satisfaction (Mahmood et al., 2020), and a willing act by an employee based on desire is seen as motivation (Fatima et al., 2021). Some of the previous research proposed the perspective that the successful performance of an employee can lead to rewards within an organization (Habib et al., 2019), and that they have the potential to motivate employees (Shahzad et al., 2019). Other works of previous literature argued that recognition and rewards offered by an organization can boost employee morale and motivation, resulting in improved performance (Fu et al., 2023). Studies have added that the attitude a person has towards their job is also a part of job satisfaction (Kim et al., 2022). Some previous literature has stated that there is a possibility that employees can be satisfied with one aspect of the job and not be satisfied with other aspects (Imran & Abbas, 2020). The research went on to state that the intentions and behaviors of the employees arise based on these different types of satisfaction, and that the level of satisfaction can be influenced by motivation and rewards (Deng et al., 2022). The performance of an employee often depends on the opportunities made available to them for the purpose of exploiting their skills (Abbas & Sagsan, 2019), however, the allocation of inappropriate opportunities may lead to lowered skills, and lower levels of contributions as well (Inmaculada & Juan Carlos, 2018). Studies have shown that business organizations favor financial rewards and non-financial rewards are often overlooked. Organizations use reward systems as a key management tool to improve the firm's overall effectiveness, and the reward system has proven capable of serving as an influencer for employee behavior and motivation (Ibrar & Khan, 2010; Kumari et al., 2022).

2.1. Rewards

Rewards are a vital factor in developing and sustaining commitment levels and ensuring high-performance standards (Wickramasinghe & Widyaratne, 2012). Financial benefits, tangible services, and other benefits of an employment relationship with an organization fit into different reward categories (Kazmi & Abbas, 2021). The quantity of a reward and the overall importance given to it by the employee are the two factors that influence the attraction of a reward (Usha & Shakthi, 2014). As per the two-factor theory, rewards can be extrinsic and intrinsic, increasing employee satisfaction (Usha & Shakthi, 2014; Wei et al., 2023). Studies have shown that intrinsic rewards can increase job involvement. In contrast, extrinsic rewards improve an employee's commitment towards the organization, ultimately leading to more satisfied customers. Recent studies have made three categories for extrinsic, social, and intrinsic rewards (Fan et al., 2023; Usha & Shakthi, 2014).

2.2. Intrinsic, Extrinsic, and Social Rewards

In addition to bolstering this study, prior research articles assert that tangible advantages such as physical well-being, monetary compensation, additional incentives, and prospects for advancement provided by an organization are regarded as extrinsic rewards. Conversely, rewards stemming from the inherent nature of the job and rewards that possess the capacity to inspire employees are considered intrinsic. Recent research indicates that incentives obtained from interactions with colleagues and supervisors are considered social rewards (Usha & Shakthi, 2014). While rewards have been classified, certain studies suggest that how rewards are perceived can differ among employees. For instance, one employee may prioritize recognition over financial incentives (Khan et al., 2013).

Recent studies have shown that extrinsic and intrinsic rewards are positively correlated to the performance of employees and have recommended assigning equal importance to them while developing human resource management policies (I. Khan et al., 2013; Kumari, Abbas, et al., 2021). Aspects such as salary, job title, promotional opportunities, workplace relations, and job security have been categorized as extrinsic rewards by more recent studies, and feelings of passion, energy, motivation, and autonomy have been categorized as intrinsic rewards (Nisar et al., 2016; Zhao et al., 2022). Some studies have shown that extrinsic rewards in the form of salaries and promotional opportunities based on performance serve as strong motivators for employee performance (Khalizani et al., 2011).

2.3. Job Satisfaction

Past studies have defined the positive feelings that emerge from an individual's work role as job satisfaction. Several studies have concluded that organizations can increase customer satisfaction, decrease the rate of turnover, and improve organizational performance if their employees are satisfied (Abbas, 2020; Usha & Shakthi, 2014). Based on previous studies, job satisfaction can indirectly help organizations achieve additional growth, effective and efficient operations, and decrease employee turnover rates. More recent studies have shown that dissatisfied employees leaving the job can lead to a loss of performance and efficiency by other employees (Khan et al., 2022). In addition, recent studies show that factors like lack of balance between personal and professional life, lack of promotional opportunities, encouragement, work environment, and recognition could lead to stress and dissatisfaction (Ahmed et al., 2010). As previous research studies stated, job satisfaction is the perception of employees towards their work environment and the expectations towards the work (Usha & Shakthi, 2014); more recent studies have added that job satisfaction is what an employee wants or values from a job and the organization (Abbas & Sağsan, 2019).

2.4. Rewards and Job Satisfaction

Literature has shown that professional development has the most significant influence on job satisfaction. Recent studies have added that employees are satisfied with a job when they believe they have met their professional ideals (Yang & Hwang, 2014). Factors such as advancement opportunities, salaries, employee input in policy development, and work environments can potentially increase the satisfaction levels of employees (Ahmed et al., 2010). Rewards have been shown to support worker engagement and increase the satisfaction level of employees. Studies have shown that motivation and job satisfaction are directly linked with rewards and that an organization can improve the satisfaction level of employees by making changes to their rewards and recognition efforts (Usha & Shakthi, 2014). Employees' job satisfaction level is often influenced by their feelings and attitudes towards the job (Roos & Eden, 2008; Zhang et al., 2022). Apart from the emotional associations with a job, factors such as advancement opportunities within an organization, improvement in pay scale, and employee involvement in decision-making are some other factors that may lead to satisfaction. Some previous studies added to this by stating that other factors like workplace interaction, job security, and promotional opportunities are vital factors that can increase or decrease the satisfaction level of employees (Ahmed et al., 2010; Xiao et al., 2022).

Previous research has categorized rewards into two categories and studied the impact on motivation, employee performance, and job satisfaction. The research found on the relations of extrinsic and intrinsic rewards with job satisfaction as well as their impact on job satisfaction within Pakistan is inadequate. Based on this identified gap this research aims to examine a relationship between intrinsic and extrinsic rewards and job satisfaction within the context of Pakistan.

H_1: Intrinsic rewards have a significant positive impact on job satisfaction.

H_2: Extrinsic rewards have a significant positive impact on job satisfaction.

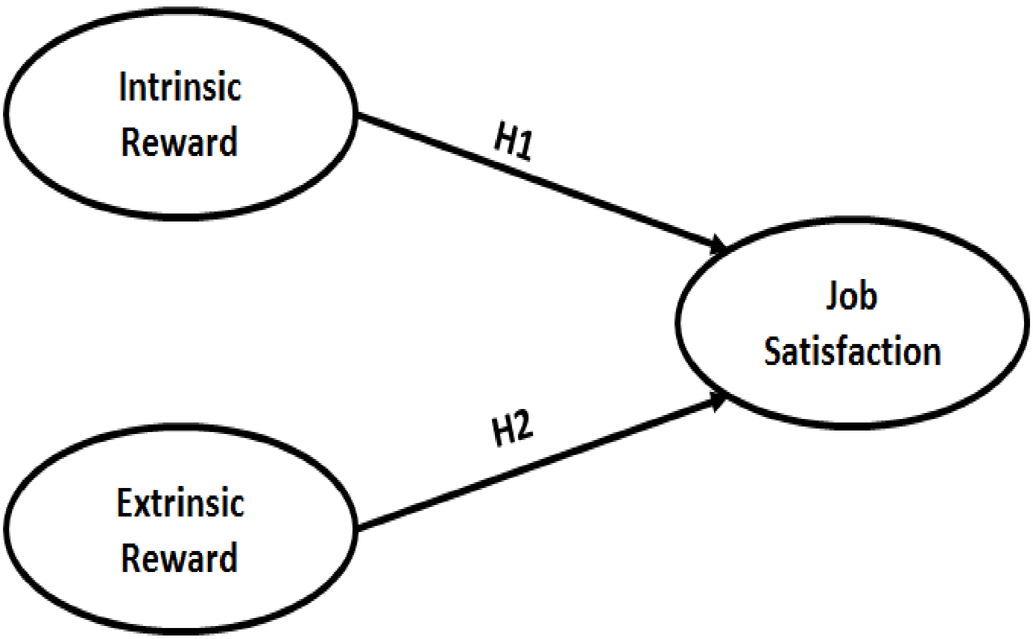

Figure 1: *Conceptual Model*

3. RESEARCH METHODOLOGY

3.1. Population Sampling

The target population for this study consisted of individuals who are currently employed in Rawalpindi or Islamabad cities, Pakistan. Along with a geographical location, the population defined for this study consisted of individuals who were involved in the manufacturing or service industries, private, government, or semi-government organizations. The population for this study included professionals from both ends of the spectrum as individuals with entry-level status and those with fifteen to twenty-plus years of experience were part of the sample.

3.2. Sampling and Data Collection

The sample size for this study consisted of 230 individuals employed in either Rawalpindi or Islamabad and working at a private, government or semi-government organization in the manufacturing or services industry. The non-probability convenience sampling method was used to conduct the research and obtain data from the respondents. The adopted questionnaire was developed on and distributed via Google Forms to acquire the required responses. The questionnaire provided to the respondents consisted of four sections. Section one of the questionnaire contained information about the demographics, organizational status, years of experience, and organizational position of the respondent. The second section consisted of five statements pertaining to intrinsic rewards, section three consisted of four statements pertaining to extrinsic rewards, and section four consisted of twenty-one statements pertaining to job satisfaction. The authors collected responses on five points Likert scale where one represented strongly disagree and five represented strongly agree. Respondents were asked to provide a response to each of the statements based on what they have experienced. They were also informed that their answers would be used for research purposes only and kept confidential.

3.3. Data Analysis

This study aimed to examine the relationship between intrinsic rewards, extrinsic rewards, and job satisfaction. To do so, various statistical analyses were performed. A demographic analysis was conducted to analyze the study. This was used to determine the total of respondents in each category with regards to demographics, organizational position, organizational status, and years of experience. A reliability test was conducted using Cronbach's Alpha method. The test was conducted to check the reliability of the measures used. Along with the reliability test, a measure of sample adequacy test was also conducted using the Kaiser-Meyer-Olkin method. The KMO test was conducted to ensure that the number of responses is suitable for the study. Lastly, a descriptive statistics test was also conducted to determine the mean and standard deviation of all the responses to each of the statements provided in the questionnaire.

3.4. Results

The demographic analysis shows the total number of respondents for each category of the demographic variables included in section one of the questionnaire: organizational position, organizational status, and years of experience. Table 1 provided below shows the number of respondents for each variable and category.

Table 1: *Demographic description of respondents.*

Description		Numbers
Gender	Male	121
	Female	109
Industry	Manufacturing	127
	Services	103
Organizational Status	Government	65
	Private	157
	Semi-Government	8
Organizational Position	Non-Managerial	99
	1st Line Manager	94
	Middle Line Manager	32
	Top Management	5
Years of Experience	Less than 5 years of experience	103
	6 to 10 years of experience	101
	11 to 15 years of experience	21
	16 to 20 years of experience	5

Based on the data provided in the tables, out of 230 total respondents, 121 respondents were male and 109 were females. Out of the total number of respondents, 127 worked in the manufacturing sector and 103 were employed in the services industry. While 65 respondents were part of a government organization, 157 respondents were from the private organization and only 8 were part of a semi-government organization. As per this data, 94 respondents were employed at a non-managerial position, 94 were employed at the first-line managerial position, 32 were employed at a mid-level management, and 5 were employed at the top management level. The sample size was mostly made of the individual at the early or mid-stages of the professional lives as 103 respondents had less than 5 years of experience, 101 had 6 to 10 years of experience, 21 respondents had 11-15 years of experience, and 5 respondents had 16 to 20 years of experience.

3.5. Kaiser-Meyer-Olkin Test

The KMO test was conducted to ensure that the number of responses is suitable for the study. For the KMO test, the minimum measure of sampling adequacy required is 0.7, however, the measure of sampling adequacy for these results was calculated to be 0.902 which shows that the sample size is enough to perform statistical analyses.

3.6. Reliability Test

A Cronbach's alpha (reliability) test was conducted to check the reliability of the measures used. The Cronbach's alpha value for the current research is 0.864 and it efficiently matches with a minimum suggested value of 0.6. Therefore, it can be determined that the data is normal and can be relied upon.

3.7. Mean and Standard Deviation

Table 2 shows the mean and standard deviations of the results that were obtained through the questionnaire. The mean values provided in the table below represent the degree to which responses varied from one statement to the other.

Table 2: *Instrument items, mean and standard deviation*

Statements	**Mean**	**Standard Deviation**
Intrinsic Rewards		
The management believes in my ability to perform.	3.10	1.194
The management offers employees a family day, motivating me to work harder during the year.	3.53	.899
The management offers informal recognition (thank you, very done, you are a star, etc.)	3.87	1.122
The management provides recognition for my work.	3.08	1.153
The achievement of the goals is a source of motivation to perform better.	3.61	.977
Extrinsic Rewards	**Mean**	**Standard Deviation**
The salary paid is commensurate to the work done.	3.30	1.240
My satisfaction would go up if my salary was increased.	3.40	.952
I receive an annual bonus based on performance.	3.84	1.096
The reward system attracts and retains the right kind of people.	3.23	1.188
Job Satisfaction	**Mean**	**Standard Deviation**
Based on my work the salary I receive is fair.	3.16	1.249

I earn the same or more when compared to others in the same profession.	3.46	.904
The management promotes fairness when deciding on salary increases.	3.90	1.073
I am regularly praised for my work.	3.12	1.174
I am given credit for my contributions to the company.	3.38	1.002
I receive regular constructive feedback from the management.	3.80	1.131
Promotional opportunities are equal for all.	3.13	1.216
Promotional opportunities are fair and honest.	3.53	.956
Working hours are reasonable.	3.74	1.133
I support and blend into the culture of the organization.	3.06	1.233
I am allowed freedom with regards to my work.	3.53	.983
There is a sense of collaboration and teamwork within the organization.	3.77	1.134
I am given challenges with respect to my skills and qualification.	3.21	1.233
I know that my position at the company is significant.	3.54	.983
I am satisfied with the company benefits.	3.82	1.102
I am satisfied with the medical benefits	3.09	1.175
The amount of annual leave days is sufficient.	3.46	.996
The amount of sick leave days is sufficient	3.70	1.127
The rewards I receive are relevant to my needs.	3.14	1.228
The company rewards employees for performance and contributions.	3.37	.956
The rewards program at the company needs improvements.	2.89	1.100

The intrinsic rewards section of the questionnaire consisted of five statements. For statement one *"The management believes in my ability to perform"* the mean was 3.10. Based on this it can be stated that all 230 respondents neither agree nor disagree with this statement. The mean for statement two *"The management offers a family day to employees which motivates me to work harder during the year"* is 3.53. Since the mean value is over 3.5 it can be stated that the respondents are in agreement with this statement and state that they receive a family day from work. For statement three *"The management offers informal recognition…"* the calculated mean is 3.87 which shows respondents agree with the fact that they are informally recognized. However, in statement four *"The management provides recognition for my work"* the mean value is at 3.08 which dictates that the respondents disagreed when questioned about receiving formal recognition. Statement five "*The achievement of the goals is a source of motivation to perform better"* asked employees if achieving a goals server as a motivator for better performance. All responses were in favor of the statement as the mean was calculated at 3.61. This shows that setting challenging yet achievable goals can be used to motivate employees for better performance.

The extrinsic rewards section of the questionnaire consisted of four statements. Statement one *"The salary paid is commensurate to the work done"* asked employees if they believe that the salary they receive is fair with regards to the work. Respondents were neutral with the statement as he means was 3.30 and for statement two *"My satisfaction would go up if my salary was increased"* the mean was calculated at 3.40. There was a change in this response when compared to the previous one, despite the change the overall responses were neutral. This shows that some people experience an increase in satisfaction if their salary were to be increased, but most wouldn't. For statement three *"I receive an annual bonus based on performance"* the calculated mean was at 3.84 which shows that the respondents agree with the statement. This shows that employees are provided with an annual bonus based on performance. In statement four "The reward system attracts and retains the right kind of people" the mean was calculated at 3.23 when asked about the company reward system. This means that the respondents were almost neutral with regards to the statement and believe that rewards systems could or could not attract the right kind of people.

