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Financial Inclusion (FI) Mediates the Relationship Between Financial Literacy (FL) and Women's Economic Empowerment (WEE)

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Abstract
This examination expects to investigate the relationship between financial literacy (FL) and financial inclusion (FI), and to dissect how FI goes about as a mediated in the relationship between FL and women's economic empowerment. Furthermore, the review dives into the control impact of social capital (SC) use as a moderating variable in FL and FI. Used positivism philosophy and deductive approach, and variables scale was adopted. The study collected 350 reliable answers from women working in private universities in the educational sector in Lahore through self-filled surveys using a simple random sampling method on a five-point Likert scale. This research used the AMOS-21 software. This software runs different types of tests e.g., "confirmatory factor analysis (CFA)" which confirms the variable items, and also uses "structural equation modelling (SEM)" to confirm or reject the research hypotheses. A p-value < 0.05 supports the first hypothesis (H1), which states that there is a substantial and beneficial relationship between financial inclusion (FI) and financial literacy (FL). Going on to the second hypothesis (H2), it is established that financial inclusion (FI) and women's economic empowerment (WEE) have a favourable and significant relationship. The third hypothesis (H3) suggests a partial mediation effect by arguing that financial inclusion is mediated by the association between financial literacy and women's economic empowerment. According to the fourth hypothesis (H4), social capital has a moderating effect on the importance and strength of the relationship between financial inclusion and financial literacy. The study's conclusions highlight social capital's strong moderating effect on this relationship. The study emphasises how important financial inclusion and financial literacy are to enhancing women's economic empowerment. It highlights the importance of policymakers and educational institutions recognizing the factors and providing opportunities and resources to enhance women's financial knowledge and skills. The findings underscore the need for proactive measures in the education sector to empower women economically.
Keywords: Financial Literacy, Financial Inclusion, Women's Economic Empowerment, Social Capital, Education Sector, Lahore

1. Introduction
Education is a fundamental right for everyone and a key to improving the economy and society. In Pakistan, many people do not get a good education and face many barriers to completing their studies (Muneer, 2021). In 2018, according to a World Bank report Pakistan has the second-highest number of children who do not go to school in the world. About 22.8 million children between 5 and 16 years old are out of school, which is 44 per cent of all the children in that age group (WorldBank, 2018);(Ambreen & Mohyuddin, 2022). Also, there are big differences in how well people do in education based on their gender, income, and location. Girls, poor people, and people who live in rural areas have fewer chances to get quality education (Blau & Kahn, 2020). One of the main problems that Pakistan has to solve to make its education system better is the lack of money and management (Nawaz & Sultana, 2019). Pakistan only spends 2.8 per cent of its total income on education, which is much lower than the 4 per cent goal that the government and the world agreed on (Brollo, Hanedar, & Walker, 2021). Also, there is no clear and honest way to use and track the money for education, which leads to waste and corruption (Thomson, 2020). As a result, many schools do not have the basic things they need, such as rooms, furniture, books, water, toilets, electricity, etc., and many teachers are not well-trained, paid, or motivated. Another problem that Pakistan has to overcome to improve its education system is the low level of financial knowledge and access among its people (Zahid, Rafique, Khurshid, Khan, & Ullah, 2023). Pakistan also has to strengthen the connection between education and women's economic power (Zahra, Yasin, Sultana, Haider, & Khatoon, 2021). The "Gender Gap Index (GGI)" shows that Pakistan is the worst country in the region for gender equality. GGI measures how equal men and women are in the economy, politics, education, and health (Marques, 2022). According to the "World Economic Forum (WEF)" report Pakistan ranked 146th for economic chances and participation, 139th for education success, 145th for health and survival, and 97th for political power by the GGI Index (WEF, 2018).
According to World Bank reports in 2018, when some economies treat men and women differently, they lose about 160 trillion dollars in global wealth every year. The BRICS is a group of five growing economies that have more people and grow faster than any other economy in the world. They have 26% of the world's land and 46% of the world's people (Khandare, 2019). So, giving more power to women in Pakistan is very important and the government needs to act fast to remove many barriers, such as not enough jobs, social support, money services, and skills training for women (Rohatgi, Gera, & Dana, 2023). Helping women to have more economic power is a key way to stop discrimination against women in developing countries and to make the economy grow (Ojo, 2022). In Pakistan, women are only less than one-third of the workers, even though they are half of the people. Women's work and stay in the work depend on how good the workplace is, which means having safety, fairness, and chances to grow (Kumar, Agrawal, Vijayshankar, & Vasavi, 2021). In Pakistan and around the world, studying how to give more economic power to women (WEE) is important and growing. It has got a lot of attention for supporting women's equal chances and outcomes, solving gender differences, lowering poverty, and making growth more inclusive (Grantham, Dowie, & de Haan, 2021). Knowing about money is a very important way to measure how well a person can make their own money decisions (Gui, Huang, & Zhao, 2021). Giving basic money services to everyone is a way to make the economy better and to improve the lives of the poor (Ozili, 2020). Having fewer social connections makes it harder to trust, cooperate, and take risks with suppliers, which stops the benefits of having good relationships (Chowdhury, Lau, & Pittayachawan, 2019).

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Gender inequality in Pakistan has many causes and depends on the situation, but it often comes from the social rules about how men and women should act, the laws about who can own and inherit things, the differences in how much education people get, and the gaps in how much money people earn. This makes us wonder how the culture and society in Pakistan affect women's power (Fizza, 2023). The usage of how much money people spend in their homes to measure how well they are doing after a training program that taught them about money and women's rights. The part of the program that focused on women's rights had a big impact on how much money women and young people spent in their homes (Koomson, Villano, & Hadley, 2021). The women know about different ways to invest their money and what the authorities are doing to help them. They said that more actions are needed to teach women about money to make them stronger (Kaur, Bedi, & Singh, 2019). But only 22% of women in Pakistan work and they earn only one-fifth of what men earn. This is a huge gap in the gender pay (Schwab, Crotti, Geiger, & Ratcheva). The current study aims to explore how financial literacy (FL) and financial inclusion (FI) are related, and how FI mediates the relationship between FL and WEE. The study also wants to assess how social capital (SC) moderates the relationship between FL and FI. This study wants to fill the following gaps in the theory to answer the research questions:
RQ1. Are financial literacy (FL) and financial inclusion (FI) related?
RQ2. Does financial inclusion (FI) and women's economic empowerment (WEE) are related?
RQ3. Is there a relationship between women's economic empowerment (WEE) and financial literacy (FL) that is mediated by financial inclusion (FI)?
RQ4. Does the relationship between financial literacy (FL) and financial literacy (FL) become moderated by social capital (SC)?