The job satisfaction section of the questionnaire consisted of twenty-one statements. For statement one *"Based on my work the salary I receive is fair"* the mean was 3.16, showing a neutral response. For statement two *"I earn the same or more when compared to others in the same profession"* the mean was calculated at 3.46 and responses to this statement remained neutral despite the slight change in the mean value of both statements. For the third statement *"The management promotes fairness when deciding on salary increases"* the mean was calculated at 3.90 which shows that the respondents were in agreement with this statement and believed that the management decides on salary increases with fairness. The fourth statement *"I* *am regularly praised for my work"* received a neutral response as the mean for this statement was at 3.12. For statement number five *"I am given credit for my contributions to the company"* the response was neutral and the mean was calculated at 3.38. Statement six *"I receive regular constructive feedback from the management"* which asked them about feedback form the management got a response that in agreement. The mean for this statement was calculated at 3.80. This means that most employees receive feedback from the management that helps them grow. When are asked about promotional opportunities in statement seven *"Promotional opportunities are equal for all"* respondents stated that they neither agree nor disagree with the statement? The mean for this statement was at 3.13. However, when asked about the fairness in promotional opportunities in statement eight *"Promotional opportunities are fair and honest"* the mean was at 3.53 as the respondents were in agreement with this statement. In statement nine *"Working hours are reasonable*" the respondent was in agreement and the mean was 3.74. When asked about work culture in statement ten *"I support and blend into the culture of the organization"* respondents were is disagreement as the mean was calculated at 3.06. This could mean that organizations need to create an environment that makes employees feel welcomed. Statement eleven *"I am allowed freedom with regards to my work"* had a calculated mean of 3.53 which shows that the respondents were in agreement with this statement.

When employees were asked about a sense of teamwork in statement twelve *"There is a sense of collaboration and teamwork within the organization"* the respondents were in agreement with the statement and the mean was 3.77. In statement thirteen *"I am given challenges with respect to my skills and qualification"* the mean was 3.21 which means a neutral response was seen. This means that either employee are not challenged at all or the challenges placed upon them are above their skills. In statement fourteen *"I know that my position at the company is significant"* respondents agreed to the statement and the calculated mean was 3.54. Statement fifteen *"I am satisfied with the company benefits,"* asked respondents about company benefits and mean of 3.82 was calculated, however in statement sixteen *"I am satisfied with the medical benefits"* the mean was 3.09. This shows that the respondents are satisfied by the company benefits, however, they do not receive medical benefits that satisfy them. In statement seventeen *"The amount of annual leave days is sufficient"* the mean was at 3.46 which shows neutral responses, however in statement eighteen *"The amount of sick leave days is sufficient"* the mean was at 3.70 which that the responses are in agreement with the statement can be stated that although the employees are not satisfied by the medical benefits, as seen in statement fifteen, they are satisfied with the number of sick leave days offered. When asked about the rewards in statement nineteen *"The rewards I receive are relevant to my needs"* the mean was seen at 3.14 which shows that there was a neutral response. In statement twenty *"The company rewards employees for performance and contributions"* the mean was 3.37 and the neutral response was seen. When asked about the reward system in statement twenty-one *"The rewards program at the company needs improvements"* the mean was calculated at 2.89. Respondents were in disagreement with the statement and stated that the reward program does not need improvements.

4. DISCUSSION

Based on the results of the Kaiser-Meyer-Olkin at 0.902, and a Cronbach's Alpha reliability test at 0.864 it can be stated that the number of responses used for analysis is suitable and that the response to the questionnaire is normal and can be relied upon.

Based on the mean values derived from the questionnaire's intrinsic rewards section, it can be concluded that most respondents agreed with the assertions regarding intrinsic rewards. According to this, the participants receive several inherent incentives at their workplace. These benefits encompass informal acknowledgement, provided family-oriented activities, and sources of inspiration. Based on the average values of external incentives, it is evident that most participants replied neutrally. Based on this, it is uncertain if the respondent obtains the most extrinsic benefits. These benefits consist of a wage proportionate to the quantity of effort and an appealing incentive system. While most respondents gave a neutral response to most statements about extrinsic rewards, a notable increase in the average score was found for statement number three. According to this, it may be asserted that respondents receive an annual bonus based on their performance, which can be considered as an extrinsic incentive.

The job satisfaction component of the questionnaire comprised twenty-one statements that necessitated respondents to provide answers based on their personal experience. Based on the estimated mean values, the respondents agreed with nine claims, were neutral towards nine statements, and disagreed with three assertions. The respondents' agreement with the assertions indicates their satisfaction with those particular aspects of their job. These factors encompass equitable compensation raises, constructive feedback, equitable prospects for promotion, working hours, team cooperation, work autonomy, the importance of their role, company perks, and sick leave policies. The respondents' neutral comments indicate that they are neither satisfied nor dissatisfied with those parts of their profession. These features encompass equitable compensation, recognition for their contributions, equal chances for advancement, annual vacation time, and awards tied to performance and are pertinent to their work. The respondents' disagreement with the claims indicates their dissatisfaction with specific aspects of their job. These features encompass elements such as assimilating into the organizational culture, medical benefits, and the necessity for enhancing the rewards program.

Based on the statistics, it can be stated that most employees are offered different types of intrinsic rewards, such as family days, informal recognition, and sources of motivation. In contrast, most employees may or may not be offered any type of extrinsic rewards such as a fair salary and attractive rewards systems that retain employees.

Based on the responses and mean values for the statements regarding job satisfaction, it can be stated that they are mostly satisfied with most intrinsic rewards offered by the organization and some of the extrinsic rewards. Employees show satisfaction with intrinsic factors, including constructive feedback, freedom of work, the significance of their position, and sick leaves. Employees were also satisfied by extrinsic factors, including fair salary increments, fair promotional opportunities, and working hours. However, respondents remained neutral with regards to their satisfaction with various extrinsic factors and praises for their contribution, equal promotional opportunities, and performance-based and relevant rewards. Most respondents were in disagreement with some aspects of job satisfaction that included blending into the organization's culture and medical benefits, yet the respondents stated that they would not like the rewards system to improve.

5. CONCLUSION

The research examined the correlation between intrinsic and extrinsic rewards and job satisfaction. The study examines the relationship between intrinsic and extrinsic rewards, treated as independent variables, and work satisfaction, considered the dependent variable. The study focused on persons engaged in the manufacturing or services industry in Islamabad or Rawalpindi, namely in government, private, or semi-government enterprises. The population was additionally classified based on gender, years of experience, and other demographic factors. A sample size of 230 individuals was chosen to carry out the study. A modified questionnaire was provided on Google forums, and the convenience sampling approach was employed. As part of the data analysis process, a demographic analysis was performed to ascertain the number of individuals belonging to a certain category for each question. In addition, a Kaiser-Meyer-Olkin Test was undertaken to ascertain the adequacy of the number of replies for the study. A Cronbach's Alpha test was administered to assess the reliability and consistency of the responses. Additionally, mean and standard deviation tests were performed for each statement pertaining to intrinsic and extrinsic incentives and work satisfaction.

The findings indicate that individuals working in Rawalpindi or Islamabad, employed in private, government, or semi-government organizations in the manufacturing or services sector, receive different intrinsic rewards. However, the provision of extrinsic rewards may or may not be available to them. Individuals exhibit satisfaction with intrinsic benefits while remaining neutral towards extrinsic rewards. The respondents expressed their disinterest in enhancing the rewards system at their firm.

These results unequivocally demonstrate that employees derive intrinsic rewards from their organization. Employee satisfaction primarily stems from intrinsic aspects of their employment. Furthermore, employees express a preference for the reward structure at their organization to remain unchanged. Thus, it can be inferred that intrinsic rewards exert a more significant influence on job satisfaction in comparison to extrinsic rewards.

6. IMPLICATION

This study implies that organizations that employ individuals similar to the population of this study can make additions to, or improve, their intrinsic rewards in order to improve employee satisfaction. Although intrinsic rewards were seen to have a greater impact on job satisfaction in the study, the organizations should also focus on the various extrinsic factors of the job. These factors include, but are not limited to, a comparatively fair salary, equal promotional opportunities, and relevant and performance-based rewards. Statements regarding these statements had a neutral response which indicates that this an opportunity for organizations to implement extrinsic rewards in the programs to increase job satisfaction significantly.

7. LIMITATIONS.

The study is limited to employees in Rawalpindi and Islamabad who work at a private, government, or semi-government organization in the manufacturing or services industry and, therefore, the results may not be generalizable to other regions of Pakistan.

REFERENCES

Abbas, J. (2020). Impact of total quality management on corporate sustainability through the mediating effect of knowledge management. *Journal of Cleaner Production, 244*, 118806. https://doi.org/10.1016/j.jclepro.2019.118806

Abbas, J., & Sagsan, M. (2019). Identification of key employability attributes and evaluation of university graduates' performance: Instrument development and validation. *Higher Education, Skills and Work-Based Learning*, *10*(3), 449–466. https://doi.org/10.1108/HESWBL-06-2019-0075

Abbas, J., & Sağsan, M. (2019). Impact of knowledge management practices on green innovation and corporate sustainable development: A structural analysis. *Journal of Cleaner Production*, *229*, 611–620. https://doi.org/10.1016/j.jclepro.2019.05.024

Admassie, G. A. (2019). Impact of Rewards Management System on Employees' Satisfaction in Case of DebreBirhan University Administrative Staffs. *J Invest Manag*, *8*, 16–24.

Ahmed, I., Nawaz, M., & Iqbal, N. (2010). Effects of Motivational Factors on Employees Job Satisfaction a Case Study of University of the Punjab, Pakistan. *International Journal of Business and Management*, *5*.

Ambad, S. N. A., Kalimin, K. M., Damit, D. H. D. A., & Andrew, J. V. (2021). The mediating effect of psychological empowerment on leadership styles and task performance of academic staff. *Leadership & Organization Development Journal*.

Beigi, S. (2023). A Framework for Firm Performance Under the Influence of Knowledge Management and Dynamic Capabilities: Examining the Mediating Role of Sustainable Competitive Advantage. *Iranian Journal of Management Sciences*, *16*(1), 205–227.

Deng, Y., Cherian, J., Kumari, K., Samad, S., Abbas, J., Sial, M. S., Popp, J., & Oláh, J. (2022). Impact of Sleep Deprivation on Job Performance of Working Mothers: Mediating Effect of Workplace Deviance. *International Journal of Environmental Research and Public Health*, *19*(7), 1–17. https://doi.org/10.3390/ijerph19073799

Fan, Q., Abbas, J., Zhong, Y., Pawar, P. S., Adam, N. A., & Alarif, G. B. (2023). Role of organizational and environmental factors in firm green innovation and sustainable development: Moderating role of knowledge absorptive capacity. *Journal of Cleaner Production*, *411*, 137262. https://doi.org/10.1016/j.jclepro.2023.137262

Fatima, S., Kumari, K., Sandhu, Y. A., & Abbas, J. (2021). Validation of the Students' Cognitive Engagement Measure: Evidence from University Students of Karachi. *Pakistan Business Review*, *23*(3), 1–19.

Fu, Q., Abbas, J., Alarif, G. B., Sial, M. S., Brugni, T. V., & Adamwal, N. (2023). I act in an environmentally responsible fashion since my firm is socially responsible: A pathway for transition to a responsible society. *Journal of Cleaner Production*, *414*, 137523. https://doi.org/10.1016/j.jclepro.2023.137523

Habib, M., Abbas, J., & Noman, R. (2019). Are human capital, intellectual property rights, and research and development expenditures really important for total factor productivity? An empirical analysis. *International Journal of Social Economics*, *46*(6), 756–774. https://doi.org/10.1108/IJSE-09-2018-0472

Ibrar, M., & Khan, O. (2010). The Impact of Reward on Employee Performance (A Case Study of Malakand Private School). *International Letter of Social and Humanistic Sciences*, *52*.

Imran, M., & Abbas, J. (2020). The Role Of Strategic Orientation In Export Performance Of China Automobile Industry. In *Handbook of Research on Managerial Practices and Disruptive Innovation in Asia* (pp. 249–263). IGI Global.

Inmaculada, M., & Juan Carlos, B. L. (2018). Examining the intermediate role of employee abilities, motivation and opportunities to participate in the relationship between HR bundles and employee performance. *Business Research Quarterly*, *21*.

Kazmi, S. J. A., & Abbas, J. (2021). Examining the Impact of Industry 4.0 on Labor Market in Pakistan. In *Handbook of Smart Materials, Technologies, and Devices* (pp. 1–11). Springer.

Khalizani, K., Hanisah Mat, S., & Siew-Phaik, L. (2011). The Impact of Rewards and Motivation on Job Satisfaction in Water Utility Industry. *International Conference on Financial Management and Economics*, *11*.

Khan, H., Abbas, J., Kumari, K., & Najam, H. (2022). Corporate level politics from managers and employees perspective and its impact on employees' job stress and job performance. *Journal of Economic and Administrative Sciences*. https://doi.org/10.1108/JEAS-12-2021-0246

Khan, I., Shahid, M., & Nawab, S. (2013). INFLUENCE OF INTRINSIC AND EXTRINSIC REWARDS ON EMPLOYEE PERFORMANCE: THE BANKING SECTOR OF PAKISTAN. *Academic Research International*, *4*.

Kim, H., Abbas, J., Haq, M. Z. U., Lee, J. H., & Hwang, J. (2022). Differences between robot servers and human servers in brand modernity, brand love, and behavioral intentions in the restaurant industry. *Asia Pacific Journal of Marketing and Logistics*. https://doi.org/10.1108/APJML-03-2022-0214

Kumari, K., Abbas, J., Rashid, S., & Haq, M. A. U. (2021). Role of Corporate Social Responsibility in Corporate Reputation via Organizational Trust and Commitment. *Reviews of Management Sciences*, *3*(2), Article 2.

Kumari, K., Ali, S. B., & Abbas, J. (2022). The Interplay Between Leaders' Personality Traits and Mentoring Quality and their Impact on Mentees' Job Satisfaction and Job Performance. *Frontiers in Psychology*, *13*, 1–14.

Kumari, K., Ali, S. B., Khan, N. un N. K., & Abbas, J. (2021). Examining the Role of Motivation and Reward in Employees' Job Performance Through Mediating Effect of Job Satisfaction: An Empirical Evidence. *International Journal of Organizational Leadership*, *10*(4), 401–420.

Mahmood, H. K., Hashmi, M. S., Shoaib, D. M., Danish, R., & Abbas, J. (2014). Impact of TQM Practices on Motivation of Teachers in Secondary Schools Empirical Evidence from Pakistan. *Journal of Basic and Applied Scientific Research*, *4*(6), 1–8.

Mahmood, H. K., Hussain, F., Mahmood, M., Kumail, R., & Abbas, J. (2020). Impact of E-Assessment at Middle School Students' Learning – An Empirical study at USA Middle School Students. *International Journal of Scientific & Engineering Research*, *11*(4), 1722–1736.

Mao, J., Zhao, Y., Yang, S., Li, R. Y. M., & Abbas, J. (2022). Intelligent Transformation and Customer Concentration. *Journal of Organizational and End User Computing (JOEUC)*, *35*(2), 1–15. https://doi.org/10.4018/JOEUC.333470

Nisar, Q., Aslam, S., & Riasat, F. (2016). Do intrinsic and extrinsic rewards influence the job satisfaction and job performance? Mediating role of reward system. *Journal of Management Info (JMI)*, *3*.

Nisar, S., Peng, K., Wang, S., & Ashraf, B. N. (2018). The impact of revenue diversification on bank profitability and stability: Empirical evidence from South Asian countries. *International Journal of Financial Studies*, *6*(2), Article 2.

Qaiser Danish, R., & Usman, A. (2010). Impact of Reward and Recognition on Job Satisfaction and Motivation: An Empirical Study from Pakistan. *International Journal of Business and Management*, *5*.

Qing, L., Abbas, J., Najam, H., Ma, X., & Dagestani, A. A. (2024). Investment in renewable energy and green financing and their role in achieving carbon-neutrality and economic sustainability: Insights from Asian region. *Renewable Energy*, 119830. https://doi.org/10.1016/j.renene.2023.119830

Roos, W., & Eden, R. (2008). The relationship between employee motivation, job satisfaction and corporate culture. *Journal of Industrial Physcology.*, *34*.

Shahzad, M., Ying, Q., Ur Rehman, S., Zafar, A., Ding, X., & Abbas, J. (2019). Impact of knowledge Absorptive Capacity on Corporate Sustainability with Mediating Role of CSR: Analysis from the Asian Context. *Journal of Environmental Planning and Management*, *63*(2), 148–174. https://doi.org/10.1080/09640568.2019.1575799

Usha, P., & Shakthi, E. (2014). Rewards, Motivation and Job Satisfaction of Employees in Commercial Banks- An Investigative Analysis. *International Journal of Academic Research in Business and Social Sciences*, *4*.

Wei, F., Abbas, J., Alarifi, G., Zhang, Z., Adam, N. A., & Queiroz, M. J. de. (2023). Role of green intellectual capital and top management commitment in organizational environmental performance and reputation: Moderating role of pro-environmental behavior. *Journal of Cleaner Production*, *405*, 136847. https://doi.org/10.1016/j.jclepro.2023.136847

Wickramasinghe, V., & Widyaratne, R. (2012). Effects of interpersonal trust, team leader support, rewards, and knowelde sharing mechanism on knowledge sharing in project teams. *VINE: The Journal of Information and Knowledge Managment Systems*, *42*(2), 214–236.

Xiao, H., Khan, S. M., Huang, S., Abbas, J., Matei, M. C., & Badulescu, D. (2022). Employees' Green Enterprise Motivation and Green Creative Process Engagement and Their Impact on Green Creative Performance. *International Journal of Environmental Research and Public Health*, *19*(1), 1–13. https://doi.org/10.3390/ijerph2004010001

Yang, C.-L., & Hwang, M. (2014). Personality traits and simultaneous reciprocal influences between job performance and job satisfaction. *Chinese Management Studies*, *8*(1), 6–26.

Zhang, J., Cherian, J., Sandhu, Y. A. B., Abbas, J., Cismas, L. M., Negrut, C. V., & Negrut, L. (2022). Presumption of green electronic appliances purchase intention: The mediating role of personal moral norms. *Sustainability*, *14*, 1–15.

Zhao, L., Gu, J., Abbas, J., Kirikkaleli, D., & Yue, X.-G. (2022). Does quality management system help organizations in achieving environmental innovation and sustainability goals? A structural analysis. *Economic Research-Ekonomska Istraživanja*, *0*(0), 1–24. https://doi.org/10.1080/1331677X.2022.2100436

UCP Journal of Business Perspectives
Vol. 1, Issue 2 (July - December 2023)
Journal website: http://ojs.ucp.edu.pk/index.php/jbp/index

Impact of 2008's Financial Crisis on Islamic Banks of Pakistan

Ayesha Latif[1*], Muhammad Kashif Imran[1]

ABSTRACT

The comparison of financial performance of conventional and Islamic banks is a widely discussed topic after the development of the latter. The existing literature review suggests that Islamic banks usually outperform conventional banks even during crises (Azzam & Rettab, 2020), and this may imply that the global financial crisis of 2008 had little or no impact on the Islamic banks. This empirical study aims to test this narrative and compares ratios and stock prices of all full-fledged Islamic banks of Pakistan with an objective of analyzing the impact of crisis upon profitability, efficiency, risk management, asset quality, liquidity management and stock returns of IBs through trend analysis from 2005-2020. The data collected from bank's annual financial statements provided by official websites is used to test the hypothesis that these ratios and stock prices remain unchanged during the crisis. Through the application of One Way ANOVA methodology, the study concludes that profitability, efficiency and returns remain unaffected by the crisis whereas banks suffer because of liquidity, asset quality, and risk management. The application of t-test on different sub-periods indicates that capital adequacy and write-off ratios of Islamic banks need improvement. The impact of COVID on the performance of Islamic banks is limited. The research work implies that the bank managers and policy makers should focus on capital adequacy and write-off ratios in making future decisions.

Keywords: Financial crisis 2008, Islamic banks, Pakistan, Performance, Accounting ratios

1 INTRODUCTION

The financial institutions, especially banks, are an important part of economic activity of any country. Their stability and performance indicate the economy's well-being. A liquidity crunch initiated by banks may result in an economic crisis country wide or even at times worldwide. The banking industry has survived many financial crises, as banking history dates back to 1600s. The first financial crisis is believed to happen in 1720. The banking history is full of bank runs, which ultimately caused a ripple effect or systematic risk and resulted in the collision of economies and

[1] Alumni, Dr. Hasan Murad School of Management University of Management and Technology, Lahore.
[*]Corresponding author's E-mail: ayesha.latif.rana@gmail.com

countries. Bank runs and financial crises are a paradox. Bank runs cause financial crises and the financial crises cause bank runs. The cause of global financial crisis of 2008 is assumed to be sub-prime mortgages (Shafique, Faheem & Abdullah, 2012). The investments and large speculative positions by big banks in mortgages and the sharp fall of house prices in the USA market attributed to the crisis. Many big names such as Lehman Brothers and Bear Stearns faced liquidity crises and ultimately went bankrupt. The conventional financial system has faced such crisis repeatedly.

1.1 Distinguishing Features of Islamic Banks

In contrast to the conventional financial system, Muslim economists developed an Islamic financial system which is based on the Sharia'ah principles that pay immense importance to justice, ethics and moral values in society. The development of the Islamic banking system may be regarded as an important milestone in finance history because it divides the banking consumers into two channels which differ in their basis as Islamic banking is conceptually and operationally very different from conventional banking. The conventional system is based on borrowers and creditors with interest as the basic unit. Whereas Islamic banking is contract based and promotes real asset financing and trade. The basis of a conventional system which is interest, *Riba*, is strictly prohibited in the Islamic Sharia'ah. The instruments such as derivatives which caused the crisis of 2008 are not an investment option for Islamic banks as they are based on speculation and uncertainty. The speculation, *Maysir*, and uncertainity, *Gharar*, are also prohibited by Islam. The detailed differences between conventional and Islamic banking are out of scope of this research study, but due to these basic differences, Muslim economists claim that Islamic financial solutions are crisis-proof. Khan (1986) claims that the Islamic financial system is beneficial for both Muslim and Non-Muslim participants as it is based on ethics. The distinguishing features of Islamic finance are:

- **No Riba:** Riba, interest is usually defined as excess on lent money which is charged without consideration of any risk. It is strictly prohibited in the Shari'ah as Allah SWT mentioned in the Holy Quran (Chapter 2, Verse 275 – 276):

"Those who consume interest will stand on Judgment Day like those driven to madness by Satan's touch. That is because they say, "Trade is no different than interest." But Allah has permitted trading and forbidden interest. Whoever refrains—after having received warning from their Lord—may keep their previous gains, and their case is left to Allah. As for those who persist, it is they who will be the residents of the Fire. They will be there forever. Allah has made interest fruitless and charity fruitful. And Allah does not like any ungrateful evildoer."

Instead of interest, Islam believes in profit and loss sharing. Charging interest leads to the artificial creation of money and creates imbalance in the living standard of people as poor get poorer as they receive only a small amount of interest on their deposits, whereas the rich get richer as they employ funds to generate more income but instead of sharing profits, they pay only a small amount of interest. In contrast, Islam believes in just practices and encourages sharing profits as well as losses. This profit sharing helps banks in maintaining their net worth and shuns weakening of their balance sheet during uncertain financial situations (Cihak & Hesse, 2010).

- **No Gharar:** Islamic banking is contract based. Any uncertainty in the elements of a contract is referred to as '*Gharar*'. The subject matter and price should be mentioned, and both parties should be certain about the conditions of the contract. The prohibition of Gharar means Islamic banks cannot invest in hedging instruments, the derivatives market and speculative activities as they fall under the prohibited category. Zehri, Abdelbaki & Bouabdellah (2012) claim that prohibition of dealing in derivatives and speculative activities upon Islamic banks protected them from falling during the crisis.
- **Risk Sharing:** Instead of risk transfer, Islamic system believes in risk sharing. Islam announces return prohibited without bearing risk for that return. This promotes real economic activity and trade and discourages buying and selling of conventional insurance.
- **Contract Based Financing:** All Islamic financial products are contract based and they promote profit, loss, and risk sharing. The contracts are on real assets, and the banks and customers share the relationship of equity partners or joint owners instead of debtor-creditor. This asset-backed financing promotes real economic growth, overall prosperity, and a better living standard for all the participants.

The crisis of 2008 has an impact on financial institutions all over the world. The conventional financial industry lost more than $ 1 trillion from bad debts in the crisis (Reuters, 2009). In contrast, the growth rate of Islamic banks during the crisis is positive (Islamic Financial Services Industry Report, 2013). Preliminary literature research shows that Islamic banks are crisis-proof (Mirzaei et al., 2022) and the global financial crisis of 2008 has no significant impact on Islamic financial institutions (Grassa et al., 2022). This study tests whether the financial and stock performance of Islamic banks in Pakistan remain unchanged during the said crisis.

Most of the previous literature focuses on comparison between conventional and Islamic banks. The focus of this study is Islamic banks only. It compares the banks through different years. This trend analysis overtime will help in capturing the performance of the Islamic banks while comparing them with themselves instead of comparing them with already grown conventional banking industry. A lot of researchers attribute the better performance of Islamic banks during crisis to the growth phase of Islamic banks in their business cycle. They criticize that history of Islamic banks is too short to conclude their superior performance over financial counterparts. As a result this study adds to the financial literature the data for wider time period to analyze the overall trend of financial and stock performance of Islamic banks in Pakistan. The trend analysis with ANOVA testing to understand crisis's impact is a unique methodology to Pakistan's Islamic banking industry as it divides the total time period to pre-crisis, crisis and post-crisis periods and further divides the post crisis time into periods of 3 years each and compares impact of crisis individually with each sub period including the COVID period.

This study, through trend analysis and ANOVA application on pre-crisis (2005 – 2006), crisis (2007 – 2009) and post crisis (2010 – 2020), shows varied results related to crisis impact. The profitability ratios (ROA, ROE, PM), the efficiency ratios (OER, ATO) and stock returns along with EPS remain significantly same during all sub-periods. The impact of crisis is present in risk indicators (NPL, CAR, TLE) and liquidity ratios (CTA, CTD) as the ratios are statistically different in three sub periods. This can be attributed to the fact that most of the Islamic banks in Pakistan started operating just before the crisis and they were not stable. The asset quality shows mixed results as WRL remains same whereas the LTD ratio differs significantly in all periods.

2 LITERATURE REVIEW

The purpose of this paper is to determine the effect of financial crisis on stability of Islamic banks. The first step of the research study is to assess the performance of Islamic banks. The Performance Evaluation Theory explains that performance of any organization depends on some key performance indicators, KPIs. In case of financial performance, the KPIs are accounting ratios. A very wide application of these accounting ratios can be seen in the CAMELS rating system[1]. This system is used to measure the performance of banks and their ability to survive in the longer run. Many researchers (Ross, 1991; Samad, 1998; Toumi et al., 2008; Beck et al., 2010; Mobeen et al., 2011; Almanaseer, 2014; Hussain et al., 2019 & Qian Long Kweh et al., 2024) use ratio analysis for performance measurement of banks. In addition to long-run stability, the goal of any organization is to increase its shareholder's wealth. In order to gain more equity and deposits from their shareholders and customers, banks need to perform well. This performance may be determined through return on stock.

[1] CAMELS is an acronym for Capital adequacy, Assets, Management capability, Earnings, Liquidity and Sensitivity. This research study does not apply the CAMELS ratio but for the reference of application of ratios in performance evaluation, the concept is mentioned here.

Rasiah (2010) states that from an investor's viewpoint, profitability is an important measure of the bank performance. The profitability may be measured through ROA, return on assets (Tabash et al., 2023). The higher ratio indicates higher profitability. Also, the ratios are inflation invariant and are better indicators of performance. Hassan (1999), Samad (1998) & Rushdi (2003) also emphasize on use of ROA and ROE as performance measures. The ratio analysis is a better tool for performance measurement as it ignores other variables which may affect the result such as a bank's size etc.

Zehri, Abdelbaki & Bouabdellah (2012) study the effect of the crisis on Islamic and conventional banks using ratio analysis. In their study they prove that accounting ratios are good indicators of performance and hence a discriminator between performance of Islamic and conventional banks. Their comparison study shows that Islamic banks outperform conventional ones during crisis. They attributed the success of Islamic system to the underlying theory of no interest and profit-loss sharing.

Many research studies compare Islamic bank's performance with conventional banks before the crisis (Zineldon, 1990; Kazarian, 1993; Samad, 1999, 2004 & Iqbal, 2001). These researchers in their respective studies conclude that Islamic banking has advantages over conventional banks with Islamic banks performing better than their financial counterparts. On the other hand, during the crisis of 2008, many conventional financial institutions collapsed. Many researchers and economists examine causes of the crisis and performance of conventional banks. Dewi & Ferdian (2009) state that speculative activities and careless lending transactions resulted in global financial crisis. Shafique, Faheem & Abdullah (2012) review the existing literature on Islamic bank's performance during crisis. In their descriptive study, they mention different causes of 2008's financial crisis while calling sub-prime mortgages the primary cause behind the crisis. They conclude that as Islamic banks are based on the Sharia'ah principles, they are better in terms of their product portfolio and have the ability to survive a crisis as they are more liquid with less debt inclusion in their framework.

To determine more profitable and sustainable banking options, researchers compare the performance of Islamic banks with conventional banks. Tlemsani & Suwaidi (2016) compares both banking channels of United Arab Emirates in 2007 - 2008. With a comparative performance analysis between one Islamic and one conventional bank, the researchers find that the conventional bank has larger negative impact of the crisis in terms of profitability, ROA. Furthermore, for the same time period, the researchers perform a cross-sectional analysis between 8 Islamic and 43 conventional banks. Comparing the capital adequacy, profitability, liquidity and leverage of both banking systems, they conclude that although crisis effects both banking systems, Islamic banks perform well financially as compared to their counterparts. Beck et al. (2010) concludes the same result while comparing both banking systems of several countries. Their study highlights that higher liquidity, lower overhead costs, higher fixed asset ratio with higher ROA and better capitalization of Islamic banks help them in surviving the financial crisis better than conventional banks.

The GCC (Gulf Cooperation Council) is considered to be a better market for comparison as both banking sectors are operating there with comparable market capitalization. Parashar & Venkatesh (2010) measure five performance indicators for selected 6 conventional and 6 Islamic banks. The time period extends from 2006 - 2009. They conclude that Islamic banks outperform conventional banks in terms of return on average assets and liquidity whereas conventional banks perform better in terms of capital ratio, leverage and return on average equity. The overall four year performance of Islamic banks is found to be better than conventional banks. Almanaseer (2014) use data from 24 Islamic banks of GCC countries over the period 2005 - 2012. The study concludes that crisis does not have a significant impact on profitability of the Islamic banks and the size of bank along with equity capital are important factors impacting the profitability of any bank type. Islamic banks are largely equity sponsored and have comparatively more liquid assets which are key helpers in crisis survival. Hassan & Dridi (IMF study, 2010) also conclude superior performance of Islamic banks in terms of profitability and asset growth compared to conventional banks.