2. Theory and Hypotheses

2.1. Financial Capability Theory

The financial capability theory is a way of looking at how people and households deal with the challenges and risks of managing their money and making financial choices (Sun & Chen, 2022). Financial capability refers to expertise, skills, and mindsets that enable individuals and families to make sound financial choices and reach their economic goals (Birkenmaier, Rothwell, Frey, & Coffey, 2022). Financial literacy is the mix of knowledge, skills, attitudes, and behaviours that consumers need to make smart and informed financial decisions that improve their well-being (Rothwell, Khan, & Cherney, 2016). To measure financial capability, a complex and flexible approach that considers the variety and complexity of human wants and needs as well as the personal and factual aspects of financial well-being can be used (Potocki, 2022). By using the "financial capability and asset building (FCAB)" model, practitioners can increase their clients' chances of connecting to opportunities like credit repair, job training, or saving (Scanlon & Sanders, 2017). When using the prospect of digital mobile payments to boost MSE productivity and long-term viability financial competence plays a crucial role. (Muraya, 2019).

2.2. Financial Literacy (FL) and Financial Inclusion (FI)

The point is to work on financial literacy and measure its impact on financial behaviour. One of the most important tools for achieving financial inclusion is financial literacy (Sharma, 2022; Shah & Ali, 2023). A few gatherings have restricted admittance to monetary administrations, and they will more often than not have less monetary information (Klapper & Lusardi, 2020). Giving monetary schooling can improve their cooperation in the financial framework. Past examinations have shown that individuals in destitution have low degrees of monetary proficiency, which harms monetary consideration universally (Candiya Bongomin, Munene, Ntayi, & Malinga, 2017). The study by (Allen, et al., 2016) does not account for the impact of financial literacy, which is assumed to have a positive link with financial inclusion. The issue of hidden variable bias poses a challenge to the connection that exists between financial literacy and financial inclusion, (Cole, Sampson, & Zia, 2011).

H1: The relationship between financial inclusion (FI) and financial literacy (FL) is significant and positive.

2.3. Financial Inclusion (FI) and Women's Economic Empowerment (WEE)

Women's economic empowerment in the monetary area can prompt a more fair and supportable society, where ladies have more office and can enhance financial development (Ghosh, 2022). The improvement of a monetary framework, the fulfilment of orientation balance, and the ascent of ladies' business all decidedly affect strengthening, while the presence of orientation segregation is a deterrent. The review urges state-run administrations and policymakers to find the best monetary consideration projects to upgrade ladies' strengthening in emerging nations (Aziz, Sheikh, & Shah, 2022). The suggested techniques incorporate giving instructive projects on monetary education, planning imaginative monetary items that suit the particular necessities of ladies, and working on the administrative climate to bring down section boundaries. These strategies can lay out serious areas of strength for a between monetary incorporation and the strengthening of ladies. A far-reaching approach is expected to conquer the many difficulties that prevent ladies from getting into monetary administrations and to guarantee that the headway made is genuinely significant (Reichel, 2020). Women's empowerment can be expanded by giving ladies more admittance to cash assets and drawing in them more in monetary exercises, as a result of their consideration in the monetary area. Ladies who have formal monetary administrations can put something aside for the future, put resources into their schooling and their kids' schooling, and adapt to surprising expenses (Ghosh & Vinod, 2017).

H2: A significant and positive relationship between financial inclusion (FI) and women's economic empowerment (WEE).

2.4. Mediating Role of Financial Inclusion (FI)

Attaining complete and persistent financial inclusion and stability involves several factors. Until recently, the global discussion mainly focused on making financial products and services more available to people (Khan, Siddiqui, & Imtiaz, 2022). Women ought to be enabled to deal with their homes and neighbourhood projects well. At the point when they are engaged, they can work on their monetary proficiency through conventional schooling and their nearby information. Women in rural areas have been given empowerment through a local strategy based on local knowledge (Soegiono, Atahau, & Huruta, 2019). Financial inclusion means that people can access and use affordable, efficient, and effective financial products or systems. The purpose of financial products is to provide a secure place for storing value and to help prevent and reduce financial risks under regulatory control (El-Zoghbi, 2018). The financial inclusion affects poverty reduction in Minna (Sakanko, Audu, Lawal, & Onimisi, 2018). Using logistic regression, they discovered that formal credit, financial advisors, teller services, and formal accounts all improved people's well-being. Monetary consideration assumes a major part in bringing down pay disparity, particularly by giving admittance to credit to low-pay families and small and medium-sized organizations (Turegano & Herrero, 2018). The effect of financial inclusion on reducing poverty (Sanya & Olumide, 2017). They used multinomial logit models and descriptive statistics to look at things like the availability of special funds, cash centres, banks, and loans. The relationship between Nigeria's poverty reduction and financial inclusion. As measures of financial inclusion, the study looked at how loans were distributed to rural areas, the loan-to-deposit ratio, and the size of branch networks (Okoye, Adetiloye, Erin, & Modebe, 2017). Financial inclusion means that every person has the basic right to access a variety of high-quality financial services in a quick, convenient, and informed way while maintaining their dignity (Fernando, 2016).

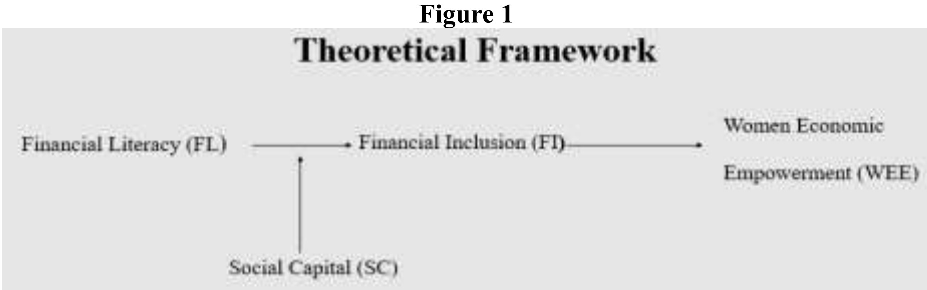
H3: Women's economic empowerment (WEE) and financial literacy (FL) are mediated via financial inclusion.