Although most of studies performed on GCC region conclude superiority of Islamic system but Abdalla Salih (2018) concludes that conventional banks outperform Islamic banks in terms of efficiency & ROA. He performs ratio comparison between 33 Islamic and 48 conventional banks of GCC from 2006 - 2012. A recent literature on GCC provided by Hussain et al. (2019) also concludes that performance of Islamic banks is significantly influenced during the crisis period. While comparing 30 banks from 2005 – 2011, the study finds that capital adequacy, financial risk and operational efficiency have a positive relationship with profitability whereas credit risk has negative relationship. Tabash et al. (2023) also report negative impact of crisis upon ROA and ROE of Islamic banks.

The Kingdom of Saudi Arabia is an important participant of the GCC. Tabash & Dhankar (2014) study impact of 2008's crisis on the stability of Islamic banks in the KSA. The researchers using ratio analysis performed on full-fledged Islamic banks from 2005 - 2010 divide the total time period into before-crisis, crisis and after crisis sub-periods. The study finds that there is no statistically significant difference in ratios of all three sub time-periods indicating the crisis has no impact on the stability of Islamic banks and they perform well in crisis too.

Kaouther et al. (2011) perform ratio analysis upon 50 Islamic and 59 conventional banks from 18 countries in the period 2004 - 2009. The study concludes that Islamic banks have more shareholder capital whereas conventional banks use more debt for their functioning. Thus, Islamic banks have low debt to equity ratio. In addition, Islamic banks have comparatively higher ROA and lower debt to asset ratio. The lower leverage of Islamic banks helps them surviving the crisis. Mobeen et al. (2011) also conclude that leverage ratio increases for both systems but the increase in case of Islamic banks is small, indicating less debt presence in their capital structure. The study concludes that net profit increases for Islamic banks whereas it decreases for conventional system during the crisis. The findings of Rashwan (2010) also support the hypothesis that Islamic banks perform well compared to conventional banks before crisis. The study compares both banking systems from 2007 - 2009 and concludes that during the crisis there is no difference among both bank type's performance, the returns of both types decline but after the crisis conventional systems outperform the Islamic banks.

Omar (2017) states that Malaysia is the hub of Islamic banking. Abdulle & Kassim (2012) compares 6 Islamic and 9 conventional banks from Malaysia. By comparing before, during and after crisis ratios, the authors conclude that Islamic banks hold more liquid assets and are less likely to suffer from liquidity risk. Also, during a crisis both banking systems are impacted in a similar manner in terms of profitability and credit risk but the Islamic system performs slightly better than conventional system. The results are supported by an empirical study of Aktas et al. (2013) performed on the Turkish market using trend analysis for conventional and Islamic banks from 2006 - 2011. The study concludes that Islamic banks are more stable in terms of profitability, capital adequacy and liquidity.

In Pakistan's context, Sehrish et al. (2012) compare financial performance of conventional and Islamic banks from 2007 - 2011 and concludes that Islamic banks are more safe in terms of liquidity but less efficient in terms of expense management. The findings are supported by research studies of Siddiqui (2008) and Khan et al. (2016). In contrast, Abbas, Azid & Besar (2016) find the performance of Islamic banks to be low comparatively.

Most of the studies show that Islamic banks outperform conventional banks in usual market conditions as well as during a crisis. Different researchers attribute different reasons behind this result. While some researchers acknowledge the fact that Islamic banking products are more just and promote real business activities and trade, other researchers attribute the growth of Islamic banks to the phase of their business cycle as Islamic banking industry is in its growth phase. This study uses Tabash & Dhankar (2014)'s model on the Islamic banks of the Pakistan to determine the impact of global financial crisis. The study focuses on Islamic banks only, unlike other studies, and compares them through trend analysis, which helps in capturing the true performance of IBs. The study adds to the financial literature the results from a wider time period using trend analysis with ANOVA testing to understand the crisis's impact, and it is a unique methodology to Pakistan's Islamic banking industry. The total time period is divided into pre-crisis, crisis and post-crisis time periods. Also, the post crisis time is divided into further periods of 3 years each and comparing impact of crisis individually with each sub period adds to the existing financial literature.

The null hypothesis in ANOVA testing is that there is no significant difference between the means of all groups under consideration. Referring to our study, the null hypothesizes state that ratios of three sub-periods, pre-crisis, crisis and post-crisis are not statistically different. The alternate hypothesis here is that the ratios declined during crisis compared to pre & post crisis ratios. The null hypothesis are:

H 1: The Return on Asset ratio of Islamic banks is significantly same in all sub-periods

H 2: The Return on Equity ratio of Islamic banks is significantly same in all sub-periods

H 3: The Profit Margin of Islamic banks is significantly same in all sub-periods

H 4: The Operating Expense ratio of Islamic banks is significantly same in all sub-periods

H 5: The Asset Turnover ratio of Islamic banks is significantly same in all sub-periods

H 6: The Non-performing Loans ratio of Islamic banks is significantly same in all sub-periods

H 7: The Capital Adequacy ratio of Islamic banks is significantly same in all sub-periods

H 8: The Leverage ratio of Islamic banks is significantly same in all sub-periods

H 9: The Current Assets ratio of Islamic banks is significantly same in all sub-periods

H 10: The Cash to Deposits ratio of Islamic banks is significantly same in all sub-periods

H 11: The Loans to Deposits ratio of Islamic banks is significantly same in all sub-periods

H 12: The Write-off ratio of Islamic banks is significantly same in all sub-periods

H 13: The Stock Returns of Islamic banks are significantly same in all sub-periods

H 14: The Earnings per Share of Islamic banks is significantly same in all sub-periods

3 CONCEPTUAL FRAMEWORK

KPIs Before Crisis		KPIs During Crisis		KPIs After Crisis
Profitability Ratios Return on asset Return on equity Profit margin		**Profitability Ratios** Return on asset Return on equity Profit margin		**Profitability Ratios** Return on asset Return on equity Profit margin
Efficiency Ratios Operating expense ratio Asset turnover	=	**Efficiency Ratios** Operating expense ratio Asset turnover	=	**Efficiency Ratios** Operating expense ratio Asset turnover
Risk Indicators Non-performing ratio Capital adequacy Leverage		**Risk Indicators** Non-performing ratio Capital adequacy Leverage		**Risk Indicators** Non-performing ratio Capital adequacy Leverage
Liquidity Ratios Current assets ratio Cash to deposit ratio		**Liquidity Ratios** Current assets ratio Cash to deposit ratio		**Liquidity Ratios** Current assets ratio Cash to deposit ratio

Asset Quality Ratio Loans to deposit Write-off ratio	**Asset Quality Ratio** Loans to deposit Write-off ratio	**Asset Quality Ratio** Loans to deposit Write-off ratio
Return Analysis Price return Earnings per share	**Return Analysis** Price return Earnings per share	**Return Analysis** Price return Earnings per share

4 RESEARCH METHODOLOGY

This empirical research studies the impact of financial crisis of 2008 on Islamic banks of Pakistan.

4.1 Population, Sample & Time Period

The selected sample consists of all full-fledged Islamic banks of Pakistan from target population of all Islamic banks of the country. The window model based banks and Islamic subsidiaries of conventional banks are omitted from the analysis to capture the impact of crisis on banks operating on purely Islamic Sharia'ah principles. The data source is annual financial reports from websites of the respective banks. The time period extends from 2005 – 2020. This is further divided into three sub-periods i.e. pre crisis 2005 – 2006, crisis 2007 – 2009 and post crisis 2010 – 2020. The post crisis time period is further divided into four periods named as post crisis 2010 – 2012, 3-years post crisis 2013 – 2015, 6-years post crisis 2016 – 18 and COVID period 2019 – 2020.

4.2 Concept, Construct & Variables

The concept here is to measure performance of banks, which is constructed into ratio and return analysis. The variables from ratio and return analysis are described in TABLE 1.

4.3 Data & Model

Tabash & Dhankar (2014) applied ANOVA on ratios of three different time periods consisting of pre-crisis, crisis and post-crisis while calculating impact on the Islamic banks of KSA. Replicating the same model on the Islamic banks of Pakistan will help in determining the crisis's impact. The websites of banks are helpful as all financial data is available in standard format in the form of financial statements. As a first step, the ratios are calculated for sampled banks using MS-EXCEL. Secondly, SPSS software is used for hypothesis testing. The test applied here is One Way Analysis of Variance, ANOVA. This statistical method helps in comparing means of more than two groups. In simple words, this test will identify whether the three sub-periods (pre-crisis, crisis, post-crisis) vary according to their mean values. Thirdly, the different post-crisis periods are compared to the crisis period using SPSS independent samples t-test. This will help in comparing the crisis ratios to the different non-crisis period ratios. The ratios calculated include profitability, efficiency, risk management, asset quality and liquidity ratios. The return analysis includes stock price returns and earnings per share. The variables are discussed in TABLE 1 along with their formulas.

TABLE 1: *Variables and their characteristics*

Ratio Group	Proxy	Abbreviation Used	Operational Definition	Reference Model
Profitability Ratios	Return on assets	ROA	$\frac{net\ profit}{total\ assets}$	Tlemsani & Suwaidi, 2016
	Return on equity	ROE	$\frac{net\ profit}{total\ equity}$	Tlemsani & Suwaidi, 2016
	Profit Margin	PM	$\frac{net\ income}{revenue}$	Zehri et al, 2012
Efficiency Ratios	Operating expense ratio	OER	$\frac{total\ operating\ expense}{total\ revenue}$	Parashar & Venkatesh, 2010
	Asset turnover	ATO	$\frac{net\ sales}{total\ assets}$	Zehri et al, 2012
Risk Indicators	Non-performing loans	NPL	$\frac{non-performing\ loans}{total\ loans}$	Abdulle & Kassim, 2012
	Capital adequacy	CAR	$\frac{capital\ tier\ 1 + capital\ tie}{risk\ weighted\ assets}$	Parashar &

				Venkatesh, 2010
	Leverage	TLE	$\frac{total\ liability}{total\ equity}$	Zehri et al, 2012
Liquidity Ratios	Current assets ratio	CTA	$\frac{current\ assets}{current\ liabilities}$	Abdulle & Kassim, 2012
	Cash to deposits	CTD	$\frac{cash}{total\ customer\ deposits}$	Tabash & Dhankar, 2014
Asset Quality Ratios	Loans to deposits	LTD	$\frac{loans\ and\ advances}{customer\ deposits}$	Tlemsani & Suwaidi, 2016
	Write-off ratio	WRT	$\frac{write-offs\ during\ year}{total\ loans}$	Abdulle & Kassim, 2012
Return Analysis	Price return	Ret	$\frac{ending\ price\ -\ begining\ price}{begining\ price}$	Jawadi et al, 2014
	Earnings per share	EPS	$\frac{net\ income}{no.\ of\ outstanding\ shares}$	Tlemsani & Suwaidi, 2016

5 ANALYSIS AND DISCUSSION OF ANOVA RESULTS

The ANOVA is applied on three periods i.e. pre-crisis 2005 – 06, crisis 2007 – 09 and post crisis 2010 – 20. The results are discussed below:

5.1 Profitability Ratios

Profitability is usually considered the first measure of performance for any institution. It indicates how efficiently the bank is using its assets to generate income. The analysis shows that Islamic banks maintained their profitability during crisis. The profitability ratios are significantly same in all sub-periods. The finding is consistent with Toumi et al. (2008) and Parashar & Venkatesh (2010).

5.1.1 *Return on Assets*:

This ratio is an important profitability measure as it compares returns generated from bank's assets. The higher the ROA, the better is the asset utilization and greater bank's profitability. The ANOVA test returns a significance value of 0.145 which implies that null hypothesis of equality of means in all sub-periods is supported. The crisis of 2008 has no impact on Islamic banks in terms of ROA.

5.1.2 Return on Equity:

This ratio compares returns generated using bank's equity. The higher the ROE, the higher is the shareholder value and bank's efficiency. The ANOVA application shows a significance value of 0.228 and the null hypothesis of equality of means is supported. The crisis fails to impact ROE of Islamic banks.

5.1.3 Profit Margin:

The banks strive hard to earn profits. The higher the PM, the more profitable the bank is. The ANOVA test's significance value is 0.136, resulting in support of null hypothesis, implying that the crisis has no impact on profit margins of IBs.

5.2 Efficiency Ratios

As the name implies, these ratios measure how efficient the banks are in managing their operations. The analysis shows that efficiency ratios are significantly same in all sub-periods. The crisis has no impact on the efficiency of Islamic banks. Samad (2021) also concludes that IB's loan and deposit efficiencies are not impacted by the crisis in case of Malaysia.

5.2.1 Operating Expense Ratio:

It is a benchmark ratio of a bank's efficiency as it compares cost to the generated income. The higher OER indicates less efficient banking operations. The ANOVA application shows a significance value of 0.090 and the null hypothesis is accepted at 5% alpha, implying that OER is the same in all sub-periods.

5.2.2 Asset Turnover:

The ratio indicates how efficiently bank uses its assets to generate sales, which are loans and advances in a bank's case. The higher ATO indicates efficient asset use. The ANOVA application returns a significance value of 0.788, supporting null hypothesis and negating any impact of crisis on IBs in terms of ATO.

5.3 Risk Indicators

The failure of institutions in managing risk is considered to be the main cause of the 2008's crisis (Khan et al., 2016). The analysis of risk ratios show that Islamic banks became more risky in crisis as the ratios are not significantly same in all sub-periods. Parashar & Venkatash (2010) also conclude that Islamic bank's capital ratio and leverage is impacted negatively during a crisis.

5.3.1 Non-Performing Loans:

A higher non-performing ratio indicates greater liquidity risk (Hanif, 2012). The ANOVA test shows a significance value of 0.007 and the null hypothesis is not supported. The crisis of 2008 impacted the non-performing loans of IBs. The higher NPL in crisis shows borrowers defaulted on their loan contracts.

5.3.2 Capital Adequacy Ratio:

It is an important ratio in banking industry as it represents safety and soundness of a bank in crisis (Estrella, Park & Presitiani, 2000). This ratio compares the total capital required to be held against risk weighted assets of the bank. This ratio implies that banks should have sufficient capital to cover its risky assets as banks hold a lot of liabilities. The ANOVA test returns a significance value of 0.00 which shows no support to null hypothesis and concludes that crisis impacted the CAR of Islamic banks. The CAR declines in crisis period making banks risky.

5.3.3 Leverage:

This ratio represents the capital structure of the banks and compares debt and equity. Acharya, Mehran & Thakor (2010) claims that banks with higher levels of capital can withstand a crisis. The ANOVA application shows a significance value of 0.00 which means the leverage of banks is impacted during the crisis.

5.4 Liquidity Ratios

Liquidity plays an important role in determining the sustainability of banks. It refers to how quickly a bank can convert its assets into cash to meet the withdrawal demands of its depositors. The banks holding more liquid assets are better able to survive. Islamic banks are considered to be highly liquid as they cannot invest in interest bearing short term investments, they hold more cash at hand to meet their short term obligations. The analysis shows that crisis has an impact on liquidity as ratios in all sub periods are significantly different.

5.4.1 Current Assets Ratio:

This ratio compares the amount of liquid assets a bank owns against its short-term liabilities. The ANOVA shows significance value of 0.00 which implies crisis impact on Islamic banks in terms of CTA. The ratio declines during crisis representing an increase in current liabilities and a decrease in current assets.

5.4.2 Cash to Deposits Ratio:

This is a deposit run-off ratio and indicates what percentage of customer fund withdrawal requests be met in case of a liquidity crunch. The ANOVA application shows a significance value of 0.00 which shows that null hypothesis of equality of means of all sub-periods is not supported. The crisis has an impact on CTD of Islamic banks.

5.5 Asset Quality Ratios

The assets of banks are usually loans advanced to its borrowers. The ability to get interest and principal back refers to asset quality. The analysis shows asset quality of Islamic banks declined in terms of loans to deposit ratio, whereas the write-off ratio shows no impact of the crisis.