2.5. Moderating Role of Social Capital (SC)

Social capital is boosted when people with different levels of financial literacy share experiences and information about financial products. An elevated degree of social capital will increment monetary consideration. Monetary information doesn't straightforwardly impact monetary consideration in the public eye but rather through factors that adjust the impact of social capital in unfortunate networks (Bongomin, Ntayi, Munene, & Nabeta, 2016). Both financial knowledge and social relationships affect financial inclusion. Social capital is not a factor that modifies the effect but a separate variable (Pulungan & Ndruru, 2019). Having less social capital raises vulnerability, advantage, and functional dangers with providers, which forestalls the advantages of having great connections (Chowdhury et al., 2019). Likewise, normal legally binding practices distribute errands to individuals who are best at taking care of hazards, which assists with creating learning exercises inside a relationship and changing social capital into provider execution (Sukoco, Hardi, & Qomariyah, 2018). Social culture plays a vital role in local development and is a part of urban culture (Galaso, 2018). An honour not only means a lot of financial support from the government but also means the cooperative's strength and reliability, which gives the firm social capital in the society around it. Also, social capital is a very important resource for building human resilience and making arrangements to share risks when facing environmental dangers and shocks (Östh, Dolciotti, Reggiani, & Nijkamp, 2018).

H4: The relationship between financial literacy (FL) and financial inclusion (FI) is moderated by social capital (SC).

Figure 1



3. Methodology

The study draws on existing literature and theories to formulate hypotheses about the relationships among the variables of interest. These hypotheses are then tested using data collected from the participants. Therefore, a quantitative research approach is appropriate for the study's objectives (Saunders, Lewis, & Thornhill, 2009). Moreover, since the goal is to generalize the results, deduction is a fitting method in this situation (Saunders et al., 2009). The choice of a quantitative methodology is also affected by the main risk involved in it the potential low response rate of the survey questionnaires. On the other hand, qualitative methods may have difficulty deriving valuable insights from the available data (Cooper & Schindler, 2014).

3.1. Measures

The study used ten measures of financial literacy from (Volpe, Chen, & Pavlicko, 1996), which asked participants to rate their agreement with statements such as "I budget and track my spending" on a 5-point Likert scale. The reliability of this measure was 0.78. The study also adopted seven indicators of financial inclusion from (Jennah, 2022) and eleven dimensions of women empowerment from (Nhleko, 2017). The overall Cronbach alpha value for this variable was 0.783. The social capital variable consisted of ten questions from (Baron & Markman, 2003), with a reliability of 0.83. All the scales used in the study were based on a 5-point Likert scale, as in the previous studies where they were derived from.

3.2. Sampling and Data Collection

The study adopted the simple random sampling technique, which gives each member of a population an equal and independent chance of being selected for the sample. This technique reduces bias and ensures equal representation of each individual or item (Kothari, 2004). The study chooses Lahore City as the sampling area because of its metropolitan characteristics and its high population of 13.09 million. The population is diverse in terms of cultures and religions ("World Cities Lahore Population," 2022). Furthermore, Lahore is considered the educational hub of Pakistan, as it has more private and public universities and colleges than any other district in the country.

According to the Pakistan Education Statistics 2020-211, there were *34,908* female teachers in degree colleges and universities in Pakistan, out of a total of 67,043 teachers. In this research calculate the sample size for the survey, taking into account the finite population size and the sampling design (Lohr, 2021). The study set the confidence level at 95%, the margin of error at 5%, and the p-value at 0.5 (Fowler Jr, 2013). The sample size was calculated by the website "SurveyMonkey.com". The study gathered data from 380 employees of the education sector in Lahore using online self-administered and standardized questionnaires, which were distributed to women teachers during working hours in various private universities in Lahore and in different departments e.g., English department, faculty of management studies, department of Economics, etc., 30 participants partially filled the questionnaire, in this way did not take these 30 questionnaires.

This study worked on four different variables and each of them was established prior, therefore, these variables were used as scales to collect data. Among these variables, one was independent, one was a mediating variable, one was a dependent variable, and one moderator variable. Therefore, financial literacy (FL) was used as the independent variable. Financial inclusion (FI) was a mediating variable. Women's economic empowerment (WEE) was used as a dependent variable. Social capital is used as a moderator variable. Every variable was made up of best-question items and was based on Likert scales with five points, ranging from 1 to 5. For the measurement purpose, 1 was used for strongly disagree (SD), 2 for disagree (D), 3 for neutral (N), 4 for Agree (A) and 5 for strongly agree (SA). A self-administrative questionnaire was used to gather data for each variable. The financial literacy (FL) had 10 question items, financial inclusion (FI) 7 question items, Women's economic empowerment (WEE) had 11 items and the social capital variable had 10 question items. Moreover, there were five demographic variables as mentioned earlier. So, in this way, 38 question items were included in this research questionnaire. The “confirmatory factor analysis (CFA), and structure equation modeling (SEM)”, test performed via “IBM-SPSS-AMOS 21” were used to conclude the findings and hypotheses.

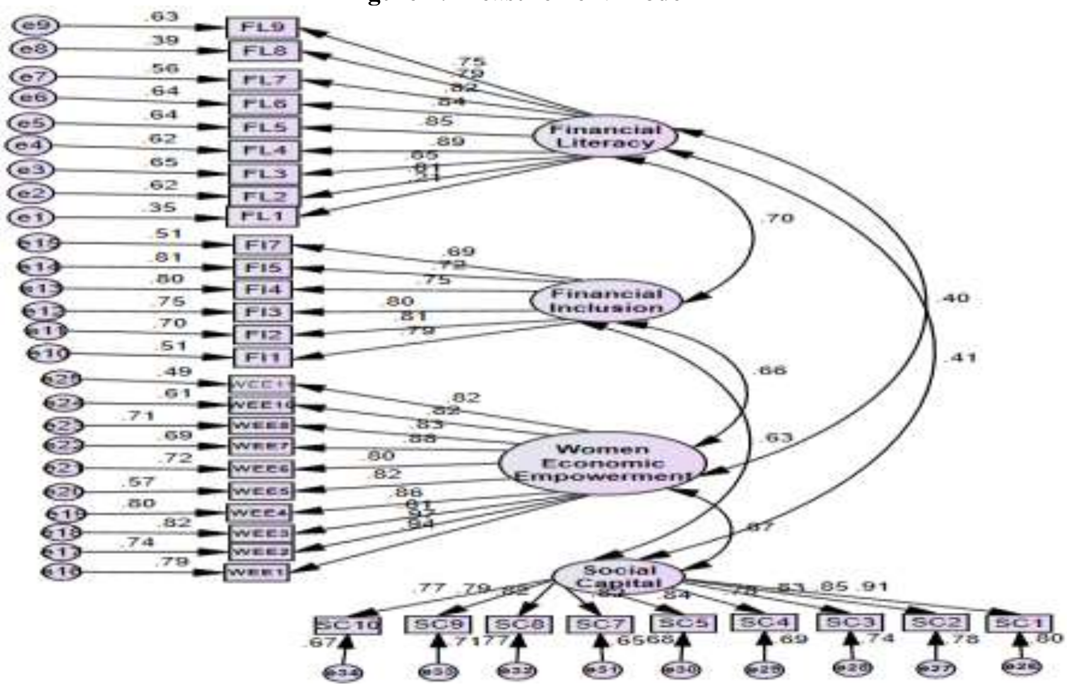
4. Data Analysis

In this stage, data was collected from 365 respondents but seven respondents partially filled out the questionnaire and eight participants did not return the questionnaire. Therefore, we checked the reliability of 350 respondents in this study. This phase sought to use the Cronbach alpha to assess the data's reliability. The accepted value of Cronbach's alpha is 0.80 but scholars emphasized 0.60 as a highly accepted level for the internal consistency between the variables (Mohd Sadad, Irfan, & Azhar, 2020). The internal consistency means that the question items present in the questionnaire were following similar variables.

Table 1: Reliability Statistics

Type of Variables	Variables	Numbers of items	Cronbach alpha
Independent Variable	Financial Literacy (FL)	10	0.78
Mediating Variable	Financial Inclusion (FI)	7	0.81
Dependent variable	Women Economic Empowerment (WEE)	11	0.86
Moderating variable	Social Capital (SC)	10	0.80

Figure 2: Measurement Model



The Cronbach alpha value of an independent variable, i.e., financial literacy (FL) was 0.78 for 10 question items. The Cronbach alpha value of a mediating variable, i.e., financial inclusion (FI) was 0.81 for 7 question items. The Cronbach alpha value of a dependent variable, i.e., women's economic empowerment (WEE) was 0.86 for 11 question items. The Cronbach alpha value of a moderating variable, i.e., social capital (SC) was 0.80 for 10 question items.

All the Cronbach alpha values of four variables were constructed in the acceptable range. The values of Cronbach alpha used for reliability were identified with high internal consistency between the variables. These Cronbach alpha values showed that question items of the questionnaire were easily understandable by research participants and also expressed the goodness for the measurement for all variables.

4.1. Measurement Model

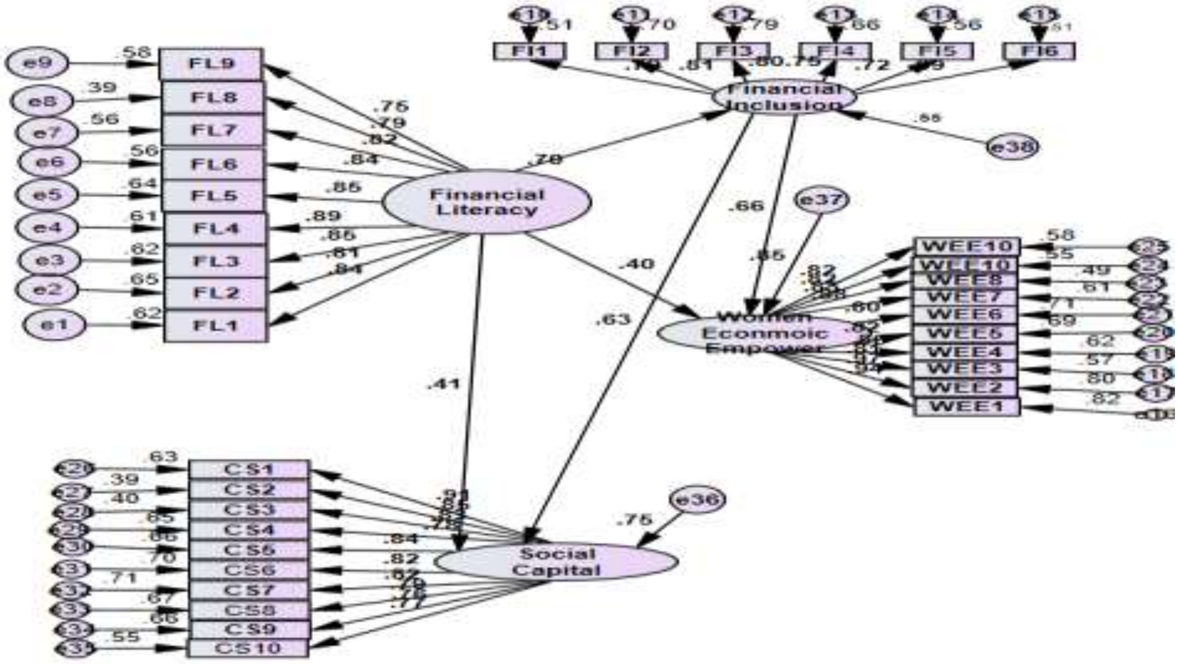
To check the suitability of the model, different estimates were run and values of different indices were analyzed. Therefore, the focus was to find the standard estimations to know the values of factor loading and many others. The value of the standardized factor loadings of each item needs to be more than 0.60 and if not those items were required to be extracted. In the above

measurement model, only one item was removed because its factor loading was less than 0.60 i.e., the factor loading of FL10 was 0.21. On the other hand, in this model, the modifying indices should not to greater than 15 if the value is more than 15 then that would create problems in the model (Afthanorhan, Ahmad, & Mamat, 2014). Moreover, those estimates were run again to analyze other indices. If these values were within the acceptable limit, then, the model was considered fit for the analysis.
CMIN/DF value was used to know the discrepancy between the model and data. If its value was greater than one and less than two then it would be considered an *acceptable* range. It was considered an excellent position of Chi-square because the cutoff criteria were given in Table 1. In this study, the value of Chi-square (CMIN) was 1824.071, and the degree of freedom (DF) value was 1000. So, "CMIN/DF value was 1.824 for this research. In Table 1, the value of CFI was 0.961 and the value of SRMR was 0.075. The value of RMSEA was 0.059, the PClose value was 0.070, and the TLI value was 0.932". All these values were considered acceptable ranges as those were lying within the range of recommended values (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014).