5.5.1 Loans to Deposits Ratio:

The banks operate on loans and deposits. The ratio comparing both is important and ANOVA application returns a significance value of 0.036 and the null hypothesis is not supported, showing the crisis has an impact on the LTD ratio. The ratio declines during the crisis because the deposits increase rapidly with a relatively lower increase in loans.

5.5.2 Write-Off Ratio:

The write-off ratio represents bad debts which the banks write-off from their books. The ANOVA test shows a significance value of 0.163, supporting the null hypothesis of equality of means of all sub-periods. The crisis has no impact on the write-off ratio of banks.

5.6 Return Analysis

Returns are particularly important for investors while making an investment decision. The analysis shows that stock returns and earnings per share of Islamic banks during crisis are consistent with pre and post crisis values. The market performance of banks is significantly same in all sub-periods. This claim of statistically unchanged stock price returns during crisis is supported by the study by Muhammad Daniyal et al. (2022).

5.6.1 Price Return:

The price return shows yearly return on the stock price of the banks. The ANOVA results show significance value of 0.550 and the null hypothesis is supported. The crisis of 2008 has no impact on returns of banks and the market performance of Islamic banks is significantly same in all sub periods.

5.6.2 Earnings Per Share:

It is another important ratio which investors look for while making investment decisions. The ANOVA test returns a significance value of 0.067. The null hypothesis of equality of means of all sub-groups is supported, which shows that the crisis failed to impact the EPS of IBs.

TABLE 2: *ANOVA Test Results*

Ratio	**F – Value**	**Significance Value**	**Null Hypothesis**	**Impact of crisis**
ROA	1.989	0.145	Supported	Absent
ROE	1.514	0.228	Supported	Absent
PM	2.060	0.136	Supported	Absent
OER	2.498	0.090	Supported	Absent
ATO	0.239	0.788	Supported	Absent
NPL	5.287	0.007	Not Supported	Present
CAR	12.607	0.000	Not Supported	Present
TLE	17.201	0.000	Not Supported	Present
CTA	40.168	0.000	Not Supported	Present

CTD	44.143	0.000	Not Supported	Present
LTD	3.517	0.036	Not Supported	Present
WRL	1.868	0.163	Supported	Absent
Ret	0.606	0.550	Supported	Absent
EPS	2.8250	0.067	Supported	Absent

6 ANALYSIS AND DISCUSSION OF T-TEST RESULTS

Different t-tests are executed between sub groups to analyze the performance of banks. The results are:

6.1 Pre-Crisis and Crisis

The pre-crisis is 2005 – 06 and crisis is 2007 – 09. All the ratios between both periods are statistically same except CTA. The current assets ratio declined during crisis because of increase in current liabilities. The impact of crisis is very limited.

6.2 Crisis and Post-Crisis

The crisis is 2007 – 09 whereas post crisis here means 2010 – 12. All ratios are significantly same except CAR and WRL. The capital adequacy ratio declines in post crisis period (except for Meezan Bank) because risk weighted assets increase with a decrease in capital due to crisis. Similarly, the write-off ratio increases post crisis as an after effect of the crisis. This shows banks were safe during crisis but vulnerable after that.

6.3 Crisis and 3 Years Post Crisis

The crisis is 2007 – 09 and the other period is from 2013 – 15. All ratios are significantly same except CAR and Ret. The capital adequacy ratio is lower in the period 2013 – 15 as compared to the crisis period. This shows that banks were prudent during crisis and maintained higher CAR to combat crisis. The return increases in 2013 – 15 compared to crisis showing growth of banks in terms of share price.

6.4 Crisis and 6 Years Post Crisis

The crisis is 2007 – 09 whereas the other period is 2016 – 18. All ratios are significantly same except ROA, PM, CTA, CAR and Ret. The return on assets, profit margin and returns increase in 2016 – 18 showing positive growth for banks, whereas the capital adequacy ratio and current assets ratio declines in 2016 – 18. The rapid increase in current liabilities causes the decline in CTA.

6.5 Crisis and Covid

The crisis period is 2007 – 09 whereas the COVID period is 2019 – 20. All ratios are same except ROA, PM, OER, CAR, WRL and Ret. The return on assets, profit margin and returns increase in 2019 - 20 whereas OER declines, showing efficient operations of banks. The CAR declines and WRL increases, showing higher risk of Islamic banks with higher growth in the COVID period.

6.6 3- and 6-Years Post Crisis

The periods being compared are 2013 – 15 and 2016 – 18. All ratios in these periods are same indicating consistent performance of Islamic banks over years.

6.7 6 Years Post Crisis and Covid

The periods under comparison are 2016 – 18 and 2019 – 20. The ratios are statistically same except PM, WRL and EPS. This shows that higher write-offs during COVID is impacting profit margin negatively. Same results are obtained when 2016 – 18 period is compared with 2020 only. This shows the impact of COVID on Islamic banks is limited.

TABLE 3: *T – Test Results*

Ratio	2005-06 2007-09	2007-09 2010-12	2007-09 2013-15	2007-09 2016-18	2007-09 2019-20	2013-15 2016-18	2016-18 COVID	2016-18 2020
ROA	0.353	0.557	0.112	0.007*	0.035*	0.267	0.748	0.501
ROE	0.469	0.493	0.713	0.705	0.556	0.929	0.713	0.698
PM	0.063	0.817	0.088	0.038*	0.013*	0.881	0.045*	0.030*

OER	0.351	0.161	0.082	0.068	0.003*	0.810	0.156	0.333
ATO	0.956	0.938	0.370	0.156	0.532	0.598	0.053	0.081
CTA	0.039*	0.153	0.096	0.031*	0.112	0.484	0.717	0.454
CTD	0.577	0.306	0.208	0.082	0.257	0.533	0.601	0.503
CAR	0.284	0.010*	0.000*	0.000*	0.000*	0.499	0.647	0.760
TLE	0.622	0.692	0.824	0.907	0.713	0.729	0.618	0.772
NPL	0.102	0.144	0.593	0.085	0.316	0.236	0.320	0.311
LTD	0.812	0.297	0.872	0.211	0.722	0.092	0.206	0.178
WRL	0.121	0.032*	0.875	0.817	0.000*	0.960	0.000*	0.000*
Ret	0.283	0.487	0.003*	0.001*	0.000*	0.085	0.201	0.280
EPS	0.856	0.428	0.626	0.705	0.066	0.147	0.039*	0.030*

* shows null hypothesis of equality is not supported

The better performance of Islamic banks may also be attributed to their foundation. As their no-interest linkage is not related to the global financial sector (Ali, 2008).

7 CONCLUSION

Islamic financial institutions are very essential for Muslim banking users as they provide them with *Halal* (permissible) investment opportunities. The *Riba* (interest) is strictly prohibited by Allah SWT. Islamic banks operate on profit and loss sharing instead of interest. The financial crisis of 2008 has a devastating impact on many conventional institutions. The impact of the event on Islamic institutions is an area under extensive research as Islamic banking faced its first major crisis and most of the researchers conclude that Islamic banking performs better than conventional banking in terms of profitability, efficiency, liquidity and risk management. The researchers also conclude that introducing the Islamic financial system as an alternative to the conventional system will help in overcoming chances of facing a financial crisis again (Megha, 2008; Shapra, 2008; Shahid 2009; Tlemsani & Suwaidi, 2016; Farooq & Zaheer, 2015).

This study adds to the literature the impact of crisis on Islamic banks of Pakistan. The trend analysis and ANOVA application on ratios of three sub-periods including pre-crisis (2005 – 2006), crisis (2007 – 2009) and post crisis (2010 – 2020) shows mixed results related to crisis impact on banks. The profitability (ROA, ROE, PM), efficiency (OER, ATO) and returns along with EPS remain significantly same during crisis and pre post crisis. The impact of crisis is found on risk indicators (NPL, CAR, TLE) and liquidity (CTA, CTD) as the ratios are significantly different in all sub periods. This can be attributed to the fact that most of the Islamic banks in Pakistan started operating just before the crisis and they were not very stable. The asset quality shows mixed result as WRL remains same whereas the LTD ratio differs significantly in all periods.

The t-tests are executed on different sub periods from 2005 – 2020 to analyze performance of banks and this indicates that CAR was declining gradually, but now it shows upward trend in the COVID period which implies that banks are prudent and increased their CAR to combat pandemic crisis. Profitability measures, such as ROA and ROE, are improving, whereas the profit margins are diminishing due to higher write-offs during pandemic.

The findings of this research paper will help bank authorities and policymakers in making future decisions as they should focus more on CAR and WRL. It is to be added here that the sample size of this study is small, although it covers all the Islamic banks of Pakistan.

For future research, the sample size may be extended to add more countries in the analysis. This will be particularly helpful as it will highlight the country-wise impact pattern of crisis on Islamic banks.

REFERENCES

Abbas, M., Azid, T., & Hj Besar, M. H. A. (2016). Efficiency, effectiveness and performance profile of Islamic and conventional banks in Pakistan. *Humanomics, 32*(1), 2–18. https://doi.org/10.1108/h-09-2015-0058

Aktaş, M. (2013). Stability of the Participation Banking Sector Against the Economic Crisis in Turkey. *International Journal of Economics and Financial Issues, 3*(1), 180–190. https://www.econjournals.com/index.php/ijefi/article/view/367

Ali, A. (2008). The impact of financial crisis on Pakistani economy. *Strategic Studies, 28/29*, 106–117. https://www.jstor.org/stable/48527696

Almanaseer, M. (2014). The Impact of the Financial Crisis on the Islamic Banks Profitability - Evidence from GCC. *International Journal of Financial Research, 5*(3). https://doi.org/10.5430/ijfr.v5n3p176

AZZAM, A., & RETTAB, B. (2020). COMPARATIVE TFP GROWTH BETWEEN GCC CONVENTIONAL AND ISLAMIC BANKS BEFORE AND AFTER THE 2008 FINANCIAL CRISIS. *The Singapore Economic Review*, 1–20. https://doi.org/10.1142/s0217590820420047

Benamraoui, A. (2008). Islamic banking: the case of Algeria. *International Journal of Islamic and Middle Eastern Finance and Management*, *1*(2), 113–131. https://doi.org/10.1108/17538390810880973

Dr. Mustafa Khattab. *Surah Al-Baqarah - 274-286*. Quran.com. Retrieved January 16, 2024, from https://www.quran.com/2/274-286

Farooq, M., & Zaheer, S. (2015). *Are Islamic Banks More Resilient during Financial Panics?; by Moazzam Farooq and Sajjad Zaheer; IMF Working Paper No. 15/41; February 1, 2015*. https://www.imf.org/external/pubs/ft/wp/2015/wp1541.pdf

Grassa, R., Sarea, A., El-Halaby, S., & Damak, A. N. (2022). BETWEEN TWO CRISES: DO ISLAMIC BANKS SUFFER? *Journal of Islamic Monetary Economics and Finance*, *8*(2), 251–274. https://doi.org/10.21098/jimf.v8i2.1475

Hamedian, B. (2013). *Financial Performance of Islamic Banks vs. Conventional Banks:The Case of Malaysia*. http://i-rep.emu.edu.tr:8080/xmlui/bitstream/handle/11129/639/Hamedian.pdf?sequence=1

Hasan, M. M., & Dridi, J. (2010, September 1). *The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study*. Papers.ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1750689

Jawadi, F., Jawadi, N., & Louhichi, W. (2014). Conventional and Islamic stock price performance: An empirical investigation. *International Economics*, *137*, 73–87. https://ideas.repec.org/a/cii/cepiie/2014-q1-137-5.html

Kaouther, T., Viviani, J.-L., & Belkacem, L. (2011). A Comparison of Leverage and Profitability of Islamic and Conventional Banks. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1836871

Khan, I., Khan, M., & Tahir, M. (2017). Performance comparison of Islamic and conventional banks: empirical evidence from Pakistan. *International Journal of Islamic and Middle Eastern Finance and Management*, *10*(3), 419–433. https://doi.org/10.1108/imefm-05-2016-0077

Loghod, H. A. (2008). *Do Islamic Banks Perform Better than Conventional Banks? Evidence from Gulf Cooperation Council countries*. RePEc - Econpapers. https://econpapers.repec.org/paper/apiapiwps/1011.htm

Mirzaei, A., Saad, M., & Emrouznejad, A. (2022). Bank stock performance during the COVID-19 crisis: does efficiency explain why Islamic banks fared relatively better? *Annals of Operations Research*. https://doi.org/10.1007/s10479-022-04600-y

M K Hassan, A H M Bashir Determinants of Islamic banking profitability10th ERF Annual Conference , p. 16 - 18 Posted: 2003-12

Muhammad Daniyal, Rahimi, H., & Hafiza Ayesha Iftikhar. (2022). Impact of Global Financial Crisis on Islamic Banks of Pakistan. *Audit and Accounting Review*, *2*(1), 48–91. https://doi.org/10.32350/aar.21.03

Parashar, Sat & Venkatesh, Jyothi. (2010). How Did Islamic Banks Do During Global Financial Crisis?. Banks and Bank Systems. 5. 54-62.

Qian Long Kweh, Lu, W., Tone, K., & Liu, H.-M. (2024). Evaluating the resource management and profitability efficiencies of US commercial banks from a dynamic network perspective. *Financial Innovation*, *10*(1). https://doi.org/10.1186/s40854-023-00531-0

Rashwan, M. H. (2010). A Comparison between Islamic and Traditional Banks: Pre and Post the 2008 Financial Crisis. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1724451

Rasiah, D.. (2010). Theoretical framework of profitability as applied to commercial banks in Malaysia. European Journal of Economics, Finance and Administrative Sciences. 74-97.

Salih, A., Ghecham, M. A., & Al-Barghouthi, S. (2019). The impact of global financial crisis on conventional and Islamic banks in the GCC countries. *International Journal of Finance & Economics*, *24*(3), 1225–1237. https://ideas.repec.org/a/wly/ijfiec/v24y2019i3p1225-1237.html

Samad, A. (2021). Global Financial Crisis and Islamic Bank Efficiency: Are Efficiencies Stable or Impacted? Evidence From Malaysian Islamic Banks. *Journal of Accounting & Finance (2158-3625)*, *21*(2).

Sehrish, S., Saleem, F., Yasir, M., Shehzad, F., & Ahmed, K. (2012). Financial performance analysis of Islamic banks and conventional banks in Pakistan: A comparative study. *Interdisciplinary Journal of Contemporary Research in Business*, *4*(5), 186–200. https://research-portal.uea.ac.uk/en/publications/financial-performance-analysis-of-islamic-banks-and-conventional-

Shafique, A., Faheem, M. A., & Abdullah, I. (2012). Impact of Global Financial Crises on the Islamic Banking System : Analysis of Islamic Financial System During Financial Crunch 2008. *Oman Chapter of Arabian Journal of Business and Management Review*, *1*(9), 124–134. https://doi.org/10.12816/0002166

Shafique, Azam, Muhammad Asim Faheem, and Iqra Abdullah. "Liquidity and Risk Analysis of Islamic Banking System during Global Financial Crises: Liquidity and Risk Analysis of Islamic Financial System during Financial Crunch 2008." *Kuwait Chapter of the Arabian Journal of Business and Management Review* 1, no. 8 (2012): 87.