Table 2: Model Fit Parameters

Measure	Terrible	Acceptable	Excellent
CMIN/DF	> 5	> 3	> 1
CFI	<0.90	<0.95	>0.95
SRMR	>0.10	>0.08	<0.08
RMSEA	>0.08	>0.06	<0.06
PClose	<0.01	<0.05	>0.05

Figure 2



The model of this study was considered a perfect fit because all the parameters fulfilled the Cutoff criteria (Gaskin & Lim, 2016).

4.2. Standardized Estimations

The study used the standardized estimations model to examine the relationship between the variables of financial literacy, financial inclusion, women's economic empowerment, and social capital in the AMOS analysis. The following output diagram of SEM analysis displayed the outcome of path analysis by indicating the effects of exogenous variables on endogenous variables.

4.3. SEM Standardized Estimations

The standardized estimations showed the standardized factor loading and R^2 amount for a sum of the variables. The standardized regression estimations of the independent variable were associated with the dependent variable. In the figure, the amount of R^2 remained at 0.85 for women's economic empowerment. The standard value of R2 was 0.4 or more and indicated that 85% change happened in endogenous variables (i.e., women's economic empowerment) with the involvement of exogenous variables. Various output indices were used to check whether the model fit or not to the structure equation modelling (SEM) analysis.
The analysis explained that;

H1: The study found that financial literacy (FL) had a significant and positive impact on financial inclusion (FI) and accepted this hypothesis. H1: $\beta = 0.70$, $t = 2.81$, p = (***) indicating a positive and significant association between financial literacy and financial inclusion.

H2: The study found that financial inclusion (FI) positively and significantly influenced women's economic empowerment (WEE)

H3: The positive and significant association between financial literacy and women's economic empowerment was mediated by financial inclusion.

H4: Social capital moderates the significance and positive relationship between financial literacy and women's economic empowerment.

5. Discussion

The study proposed four hypotheses and tested them using SEM. The study was conducted in the education sector, so the findings could be generalized across a cross-sectional time frame. Hence, the current study examined the effect of the mediator, financial inclusion, on other variables such as financial literacy and women's economic empowerment. The study selected the best possible items and applied various tests to check their reliability and validity. The SEM results showed that the first direct, positive, and accepted hypothesis was between financial literacy and financial inclusion. Both variables had positive β-values and p-values less than 0.05. The study revealed that financial literacy significantly influenced financial inclusion. The study collected the Cronbach alpha values of four variables, namely, financial literacy, financial inclusion, social capital, and women's economic empowerment, and confirmed that their values were within the acceptable statistical range. The Cronbach alpha value of 0.60 or more indicated that there was internal consistency among the variables (Mohd Sadad et al., 2020). Internal consistency meant that the questionnaire items measured the same relevant constructs. The study used AMOS software to check the model fit. This software checked the values of different parameters, such as "chi-square test, degree of freedom, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis's index (TLI), and P-Close values". The values of all these parameters were acceptable (Hair Jr et al., 2014). The factor loading of each item was more than 0.60. The study excluded one question item from each variable, i.e., financial literacy, financial inclusion, women's economic empowerment, and social capital, i.e., FL10, FI6, WEE9, and SC6, respectively, and considered the remaining items suitable for all latent variables. The remaining 35 items were still stable because their factor loading was more than 0.60 (Afthanorhan et al., 2014). The study found that the *first hypothesis*, between financial literacy and financial inclusion, was positive and significant. Previous studies also explain the relationship between financial literacy and financial inclusion (Grohmann & Menkhoff, 2021). The *second hypothesis*, between financial inclusion and women's economic empowerment, was also positive and significant. Prior investigation explains the relationship between these variables (Adera & Abdisa, 2023). The *third hypothesis*, among three variables, i.e., financial inclusion mediated the positive and significant relationship between "financial literacy and women's economic empowerment", was supported by the β-value and p-value. The p-value was less than 0.05. The study used financial inclusion as a mediating variable between "financial literacy and women's economic empowerment" in one framework, which made this study unique. Financial inclusion through FinTech (FIF) has a positive and significant impact on women's financial empowerment (WFE) in countries with low levels of gender discrimination, but not in countries with high levels of gender discrimination (Esmaeilpour Moghadam & Karami, 2023). The *fourth hypothesis*, that social capital moderated the positive and significant relationship "between financial literacy and women's economic empowerment", was also confirmed by the positive β-value and significant p-value. In previous research, social capital fully mediates the relationship between financial literacy and financial inclusion, meaning that financial literacy does not have a direct effect on financial inclusion, but only through social capital (Okello Candiya Bongomin, Mpeera Ntayi, & Akol Malinga, 2020).

5.1. Managerial Implication

The study examined the relationship between four variables, namely, financial literacy, financial inclusion, women's economic empowerment, and social capital. This was a rare research work that used financial inclusion as a mediator and social capital as a moderator. The study had implications for policymakers and the education sector. It suggested that educational institution managers should appreciate the importance of financial literacy and financial inclusion for women's economic empowerment and offer them opportunities and resources to improve their financial competence and skills. It also recommended that financial institution managers should understand how social capital affects women's access to and use of formal financial services. They should also provide products and services that are sensitive to the needs and social norms of women. Furthermore, it advised that development organization managers should recognize the interconnected and interdependent nature of financial literacy, financial inclusion, and social capital for women's economic empowerment and adopt a comprehensive and coordinated approach to overcome the obstacles and challenges that women encounter in achieving economic well-being.

5.2. Conclusion

The research employed Structural Equation Modeling (SEM) to assess four hypotheses, all of which received substantiation from the collected data. The findings indicated a constructive and statistically significant influence of financial literacy on financial inclusion, subsequently leading to a positive and significant impact on women's economic empowerment. Moreover, the study revealed that financial inclusion played a mediating role in the association between financial literacy and women's economic empowerment, while social capital exerted moderation on the relationship between financial literacy and financial inclusion. Rigorous examinations, utilizing diverse tests and software tools, were conducted to ascertain the reliability, validity, and model appropriateness concerning the data and variables.

5.3. Limitations

This study's results can be applied to the education sector and Lahore city. The study used a cross-sectional time horizon, which means that the data was collected at one point in time. The study employed a simple random sampling technique. The study focused only on the education sector. The data came from women teachers in Lahore. The study's theoretical framework consisted of four variables: financial literacy, financial inclusion, women's economic empowerment, and social capital. The study used only quantitative methods, such as CFA and SEM.

5.4. Future Directions

In the future, such type of study could be conducted in other regions of the globe and also the cities of Pakistan (i.e., Karachi, Islamabad, Rawalpindi, Multan, etc.). In the future, the longitudinal time horizon can be used for the data collection. Different sampling techniques can be used, i.e., purposive sampling, quota sampling, snowball sampling, etc. Another research can be conducted by collecting research data from specific respondents; specific age groups, genders, users of the different products, etc. Such type of research can be conducted for other sectors, i.e., insurance, the banking sector, and the medical field, etc. The other variables can be used in the proposed framework, i.e., perception of women empowerment, well-being of women empowerment, and also used as interest rate and inflation, etc. In the future, a mixed-method approach can be used to conduct such types of research.

References

Adera, A., & Abdisa, L. T. (2023). Financial inclusion and women's economic empowerment: Evidence from Ethiopia. *Cogent Economics & Finance, 11*(2), 2244864.

Afthanorhan, W., Ahmad, S., & Mamat, I. (2014). Pooled Confirmatory Factor Analysis (PCFA) using structural equation modelling on volunteerism program: A step by-step approach. *International Journal of Asian Social Science, 4*(5), 642-653.

Akinsemolu, A. A., & Olukoya, O. A. (2020). The vulnerability of women to climate change in coastal regions of Nigeria: A case of the Ilaje community in Ondo State. *Journal of Cleaner Production, 246*, 119015.

Allen, F., Demirguc-Kunt, A., Klapper, L., & Peria, M. S. M. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation, 27*, 1-30.

Ambreen, M., & Mohyuddin, A. (2022). Identifying Out of School Children in Pakistan: A Policy Breach. *Pakistan Journal of Social Research, 4*(1), 1-9.

Asad, M. M., Hassan, R. B., Sherwani, F., Ibrahim, N. H., & Soomro, Q. M. (2018). *Level of satisfaction for occupational safety and health training activities: a broad spectrum industrial survey.* Paper presented at the Journal of Physics: Conference Series.

Atmowardoyo, H. (2018). Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D. *Journal of Language Teaching and Research, 9*(1), 197-204.

Awang, P. (2015). *SEM made simple: A gentle approach to learning Structural Equation Modeling*: MPWS Rich Publication, Bangi.

Aziz, F., Sheikh, S. M., & Shah, I. H. (2022). Financial inclusion for women empowerment in South Asian countries. *Journal of Financial Regulation and Compliance, 30*(4), 489-502.

Banerjee, S., Alok, S., & George, B. (2020). Determinants of women empowerment as measured by domestic decision-making: a perspective from a developing economy. In *Advanced issues in the economics of emerging markets* (Vol. 27, pp. 1-12): Emerald Publishing Limited.

Baron, R. A., & Markman, G. D. (2003). Beyond social capital: The role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing, 18*(1), 41-60.

Bedi, H. S., Karn, A. K., Kaur, G. P., & Duggal, R. (2019). Financial literacy–A Bibliometric analysis. *Bedi, HS, Karn, AK, Kaur, GP, & Duggal, R., Financial Literacy–A Bibliometric Analysis. Our Heritage, 67*(10), 1042-1054.

Birkenmaier, J., Rothwell, D., Frey, J. J., & Coffey, D. S. (2022). Introduction to the Special Issue on "Financial Capability and Asset Building for Family Financial Wellbeing". *Journal of Family and Economic Issues, 43*(4), 647-653.

Blau, F. D., & Kahn, L. M. (2020). The gender pay gap: Have women gone as far as they can? In *Inequality in the United States* (pp. 345-362): Routledge.

Bongomin, G. O. C., Ntayi, J. M., Munene, J. C., & Nabeta, I. N. (2016). Social capital: mediator of financial literacy and financial inclusion in rural Uganda. *Review of International Business and Strategy, 26*(2), 291-312.

Brollo, F., Hanedar, E., & Walker, M. S. (2021). *Pakistan: Spending needs for reaching sustainable development goals (SDGs)*: International Monetary Fund.

Bucher-Koenen, T., Lusardi, A., Alessie, R., & Van Rooij, M. (2017). How financially literate are women? An overview and new insights. *Journal of Consumer Affairs, 51*(2), 255-283.

Candiya Bongomin, G. O., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2017). Financial Literacy in emerging economies: Do all components matter for financial inclusion of poor households in rural Uganda? *Managerial Finance, 43*(12), 1310-1331.

Chowdhury, P., Lau, K. H., & Pittayachawan, S. (2019). Operational supply risk mitigation of SME and its impact on operational performance: a social capital perspective. *International Journal of Operations & Production Management, 39*(4), 478-502.

Cinar, K., & Kose, T. (2018). The determinants of women's empowerment in Turkey: A multilevel analysis. *South European Society and Politics, 23*(3), 365-386.

Cole, S., Sampson, T., & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *The journal of finance, 66*(6), 1933-1967.

Cooper, D. R., & Schindler, P. (2014). *Business research methods*: McGraw-Hill.

Deka, P. P. (2015). Financial literacy and financial inclusion for women empowerment: A study. *International journal of applied research, 1*(9), 145-148.