Tabash, M. I., Alnahhal, M., & Bagheri, N. (2023). Islamic financial institutions performance pre- and post-global financial crisis 2007/2008: empirical insights from Gulf Cooperation Council. *International Journal of Business and Systems Research*, *17*(1), 27–27. https://doi.org/10.1504/ijbsr.2023.127710

Tabash, M. I., & Dhankar, R. S. (2014). The Impact of Global Financial Crisis on the Stability of Islamic Banks: An Empirical Evidence. *Online) Journal of*

Islamic Banking and Finance, *2*(21), 367–388. http://jibfnet.com/journals/jibf/Vol_2_No_1_March_2014/21.pdf

Tlemsani, I., & Suwaidi, H. A. (2016). Comparative Analysis of Islamic and Conventional Banks in the UAE During the Financial Crisis. *Asian Economic and Financial Review*, *6*(6), 298–309. https://econpapers.repec.org/article/asiaeafrj/v_3a6_3ay_3a2016_3ai_3a6_3ap_3a298-309_3aid_3a1486.htm

Yusuf Abdulle, M., & Kassim, S. (2012). *Impact of Global Financial Crisis on the Performance of Islamic and Conventional Banks: Empirical Evidence from Malaysia*. https://ibtra.com/pdf/journal/v8_n4_article1.pdf

Zehri, Chokri & Abdelbaki, Asma & Najla, Bouabdellah. (2012). Effects of the current financial crisis on Islamic banks compared to conventional banks. Banks and Bank Systems. 7. 83-93.

UCP Journal of Business Perspectives
Vol. 1, Issue 2 (July - December 2023)
Journal website: http://ojs.ucp.edu.pk/index.php/jbp/index

Impact of conversion on deposits and operational cost of Faysal Bank: A case of Pakistan

Sumera Iqbal[1*]

ABSTRACT

Theme: The Islamic financial industry is showing remarkable growth and has earned the confidence of both investors and creditors. Conventional banks are converting their business into Islamic around the globe and Pakistan is much ahead in this regard since it has to convert all its conventional banking into Islamic. This study is about the comparisonof the performance of Faysal Bank before and during conversion, the largest conversion globally rated as 'first of its scale' by IIRA and AAOIFI.
Methodology: Using secondary data (2002-2022) from the annual reports of Faysal Bank t-test was performed, and a graphical analysis was done to compare the performance of the bank before and during the conversion process of the bank.
Findings: The Findings of the study are that the conversion affects deposits of the bank positively also, the bank is performing far better than before conversion.
Research limitations: This study focuses on deposits and operational costs of the bankbefore and during conversion. Many other factors can be studied alongside the strategies Faysal Bank adopted for this massive conversion.
Significance: The study will help to reveal the effect of conversion on a Bank's deposits and operational cost during conversion. Since this is the first full-fledged conversion of a Pakistani bank, so will be an addition to the existing literature on conversion.

Keywords: Operational cost, deposits, conversion.

1. INTRODUCTION

Conversion of conventional banks into Islamic banks is not a new thing in the world. The process is started with the Prophet Hood of the Holy Prophet Hazrat Muhammad SAW as Riba based financial system was rejected in the Holy Quran (Al Baqrah:278). This conversion process continues. It is not certain how much it will take to overcome the conventional system completely, but the world is observing a rapid conversion of conventional banks to Islamic Banks.

[1] MS Islamic Banking and Finance, Minhaj University Lahore.
[*] Corresponding author's E-mail: meraiqbal1914@gmail.com

1.1. Background of the Study

In Pakistan, Islamic banking is the talk of the town. In a conventional economic system like Pakistan, the emergence of Islamic banking is really amazing. There are many factors behind this rapid growth, e.g., interest-free halal products, customer satisfaction, and State Bank's policy to Islamize the banking sector till 2025. Along with Muslims, a number of non-Muslims are also found using Islamic banks. According to a report by the State Bank of Pakistan more than 300 Islamic financial institutions are working in almost 75 countries.

After the Supreme Court's historical judgment (19th December, 1999), a Commission was formed for the transformation of the financial system, and this commission emerged as a new approach to the Islamization of the financial sector in Pakistan. The establishment of full-fledged Islamic Banks, Islamic Banking subsidiaries of existing banks, and standalone branches for Islamic Banking were included in this approach. The ultimate purpose of this approach was to develop a parallel Islamic banking system that is Sharia-compliant and compatible with the existing conventional system.

1.2. Problem Statement

It is a general assumption about Islamic banking that it costs more as compared to conventional counterpart, which is true, but we have seen that higher management of banks also think that conversion can bring a set back to their deposits.

1.3. Research Question

Does conversion bring set back to bank deposits and increase the operational cost?

1.4. Research Objectives

1- To study the impact of conversion on deposits.
2- To identify the effect of conversion on operational cost.

1.5. Significance of the Study

This study will help to learn the effect of the conversion process on deposits and operational costs of Faysal Bank along with techniques and policies that helped Faysal Bank in a successful conversion and will be a guiding line for the bank planning conversion worldwide.

2. LITERATURE REVIEW

Many studies have been done over the years to reveal and investigate the pros and cons of conversion in the financial industry. Here are some more relevant studies regarding the conversionof conventional banks into Islamic banks.

The conversion process is based on the belief that there is a need to make the right change. There is always a religious and financial motivation behind conversion. Independent Sharia Supervisory Board should adhere to all the conditions mentionedby AAOIFI for successful conversion (Ahmed and Hussainey 2015).

Zulfiqar (Hasan 2016) explains the impact of the conversion on objectives, products, operating expenses, source of funds, and use of funds. The study mainly focuses on rules, regulations, processes, and effects of conversion.

A study states that the conversion process is based on the belief that there is a need to make theright change. There is always a religious and financial motivation behind conversion. Independent Sharia Supervisory Board should adhere to all the conditions mentioned by AAOIFI for successful conversion (Saaid. Zurina Shafii 2013).

A study highlights the problems faced by management during conversion. Lack of a comprehensive framework of conversion, human resources, Islamic financial products, andtechnical banking staff with sharia knowledge are some main issues. Also, this study suggests a gradual process of conversion (Shafii, Shahimi, and Saaid 2016).

Conversion to Islamic banks has a positive effect on the market share of the banks (Al Arif et al. 2023). The author used the penal regression technique with ROA, Operational Efficiency Ratio, and capital Adequacy ratio as independent variables. Market share was taken as a dependent variable. Conversion policy was taken as a dummy variable as 1 after conversion and 0 before conversion. The results showed that ACEH bank's share grew from 1% to 7% while NTB bank grew from 0.5% to 2% after conversion. The overall market share of the Islamic banking Industry grew from 5% to 6.7% after conversion by the end of 2021.

“Conversion of Conventional Bank into an Islamic bank: risks and challenges” by Nasir, H. (2021) is a study about the conversion of Faysal Bank. The findings of this study are that the bank faced a number of challenges during the conversion process from human resources to Islamic products/ operational strategies and financial issues.

A study (Awan 2009) utilized ratio analysis to compare Islamic and conventional banking in Pakistan. The author focused on a sample of six Islamic and six conventional banks of equal size operating in Pakistan between 2006 and 2008. Awan calculated various performance and profitability ratios, including ROA (Return on Assets), ROD (Return on Deposits), ROE (Return on Equity), EPS (Earnings per Share), Equity to Total Assets ratio, Debt to Asset ratio, Cash to Deposit ratio, among others. The results of the ratio analysis indicated that most of the profitability ratios for conventional banks were negative during the study period, implying low performance. Conversely, the profitability ratios calculated for Islamic banks showed superb consequences, indicating high returns for the banks and their shareholders.

Moreover, the assets of Islamic banks witnessed a significant growth of approximately 78% compared to a mere 57% in conventional banks' assets from 2006 to 2008. The marketplace proportion of Islamic banks expanded from 2.5% to 5%. Additionally, the ratio of non-performing loans in Islamic banks was notably decreased than that of conventional banks. Moreover, Islamic banks had greater provisions for bad debts as compared to their conventional counterparts.

The findings concluded that the general performance of Islamic banks was thatof conventional banks. The study also revealed that the outcomes achieved by Islamic banks were not a result of exploiting depositors or shareholders; in fact, Islamic banks supplied better returns to their investors than conventional banks. The price of finances for Islamic banks stood at 6.5% in comparison to 4.5% for conventional banks, as Islamic banks shared 50% of their profits on a Modarabah basis with depositors. Additionally, the volatility of profitability in Islamic banks turned lower than that in conventional banks in Pakistan. Collectively, all measures taken into consideration for Islamic banks verified fantastic results, leading the writer to suggest that Islamic banking could serve as an ultimate solution to the recent global financial crisis.

3. METHODOLOGY

To check the impact of the conversion on deposits and operational costs of the Faysal Bank, data was compared before and during the conversion in the form of a graph, and a pairedt-test was performed. A paired t-test is employed for comparing the means of two populations with two samples in which each observation in one sample is paired or matched with a corresponding observation in the other sample (Daya 2003).

4. DATA AND SAMPLING

Secondary data on deposits and operational costs was taken from the annual reportsof Faysal Bank from year 2002 to 2022.

5. HYPOTHESIS

H1: Conversion increased the operational cost of Faysal Bank.

$H1_o$: Conversion did not increase the operational cost of Faysal Bank.

H2: Conversion had a negative impact on deposits of Faysal Bank.

$H2_o$: Conversion did not have a negative impact on deposits of Faysal Bank.

6. RESULTS

Following are the results from the data collected from Faysal Bank's Annual reports(2002-2022).

6.1. Impact on Operational Cost:

The graph line shown in Fig 1 shows a continuous increase in the operational cost of the Faysal Bank. We can see that the upwards trend is not confined to the conversion years, i.e., 2016 to 2022; rather, it is continuous. However, we can see a greater increase during conversion years, proving our hypothesis that conversion increases the operational cost of the bank. So, through results it is proved that conversion to Islamic bank increases operational cost.

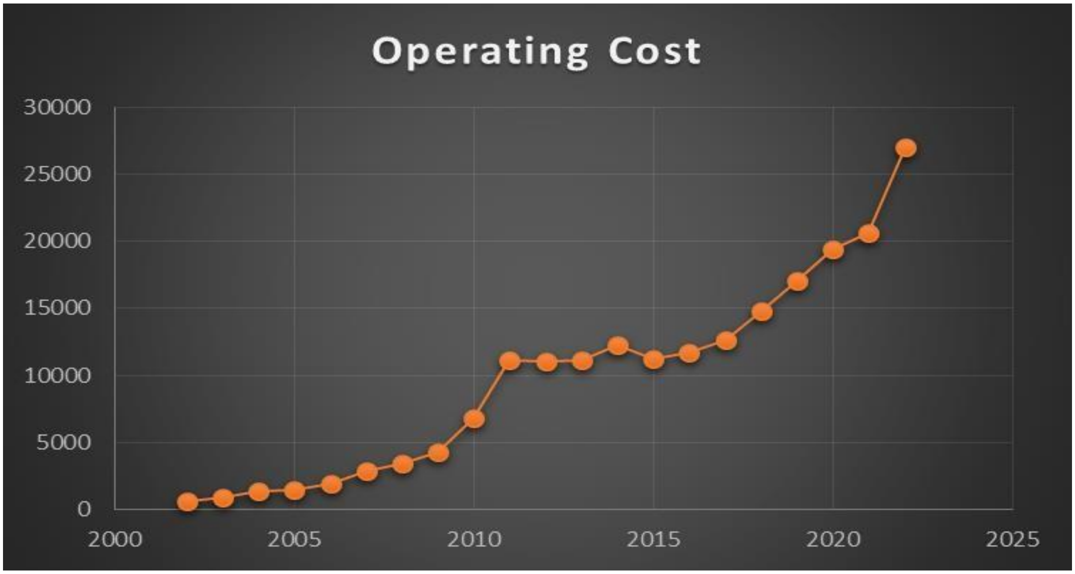

Figure 1: *Operational Cost of Faisal Bank*

6.2. Impact of Conversion on Deposits

The graph in Fig 2 shows a remarkable increase in the deposits of Faysal Bank during the period of conversion. Deposits are amazingly doubled from 2018 to 2022, and the trend shows the continuity of this growth. So, the results have rejected our accepted nullhypothesis H2, i.e., conversion did not have a negative impact on deposits. Contrary to this, conversion doubled the deposits for the bank, and Faysal Bank did not face a setback.

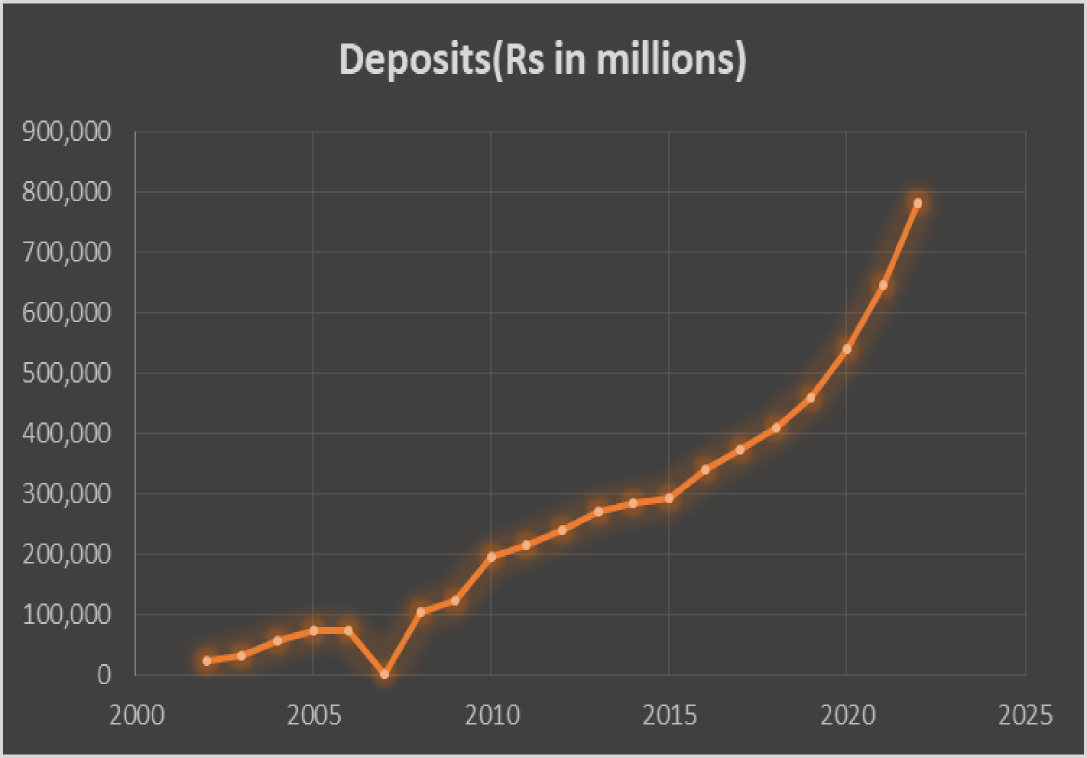

Figure 2: *Deposit trends*

6.3. t-Test Results

Paired two samples for means was done. A comparison was made between the databefore and during the conversion process, and the results are as under.

6.4. Operational Cost

The test shows insignificant p-values for the operational cost (table 1). It shows that conversion to an Islamic bank does not have a significant effect on the operational cost of thebank, rejecting the null hypothesis H1.

Table 1: *t-Test (operational Cost)*

t-Test: Paired Two Sample for Means		
	operating cost before conversion	*operating cost during conversion*
Mean	9683.857143	107940.4286
Variance	8700796.143	55915371344
Observations	7	7
Pearson Correlation	-0.796065857	
Hypothesized Mean Difference	0	
df	6	
t Stat	-1.088532695	
P(T<=t) one-tail	0.159069575	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.318139151	
t Critical two-tail	2.446911851	

6.5. Deposits

Significant p-value shows that conversion had a significant impact on the deposits, i.e., deposits increased during the conversion process (table: 2) Accepting the nullhypothesis, i.e., conversion did not have a negative impact on deposits.

Table 2: *t-Test (Deposits)*

t-Test: Paired Two Sample for Means		
	Deposits(Rs in millions) before conv	*Deposits(Rs in millions) during conversion*
Mean	231558.2857	506693.7143
Variance	3540439268	25497524326
Observations	7	7
Pearson Correlation	0.861382691	
Hypothesized Mean Difference	0	
df	6	
t Stat	-6.467152278	
P(T<=t) one-tail	0.000324271	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.000648542	
t Critical two-tail	2.446911851	

7. DISCUSSION

The above results show that conversion proved beneficial for Faysal Bank, and hence, their successful and fruitful conversion is an inspiration for other banks in Pakistan and across the world. Conversion is Faysal Bank is one of its kind because it is the largest conversion in the world with 600 plus branches. The increase in deposits is quite obvious from the results, showing the public's trust in Islamic banking, including Non- Muslims. Islamic banking is not only religiously satisfying, but it is also financially beneficial as compared to conventional banking (Ahmed and Hussainey 2015).

Although an increase in operational cost is seen for the bank, it was not because of Islamic banking; rather, it was because of the increasing assets. So the increase in the operational cost is not significant. Also, it was the best policy steps taken by the management of the Faysal Bank that decreased the cost and did not add to the expenses that caused trouble for the management.

8. CONCLUSION

To conclude, conversion is beneficial for the bank and not harmful. The study found that the conversion of a conventional bank can be successful without incurring significant costs. Also, the bank's growth and reputation improved after the conversion (increased deposits). With all the benefits of conversion to an Islamic bank, of course, there are also some challenges for the converting banks, e.g., new products, change of banking culture, need fortrained staff. However, we can see that the benefits of converting a conventional bank into an Islamic eoutweigh the challenges. Faysal Banks's example shows that banks planning for the total conversion must do it as soon as possible following Faysal Bank's strategies to get more profit and sustainability.

9. FUTURE RESEARCH

In the present study, we have discussed only two aspects, i.e., deposits and operational costs. Many other factors can be studied alongside the strategies Faysal Bank adopted for this massive conversion that is rated as 'first of its scale' globally by IIRA and AAOIFI.

REFERENCE:

Ahmed, Fatma, and Khaled Hussainey. 2015. "Conversion into Islamic Banks: Jurisprudence, Economic and AAOIFI Requirements." *EJIF - European Journal of Islamic Finance* 3:1–8.

Al Arif, Mohammad Nur Rianto, Dwi Nuraini Ihsan, Zulpawati, and Dede Abdul Fatah. 2023. "The Impact of Conversion on Market Share in Indonesian Islamic Banks." *Banks and Bank Systems* 18(2):1–12. doi: 10.21511/bbs.18(2).2023.01.

Awan, Abdul Ghafoor. 2009. "Comparison of Islamic and Conventional Banking in Pakistan." Pp. 1–36 in *Proceedings 2nd CBRC, Lahore, Pakistan*.

Daya, Salim. 2003. "Paired T-Test." *Evidence-Based Obstetrics and Gynecology* 5(3):105–6. doi: 10.1016/j.ebobgyn.2003.09.001.

Hasan, Zulfiqar. 2016. "Conversion of Conventional Banks into Islamic Banks: The

Case of Bangladesh." *International Journal of Ethics in Social Sciences* 4(1):2308–5096.

Saaid. Zurina Shafii. 2013. "The Obstacles Facing Conversion Process From Conventional Banks To Islamic Banking: A Review of Literature." *The 5th Islamic Economic Conference, Malaysia. 2013. "Sustainable Development Through The Islamic Economics Systemz"* (September):4–5.

Shafii, Zurina, Shahida Shahimi, and Adel Saaid. 2016. "Obstacles and Motivation behind Conversion of Conventional Banks to Islamic Banks: An Overview." *International Review of Management and Business Research* 5(3):1021–38.

UCP Journal of Business Perspectives
Vol. 1, Issue 2 (July - December 2023)
Journal website: http://ojs.ucp.edu.pk/index.php/jbp/index

Testing the Economic Theory of Crime in case of Pakistan

Tanveer Ahmad Shahid[1*], Mahwish Zafar[2], Amna Shafiq Minhas[3]

ABSTRACT

In Pakistan, one of the biggest issues is crime. It has an impact on the economy in addition to society. This study's primary goal is to evaluate the economic theory of crime as it applies to Pakistan. The foremost impartial of this study were to check the relation between inflation, political stability, and income inequality with crime rate of Pakistan while implying the economic theory of crime, but regression analysis and correlation are employed to verify the impact of socioeconomic status on criminal activity. For this purpose, regression analysis was conducted. The findings of this study reveal that factors are positively associated with the dependent variable. However, the outcome of income inequality and political stability shows a negative association with crime. For this study quantitative method has been used. Furthermore, from 2004 to 2021 The Pakistan Bureau of Statistics and other sources have provided secondary data. Additionally, E-views software was utilized to measure the instruments. This study gives evidence by testing the economic theory that people move toward crime to maximize their needs.

Keywords: Crime theory, Inflation, Income inequality, Political stability.

1. INTRODUCTION

One of the most important societal issues, crime negatively impacts adult socioeconomic position, child development, and public safety. Crimes are considered a major dynamic to restrict the healthy and settled society whereas it consents to the simulated of anxiety, insecurities, and mental upsets among the masses. Crimes have different numbers and definitions as well according to regions or areas with distinct times.

Moreover, a crime is depicting human adverse behavior with others, which the state is sure to stop. It reduces the distinctive individual responsible for punishment because of taking place initiated through the country structures allotted to decide the environment, the degree, and the lawful values of the individual’s unfairness. The economic theory of crime which was introduced by Nobel laureate Gray Becker in

[1] PhD Scholar at Department of Commerce and Economics, Superior University, Lahore.
[2] Faculty of Business and Management Sciences, Superior University Lahore
[3] Lahore School of Accountancy and Finance, University of Lahore, Pakistan
[*]Corresponding author’s E-mail: tanveershahid077@gmail.com

1968 states that potential criminals acknowledged drastically to the deterring incentives through the system of justice criminal. They evaluate the advantage of committing against the law with the tough concern that has been growing over the years. The number of murders, attempted murders, dacoities, robberies, burglaries, cattle thefts, sectarian deaths, terrorist attacks, and suicide explosions has increased over time, particularly in the last ten years. An increase in criminal activity has led to economic concern. This may have diminished the self-assurance of buyers in the economy. Increased crime rates could have had an impact on the economic boom. The current investigation tests the theory of crime in the case of Pakistan Time collection facts from 2004 to 2021 have been used for the analysis. Figure 1 indicates that crimes are increasing with the stream of time but on the other side economic growth also shows fluctuation with time.

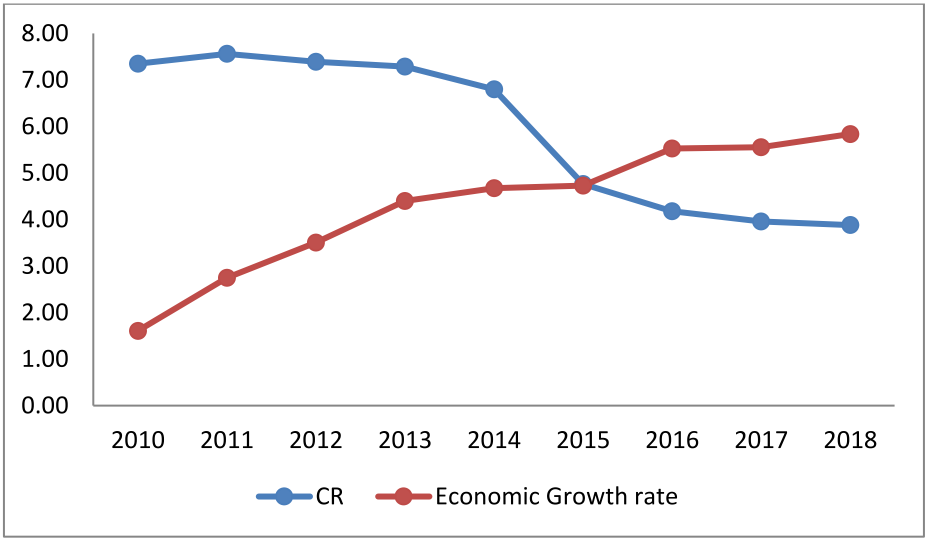

Figure 1: *Descriptive Data Analysis of Economic Growth VS Crime*

In Pakistan, crimes have various forms in which organized crime, illicit financial transactions, political unrest, terrorism, etc. Therefore, Pakistan has only a few studies that show the crime and economic variables. These figures display most effective the stated crimes; nonetheless, in Pakistan, between 30 and 50 percent of crimes may go undetected (Gillani & Rehman, 2009). Pakistan's overall crime rate is higher than last decade. Moreover,

Table 1: *Crime report Pakistan*

Offense	2017	2018	2019
Murder	8235	8241	8153
Attempt to Murder	9499	10067	10438
Kidnapping /Abduction	18363	20060	20256
Dacocity	1280	1414	1382

Robbery	12458	14914	18239
Burglary	13833	14646	16124
Cattle Theft	5342	6233	7793
Other Theft	37304	39418	55836
Others	577611	588488	648118
TOTAL RECORDED CRIME	683925	703481	786339

Source: (Pakistan Bureau of Statistics , 2021)**.** Pakistan is spending an excessive amount of cash on its protection and safety for that reason, those numbers are quite concerning for the authorities and safety groups. Security expenses and the rate of crime are growing at the same time. Therefore, the government adopted drastic measures to reduce crime. Even though Pakistan's crime rate has been trending downward over the past several months, it is still relatively high when compared to other nations in the region. The Pakistani crime rate within the 12 months of 2013 turned into 7.67%. This study tests the theory and the main aim of the economic theory of crime is to describe the country's social and economic outcomes of crimes. Many studies reveal different factors which influence the growth of crime. The main aim of this study is to test an economic theory of crime in Pakistan's crime scenario.

1.1. Crime Scenario in Pakistan:

According to Pakistan's crime statistics, the country has seen a sharp increase in crime over the years, similar to other countries worldwide. It might be the result of growing inflation, poverty rates, or high unemployment. A variety of other non-economic variables are also to blame. The impact of growing crime is not limited to the ignorant and corrupt aspects of society; some well-off, well-educated, and well-located people are also involved in crime.

They are competing to amass fortune using shady methods. Additionally, these individuals have the resources to take advantage of legal gaps to commit crimes in Pakistan. In addition, the vast majority of individuals in the nation who have little resources available to them to meet their basic needs are also involved in criminal activity. Pakistan's crime statistics demonstrate the nation's poor performance in the areas of economics, society, culture, technology, the environment, ethics, and religion. In the case of Pakistan, crime rate increased from 683925 to 703481 in 2017 and 2018 whereas this value increased to 786339 in 2019 (Pakistan Bureau of Statistics , 2021).

1.2. The Economic Theory of Crime

The economic theory of crime, first introduced by Nobel winner Gray Backer in 1968, applies the neoclassical theory of demand. He won his prize based on his work on microeconomic analysis and its impact on human behavior. Before this theory, human behavior was predominantly analyzed with in social sciences which include sociology.

Becker's primary areas of interest were rational choice theory and other aspects of household behavior, investments in human capital, the coercion of punishments and crimes, and perceptions in the financial market. This theory states or argues that rationally criminals maximize their needs and self-interest as considered utility. Hence, to become a criminal it is the decision is in principle which is not different from another's occupation. Gray Backer's theory claims that there is a negative association between crime and opportunity costs also with the chance of severe punishment moreover it is positively associated with gain from this criminal behavior. Within the concept of criminals maximizing their economic utility, Becker examined criminal conduct. In other words, he contended that a criminal chooses whether to commit a crime primarily based only on an evaluation of the advantages and disadvantages associated with the act. As a result, methods for preventing crime must focus on the most effective ways to alter the cost-benefit framework. Becker concluded that increasing fines and penalties might be a far less expensive strategy than raising funding for surveillance and preventative initiatives. Economic factors and crime rates are highly correlated. Numerous studies have demonstrated that dire economic circumstances can lead to an increase in crime rates. Pakistan is another country where this phenomenon occurs.

The nation's crimes increased as a result of the 2007–2008 economic downturn. At the beginning of 2007, there were 5,38,048 total crimes reported; however, by the end of 2008, that number had increased to 5,92,503. (Gulzar, 2013). Pakistan is a growing country dealing with bad Economic situations and those situations are contributing substantially to growing crimes. The main objective of this study is to test the significance of the economic theory of crime in the case of developing countries evidence from Pakistan.

2. LITERATURE REVIEW

Globally it is going through to increasing tendency in behavior violation and criminal activities over time. It is normally supposed crimes affect life, restricting scholastic possibility, hindering entry toward feasible available opportunities of job and inauspicious the buildup of assets. The volume of crimes regulates the capacity of a country to pavement the manner for bearable financial growth. (Nadeem, 2016) Discussed the functions of earnings in compelling the crimes through other people. The study provides evidence that low earnings and a lower expected rate of crimes cause an increase in the disposition of compelling the crimes.

Likewise, low-earnings humans view their authorized lifetime profits now no longer as much, and they expect to lose comparatively small income if they have a criminal record. They suppose that legal income is not the most effective however additionally the opportunity cost of time consumed in custodial is low.

Becker (1968) recommends a version of crimes primarily constructed totally on cost and benefit evaluation and predicted utility. The study examines the factors that human beings will constrain crimes in the event they assume that their utility can be decreased in a few different activities. Moreover, a criminal can pay the cost of appellation punishment and period price as custody. The study is evidence that criminals are rational whilst constructing an evaluation among costs and benefits of activities of criminals. Ehrlich, (2017) reveals that there occurs an instantaneous affiliation among crime and unemployment. Consequences examines that for the opportunities of income, employment is an essential factor from lawful sources and if there may be a growth in the rate of unemployment then the participation in legal sources of people declines. Also, the degree of education, age construction, and income inequality additionally pay to the creation of choice of compelling crimes. The primary distinction between Becker and Ehrlich's research is that Becker considers opportunity costs in addition to observable costs and advantages of a society though Ehrlich finds employment as a factor of accessibility of income in a society.

Castro & Fajnzylber, (2017) examine a cross-sectional evaluation of the usage of income inequality, education, per capita income, and growth ratio. The observed factors that income inequality is a substantial element in crimes. The research observes and determines that a 5 percent growth in income inequality (Gini Index) helps to raise the murder rate by fifteen percent and lots of fold rises the robberies. Furthermore, another study conducted by the same author and therefore this study depicts the correlational evaluation, for panel data ordinary least square regression, and GMM located that an upsurge in income inequality helped to an upsurge in crimes. (Bernstein, 2002) examines the relationship between labor marketplace situations and distinctive crimes in Pacific countries of Asia, in this study, Bernstein used Johansen co-integration and Granger causality tests for econometric evaluation. The consequence of the study depicts long life of a relationship between unemployment and crimes.

Qamar & Safdar,(2021) research the impact of various macroeconomic variables on crimes through the use of the ordinary least square technique and accomplish that the crime rate increases with the growth of different factors likewise unemployment, inflation, and poverty. Another study makes use of metropolis-level statistics to resolve elements inducing crimes in inner-city regions. The examined consequences show that inequality, per capita GDP, and percentage of black people are the greatest elements in defining the crimes in city regions. Unemployment and police expenses are also observed to be considerable elements in illumination crimes (Latimaha, Bahari, & Ismail, 2019).

For many researchers, it isn't always poverty consistent with criminogenic however alternatively unequal useful resource allocation (Ouimet, 2012; Asghar, Qureshi , & Nadeem, 2016; Ghani, 2017) the maximum generally used measurement of inequality through those research is the Gini coefficient. According to Kelly, (2000), Anxiety will rise due to inequality not only in developing nations but also in all social classes. Additionally, inequality can weaken societal cohesiveness. Numerous hypotheses, including the stress viewpoint, the important perspective, and the frustration-aggression model, can be used to explain the relationship between inequality and homicide. Ríos, (2016) An anomie approach can also be used to understand income inequality, arguing that high levels of inequality lead to a lack of commitment to the prevailing normative framework (Goh & Kaliappan, 2018)). Inequality in the distribution of valuable resources can also exacerbate conflict between social groupings and possibly justify crime among the lower strata. According to (Asghar, Qureshi , & Nadeem, 2016), Many variations in homicide rates throughout time and space can be attributed to the fluctuating intensity of interpersonal struggle for scarce resources, both social and material.