El-Zoghbi, M. (2018). Measuring Women's Financial Inclusion: The 2017 Findex Story. *CGAP blog post, 30*.

Esmaeilpour Moghadam, H., & Karami, A. (2023). Financial inclusion through FinTech and women's financial empowerment. *International Journal of Social Economics*.

Fernando, N. (2016). National Financial Inclusion Strategies a Toolkit Specifically for Policymakers. *This Toolkit Has Been Group Sub-Group on Financial Inclusion Strategy Toolkit, To Support the Formulation of National (20th ed.). Alliance for Financial Inclusion*.

Fizza, K. (2023). *Exploring the Influence of Sociocultural Norms and Gender Biases on Women's Empowerment in Pakistan.* Harvard University,

Fowler Jr, F. J. (2013). *Survey research methods*: Sage publications.

Frazier, L. (2019). Three Facts That Show Why Financial Literacy is Especially Important for Women.

Galaso, P. (2018). Network topologies as collective social capital in cities and regions: a critical review of empirical studies. *European Planning Studies, 26*(3), 571-590.
Gaskin, J., & Lim, J. (2016). Model fit measures. *Gaskination's StatWiki, 37*(3), 814-822.
Ghosh, S. (2022). Political empowerment of women and financial inclusion: Is there a link? *Social Sciences & Humanities Open, 5*(1), 100267.
Ghosh, S., & Vinod, D. (2017). What constrains financial inclusion for women? Evidence from Indian microdata. *World Development, 92*, 60-81.
Gilgun, J. F. (2019). Deductive qualitative analysis and grounded theory: Sensitizing concepts and hypothesis-testing. *The SAGE handbook of current developments in grounded theory*, 107-122.
Golla, A. M., Malhotra, A., Nanda, P., & Mehra, R. (2011). Understanding and measuring women's economic empowerment.
Golzard, V. (2020). Economic empowerment of Iranian women through the Internet. *Gender in Management: An International Journal, 35*(1), 1-18.
Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies, 45*(1), 80-105.
Grantham, K., Dowie, G., & de Haan, A. (2021). *Women's economic empowerment: insights from Africa and South Asia*: Routledge.
Grohmann, A., & Menkhoff, L. (2021). The relationship between financial literacy and financial inclusion. In *The Routledge Handbook of Financial Literacy* (pp. 517-530): Routledge.
Gui, Z., Huang, Y., & Zhao, X. (2021). Whom to educate? Financial literacy and investor awareness. *China Economic Review, 67*, 101608.
Hair, J. F., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). Multivariate data analysis. Upper Saddle. In: NJ: Pearson Prentice Hall.
Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modelling (PLS-SEM): An emerging tool in business research. *European Business Review, 26*(2), 106-121.
Handoko, I., Bresnen, M., & Nugroho, Y. (2018). Knowledge exchange and social capital in supply chains. *International Journal of Operations & Production Management, 38*(1), 90-108.
Haque, A., & Zulfiqar, M. (2016). Women's economic empowerment through financial literacy, financial attitude, and financial wellbeing. *International Journal of Business and Social Science, 7*(3), 78-88.
Hasler, A., Lusardi, A., & Oggero, N. (2018). Financial fragility in the US: Evidence and implications. *Global Financial Literacy Excellence Center, The George Washington University School of Business: Washington, DC*.
Henseler, J. (2017). Bridging design and behavioural research with variance-based structural equation modelling. *Journal of advertising, 46*(1), 178-192.
Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modelling: a multidisciplinary journal, 6*(1), 1-55.
Jennah, H. (2022). OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022.
Kaur, G. P., Bedi, H. S., & Singh, D. A. (2019). Financial Literacy Among Women of Punjab. *Kaur, G. P, Bedi, HS & Singh, A.(2019). Financial Literacy among Women of Punjab. Our Heritage, 67*(10), 1017-1029.
Khan, F., Siddiqui, M. A., & Imtiaz, S. (2022). Role of financial literacy in achieving financial inclusion: A review, synthesis and research agenda. *Cogent Business & Management, 9*(1), 2034236.
Khandare, V. (2019). Financial inclusion: Empirical study of BRICS countries. *International Journal of Social Science and Economic Research, 4*(5), 3319-3334.
Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management, 49*(3), 589-614.
Koomson, I., Villano, R. A., & Hadley, D. (2021). Accelerating the impact of financial literacy training programs on household consumption by empowering women. *Applied Economics, 53*(29), 3359-3376.
Kothari, C. R. (2004). *Research methodology: Methods and techniques*: New Age International.
Kumar, R., Agrawal, N. K., Vijayshankar, P., & Vasavi, A. (2021). *State of Rural and Agrarian India Report 2020: Rethinking Productivity and Populism Through Alternative Approaches*: Notion Press.
Levy, P. S., & Lemeshow, S. (2013). *Sampling of populations: methods and applications*: John Wiley & Sons.
Lohr, S. L. (2021). *Sampling: design and analysis*: CRC press.
Marcus, R. (2018). The norms factor: recent research on gender, social norms, and women's economic empowerment.
Marques, B. M. (2022). *Two Tails of Nicaragua's Experience with Gender Inequality: the Neoliberal Politics of Measurement and Evaluation on the Global Gender Gap Index Reports (2006-2019).*
Mohd Sadad, M., Irfan, S., & Azhar, T. (2020). Analyzing the impact of nurses' emotional intelligence on patient's quality of care with the mediating role of job involvement. *Jinnah Business Review, 8*(1), 41-52.
Muneer, S. (2021). Women empowerment, and access to education in Pakistan: Barriers within a home. *Journal of the Research Society of Pakistan, 58*(2), 32-41.
Muraya, G. N. (2019). *Role of Financial Capabilities in Harnessing Digital Mobile Payments for Enterprise Success in Starehe Constituency Nairobi County.* University of Nairobi,
Nawal, A., Awang, Z., ur Rehman, A., & Mehmood, H. (2019). HRM Practices, Shrm, and Organizational Performance: A Configurational Perspective.
Nawaz, M. S., & Sultana, M. S. (2019). Brief perspective of the educational problems in Pakistan and their solution. *Muslim Perspectives, 4*(2), 16.
Nhleko, M.-A. N. (2017). *The use of small, medium, and micro-enterprises as a strategic tool for women's socio-economic empowerment in the northern rural KwaZulu-Natal.*

Ojo, T. A. (2022). Women Economic Empowerment during Covid-19 Crisis and Transition in BRICS Countries. *Journal of BRICS Studies, 1*(2), 72-84.