Associated with the crime charge with inside the quick period and helps the presence of criminal motivation impact as introduced Meanwhile Adekoya & Abdul Raza, (2016) Meanwhile, (Habibullah, Shah, & Baharom, 2014) observed that the inflation charge isn't always a significant thing to influence the crime rate in Malaysia. Furthermore, Apart from this, an examine by (Alwee, Shamsuddin, & Sallehuddin, 2013) found that the consumer rate index (CPI) is the most significant financial indicator in the United States of America. However, these findings do not accurately reflect the overall crime rate because the researcher only considered the CPI for urban consumers (CPI-Apparel) aged sixteen to twenty-four, and came to the conclusion that it had a greater impact on property crime.

The conclusion showed strong correlations between unemployment, inflation, inequality, and other variables. (Phillips & Land, 2012) This could have been influenced by a variety of factors. First, as the Philips curve illustrates, there may be a trade-off between inflation and unemployment during the short term but not during the long term. Moreover, using the estimation version as a single equation may lead to a multicollinearity issue. (Habibullah, Shah, & Baharom, 2014) suggested that, because it takes time for inflation to gradually reduce people's purchasing power, crime rates in Malaysia may rise over a long period rather than quickly.

In evaluation with the findings of (Lobonț, Nicolescu, & Moldovan, 2017) Growing inflation presents additional chances for criminals, which will inevitably lead to an increase in the rate of property crime. It is a reality that varied ingredients result in different forms of crimes, each with unique characteristics related to the lead or period. Secondly, because the unemployment rate is mostly based on mixed data, it is difficult to determine how the rate affects homicide and whether previous research findings hold. In contrast to inflation, the unemployment variable is purportedly much larger. Conversely, (Tabar & Noghani, 2019) found out that the unemployment rate is statistically significant (Ali & Bibi, 2020; Umair, 2019; Castro & Fajnzylber, 2017) and definitely through Becker (1968). Moreover, as found out in the examination undertaken by (Alwee, Shamsuddin, & Sallehuddin, 2013) and (Lobonţ, Nicolescu, & Moldovan, 2017), the consequences acquired are suitable although the interpretation of the effects must be cautiously considered.

3. METHODOLOGY

The objective of this study is to test the economic theory of crime in case of Pakistan whereas unit of analysis is crime rate of Pakistan quantitative data has been taken from Pakistan bureau of statistics, World Bank and other sources due to the nature of study. Moreover, data included for analysis from 2004 to 2018.

3.1. Operationalization of variables

The crime rate in Pakistan is the dependent variable in this study. Any illegal act that a person commits that has the potential to inflict harm and that the state is obligated to stop is considered a crime. Different statistical methods had been used to compare the data collected. Explanatory variable while authentic crime statistics from many nations display that unemployed people have excessive crime rates and that communities with lots of unemployment experience lots of crime, this age or race.

Table 2: *Sources of data*

Variables	Source
Crime rate	(The World bank, 2021)
Inflation	(The World bank, 2021)
Income inequality	(The global Economy , 2021)
Political stability	(The global Economy , 2021)

3.2. Econometrics Model

$CR = \beta_0 + \beta_1 * INF + \beta_2 * INI + \beta_3 *POL$

Where

CR= Crime rate

INF= Inflation

INI= Income inequality

POL= Political stability

3.3. Financial Analysis

This research section is providing the predicted outcomes and dialogue. Basically, the study of descriptive usually used to evaluate the validity of data regardless of data is good for promoted research or not. In this case data for research should be normal. Table 3 displays the model's descriptive statistical data. The consequences indicated the presence of positive skewness in a dataset on Inflation Income inequality and political stability while crime rate and unemployment offer negative skewness. Skewness value measures the probability distribution and kurtosis measures distribution frequency. Fore skewness acceptable value -3 and +3 whereas for kurtosis range -10 to +10.

Therefore, their values show suitable because it lies between ranges. Moreover, probability values of Jarque bera presenting the sample data of variables are normally distributed over the chosen time period.

Table 3: *Descriptive Analysis*

	CR	INF	IIE	PS
Mean	6.1320	8.8826	32.374	-2.3693
Median	6.2900	8.6200	31.600	-2.4800
Maximum	7.5600	20.290	37.600	-1.5800
Minimum	3.8800	2.8600	29.800	-2.7700
Std. Dev.	1.3142	4.5244	2.1119	0.3491
Skewness	-0.6980	0.9182	1.2889	1.0537
Kurtosis	2.0135	3.7647	3.9896	3.1105
Jarque-Bera	1.8264	2.4734	4.7654	2.7833
Probability	0.4012	0.2903	0.0923	0.2486
Sum	91.980	133.24	485.61	-35.540
Sum Sq. Dev.	24.182	286.58	62.443	1.7064
Observation	15	15	15	15

In table 3 mean values presenting the average values of variables with crime rate has 6.1 average, inflation, income inequality, political stability presents 8.8, 32.3 and -2.36 respectively. Furthermore, table provides the statement of statistics distribution of independent variables from mean of dependent variable.

Table 4: *Covariance Matrix*

Covariance Analysis: Ordinary
Sample: 2004 2021
Included observations: 18
Correlation
t-Statistic

Probability	**CR**	**INF**	**IIE**	**PS**
CR	1.0000			

INF	0.7675	1.0000		
	4.3178	-----		
	0.0008	-----		
IIE	-0.8812	-0.5877	1.0000	
	-6.7237	-2.6194	-----	
	0.0000	0.0212	-----	
PS	-0.1781	-0.2077	0.2649	1.0000
	-0.6527	-0.7656	0.9906	-----
	0.5253	0.4575	0.3399	-----

Covariance matrix indicates the association of two variables which can interpret value of variable changes due to other variables value. Further, if one variable value increases it shows the increase in other variable values both variables indicate positive results or positive covariance. If one variable decreases due to this other variable decrease it indicates the negative covariance relation between variables. Table 4 indicates the correlation estimation and results show crime rate whereas inflation estimated results show crime has significant results with inflation on other it has a negative correlation with income in equality. Furthermore, political stability shows a negative and insignificant correlation among variables. The empiric provides that political stability has an unfavorable and negligible relationship with the inflation rate and a positive with income inequality. Income inequality has a positive relation with unemployment whereas income inequality has a negative correlation with the inflation rate of Pakistan. Figure 2 represents the graphical representation of variables.

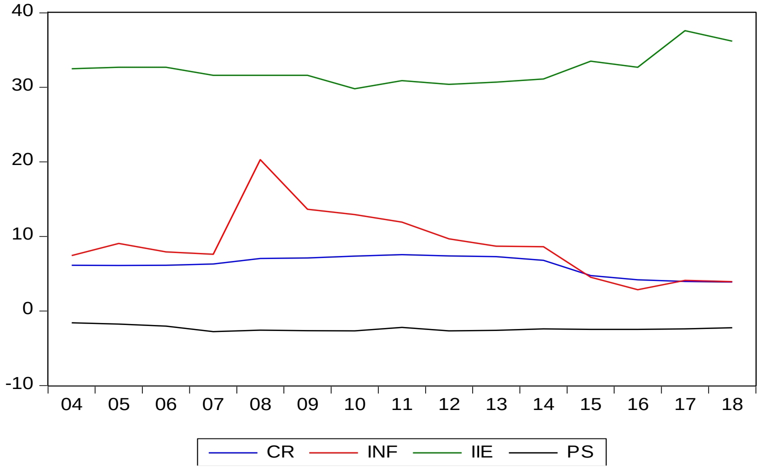

Figure 2: *Graph of Variables*

Table 5: *Regression Model*

Dependent Variable: CR

Method: Least Squares

Sample: 2004 2021

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.452	3.1793	6.1184	0.0001
INF	0.1126	0.0379	2.9716	0.0127
IIE	-0.4199	0.0823	-5.0982	0.0003
PS	0.3057	0.4121	0.7417	0.4738
R-squared	0.8779	Mean dependent var		6.1320
Adjusted R-squared	0.8446	S.D. dependent var		1.3142
S.E. of regression	0.5180	Akaike info criterion		1.7455
Sum squared resid	2.9516	Schwarz criterion		1.9343
Log likelihood	-9.0913	Hannan-Quinn criter.		1.7435
F-statistic	26.374	Durbin-Watson stat		2.1174
Prob(F-statistic)	0.0000			

Regression coefficient is derived to check marginal contribution of the independent variable to the dependent variable, holding all other variables fixed. According to regression model in table 5 R^2 value indicates the model provides a good fit to the data. The R-squared value is 0.87, or 87%, meaning that the INF, IIE, and PS account for 87% of the variation in CR. In contrast, the f test result is 13.23, meaning that the f value represents the ratio of two mean square values. Furthermore, the p-values for inflation and income disparity are significant, whereas the p-value for political stability is insignificant, indicating no relationship. Overall results indicate that the model fits the specific study well.

4. CONCLUSION

Developed and developing nations are dealing with the problem of rising crimes and it becomes extreme with each passing day. This study reveals the results by applying the economic theory of crime in the case of Pakistan. Consequences show people move towards crime when they are unable to fulfill their needs. Moreover, crime rate increased due to so many reasons. This study includes four variables in which unemployment, inflation, income inequality, and political stability are considered independent variables whereas crime rate is the dependent variable. Explanatory variables are positively related to crime, especially in developing countries like Pakistan.

As a result, human beings could have higher health and education facilities and they'll revel in extra income as they get extra opportunities and can be much less possibly to become involved in wrongdoings. Employment opportunities must be provided following each person's qualifications and experience. This will be done to lower unemployment. One of the countries with the highest rates of corruption is Pakistan. Effective action must be taken by Pakistani authorities to resolve this issue, and appropriate assessments and checks must be put in place inside the nation at each stage so that income inequality and inflation may be diagnosed and tackled properly.

The finding reveals that low unemployment does not show or mean the country has a low crime rate therefore it has a negative impact where as the inflation rate is highly significant and positively correlated with crime. Moreover, income inequality is not a short-run occurrence it takes the stage to expand the income gap between rich and poor but when people or individuals start to realize that particular gap this stage will enhance the crime activities for instance people desire to grab their rights despite legal way.

Government should take some steps regarding the equality of income which may reduce the crime rate in Pakistan. Furthermore, political stability is negatively associated with the crime rate. It is necessary to overcome the crime rate in developing countries like Pakistan where there is a large amount spent on mainlining police forces, and judicial systems without finding the root of crimes. Economic theory of crime is positively applied in the case of Pakistan where people move for their rational purpose or move toward crime to maximize their needs by paying the cost and punishment of crime.

Many developing countries especially in South Asia present varied results due to the environment and affect the economy accordingly. However, this was an imperative study in which the economic theory of crime was tested in the case of Pakistan. This research will help to reduce crime by following by reducing unemployment, and inflation, stabilizing the political figures, and equaling income. This study was further generalized by applying to other countries with the same theory.

REFERENCES

Adekoya, A., & Abdul Raza, D. (2016). Inflation, deterrence and crime: Evidence from Nigeria using bounds test approach. *Journal of Economics and Sustainable Development*, 7(18), 23-32.

Ali, A., & Bibi, C. (2020). Public Policies, Socio-Economic Environment and Crimes in Pakistan: A Time Series Analysis . *MPRA*, 100216.

Alwee, R., Shamsuddin, S., & Sallehuddin, R. (2013). Economic indicators selection for crime rates forecasting using cooperative feature selection. In AIP Conference Proceedings. *American Institute of physics*, 1221-1231(Vol. 1522).

Anwar, A., Arshed, N., & Anwar, S. (2017). Socio-economic Determinants of Crime: An Empirical Study of Pakistan. *International Journal of Economics and Financial Issues*, 2146-4138.

Asghar, N., Qureshi , S., & Nadeem, M. (2016). Effects of Socio-Economic and Political Factors on the Crime Rate in Pakistan. *Journal of Political Studies*, 183-206.

Bernstein, L. (2002). *The greatest menace: organized crime in cold war America.* Boston: University of Massachusetts Press,.

Cameron, S. (2013). Killing for Money and the Economic Theory of Crime. *Review of Social Economy*, 28-41.

Castro, R., & Fajnzylber, E. (2017). Income inequality and adolescent fertility in low-income countries. *Cadernos de saude publica*, e00203615.

Ehrlich, I. (2017). Economics of Criminal Law. *The Oxford Handbook of Law and Economics*, 295.

Ghani, Z. (2017). A comparative study of urban crime between Malaysia and Nigeria. *Journal of Urban Management*, 19-29(6).

Gillani, S., & Rehman, H. (2009). Unemployment, poverty, inflation and crime nexus: Cointegration and causality analysis of Pakistan. *Pakistan Economic and Social Review*, 79-98.

Goh, L., & Kaliappan, S. (2018). Income Inequality and Crime: Evidence from a Dynamic Panel Data Approach. *Int. Journal of Economics and Management*, 479-490.

Gulzar, M. (2013). Relationship between Crimes and Economic Conditions in Pakistan: A Time Series Approach. *Academia: Accelerating the world's research*, 2304-375.

Habibullah, Shah, M., & Baharom, A. (2014). Crime and unemployment in Malaysia: ARDL evidence. *Journal of Governance and Development*, 10(2), 69-86.

Kelly, M. (2000). Inequality and crime. *Review of economics and Statistics*, 82(4), 530-539.

Latimaha, R., Bahari, Z., & Ismail, N. (2019). Examining the Linkages between Street Crime and Selected State Economic Variables in Malaysia: A Panel Data Analysis. *Jurnal Ekonomi Malaysia*, 72.

Lobonţ, O.-R., Nicolescu, A.-C., & Moldovan, N.-C. (2017). The effect of socioeconomic factors on crime rates in Romania: a macro-level analysis. *Economic research-Ekonomska istraživanja*, 30(1), 91-111.

Nadeem, M. (2016). Effects of Socio-Economic and Political Factors on the Crime Rate in Pakistan. *Journal of Political Studies*, Vol. 23.

Ouimet, M. (2012). A world of homicides: The effect of economic development, income inequality, and excess infant mortality on the homicide rate for 165 countries in 2010. *Homicide Studies*, 16(3), 238-258.

Pakistan Bureau of Statistics . (2021). *Pakistan Bureau of Statistics: Crime Report*. Retrieved from https://www.pbs.gov.pk/sites/default/files//tables/rename-as-per-table-type/crimes_reported_by_type_and_provinces.pdf

Phillips, J., & Land, K. (2012). The link between unemployment and crime rate fluctuations: An analysis at the county, state, and national levels. *Social science research*, 41(3), 681-694.

Qamar , A., & Safdar, M. (2021). The Role of Human Capital, Corruption and Quality of Life in Determining the Crime Rate: Empirics from Pakistan. *Munich Personal RePEc Archive*, 19.

Rıos, V. (2016). Rıos, Viridiana. "The impact of crime and violence on economic sector diversity." Retrieved February 5 (2016): 2018. *Retrieved February, 5, 2018*.

Saddiq, S., & Abu Bakar, A. (2019). Impact of economic and financial crimes on economic growth in emerging and developing countries A systematic review. *Journal of Financial Crime*.

Statista. (2021). *Statista: Pakistan Inflation Rate*. Retrieved from Statista: Pakistan Inflation Rate: https://www.statista.com/statistics/383760/inflation-rate-in-pakistan/

Tabar, S., & Noghani, M. (2019). Unemployment and crime in developing countries: a meta-analysis in Iran. *Crime, Law and Social Change*, 72(3), 327-338.

The global Economy . (2021). *The global Economy: Business and economic data*. Retrieved from https://www.theglobaleconomy.com/Pakistan/wb_political_stability/

The World bank. (2021). *The World bank*. Retrieved from https://data.worldbank.org/indicator/VC.IHR.PSRC.P5?locations=PK

Umair, M. (2019). The socioeconomic determinants of crime in Pakistan. *Budapest International Research and Critics Institute journal: humanities and social sciences*, 1-6.