Okello Candiya Bongomin, G., Mpeera Ntayi, J., & Akol Malinga, C. (2020). Analyzing the relationship between financial literacy and financial inclusion by microfinance banks in developing countries: social network theoretical approach. *International Journal of Sociology and Social Policy, 40*(11/12), 1257-1277.

Okoye, L. U., Adetiloye, K. A., Erin, O., & Modebe, N. J. (2017). Financial inclusion as a strategy for enhanced economic growth and development. *Journal of Internet Banking and Commerce, 22*(S8).

Östh, J., Dolciotti, M., Reggiani, A., & Nijkamp, P. (2018). Social capital, resilience and accessibility in urban systems: a study on Sweden. *Networks and Spatial Economics, 18*, 313-336.

Ozili, P. K. (2020). Theories of financial inclusion. In *Uncertainty and challenges in contemporary economic behaviour* (pp. 89-115): Emerald Publishing Limited.

Pieters, J., & Klasen, S. (2020). Randomization for women's economic empowerment? Lessons and limitations of randomized experiments. *World Development, 127*, 104820.

Potocki, T. (2022). Locating Financial Capability Within Capability Approach–Theoretical Survey. *Gospodarka Narodowa. The Polish Journal of Economics, 309*(1), 96-106.

Pulungan, D. R., & Ndruru, A. (2019). *Pengaruh Literasi Keuangan Dan Modal Sosial Terhadap Inklusi Keuangan Mahasiswa*.

Ramakrishnan, D. (2012). *Financial literacy and financial inclusion.* Paper presented at the 13th Thinkers and Writers Forum.

REHMAN, A. U., Nawal, A., Sarwar, H., Mehmood, H., & Majid, B. (2021). Modelling media exposure, appearance-related social comparison, thin-ideal internalization, body image disturbance, and academic achievement of female university students. *J. Contemp. Issues Bus. Gov, 27*, 2569-2582.

Reichel, V. (2020). Financial inclusion for women and men in artisanal gold mining communities: A case study from the Democratic Republic of the Congo. *The Extractive Industries and Society, 7*(2), 412-419.

Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology, 51*(3), 649.

Rohatgi, S., Gera, N., & Dana, L.-P. (2023). Antecedents of economic empowerment: an empirical study of working women in Delhi-NCR. *Gender in Management: An International Journal*.

Rothwell, D. W., Khan, M. N., & Cherney, K. (2016). Building financial knowledge is not enough: Financial self-efficacy as a mediator in the financial capability of low-income families. *Journal of Community Practice, 24*(4), 368-388.

Sakanko, M. A., Audu, A., Lawal, M. C., & Onimisi, A. M. (2018). Analysis of the impact of financial inclusion on poverty reduction in Minna Niger State, Nigeria. *Abuja Journal of Economics and Allied Field, 8*(4), 80-90.

Sanya, O., & Olumide, F. (2017). Financial Inclusion as an Effective Policy Tool of Poverty Alleviation: A Case of Ekiti State Journal of Economics and Finance, 2321-5925. In: Volume.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*: Pearson education.

Scanlon, E., & Sanders, C. K. (2017). Financial capability and asset building: A transformational practice framework. *Advances in Social Work, 18*(2), 543-562.

Schwab, K., Crotti, R., Geiger, T., & Ratcheva, V. *World Economic Forum.(2019). Global gender gap report 2020 insight report.* Paper presented at the World Economic Forum.

Shah, S. M., & Ali, A. (2023). Macro Dimensions of Financial Inclusion Index and its Status in Developing Countries. *Journal of Policy Research, 9*(1).

Shanmugam, M. M., & Agarwal, B. (2019). Support perceptions, flexible work options, and career outcomes: a study of working women at the threshold of motherhood in India. *Gender in Management: An International Journal, 34*(4), 254-286.

Sharma, S. (2022). Enablers to Financial Literacy: A Dematel Approach. *Procedia Computer Science, 214*, 520-527.

Soegiono, L., Atahau, A. D. R., & Huruta, A. D. (2019). Local wisdom in rural microfinance: A descriptive study on villagers of East Sumba. *Entrepreneurship and Sustainability Issues, 6*(3), 1485.

Sukoco, B. M., Hardi, H., & Qomariyah, A. (2018). Social capital, relational learning, and performance of suppliers. *Asia Pacific Journal of Marketing and Logistics, 30*(2), 417-437.

Sukumaran, K. (2015). Financial access: inclusion and literacy. *Annual Research Journal of Symbiosis Centre for Management Studies, 3*(1), 188-207.

Sun, S., & Chen, Y.-C. (2022). Is Financial Capability a Determinant of Health? Theory and Evidence. *Journal of Family and Economic Issues, 43*(4), 744-755.

Thomson, P. (2020). *School scandals: Blowing the whistle on the corruption of our education system*: Policy Press.

Tripathi, T., & Mishra, N. K. (2017). Fuzziness in the conceptualization of women's empowerment, access to resources and autonomy: evidence from Indian states. *Journal of Social and Economic Development, 19*, 60-82.

Turegano, D. M., & Herrero, A. G. (2018). Financial inclusion, rather than size, is the key to tackling income inequality. *The Singapore Economic Review, 63*(01), 167-184.

Volpe, R. P., Chen, H., & Pavlicko, J. J. (1996). Personal investment literacy among college students: A survey. *Financial Practice and Education, 6*(2), 86-94.

WEF. (2018). The Global Gender Gap Report. *25*.

World Cities Lahore Population. (2022). Retrieved from worldpopulationreview.com

WorldBank. (2018). Education Statistics (EdStats).

Zahid, R. A., Rafique, S., Khurshid, M., Khan, W., & Ullah, I. (2023). Do Women's Financial Literacy Accelerate Financial Inclusion? Evidence from Pakistan. *Journal of the Knowledge Economy*, 1-23.

Zahra, K., Yasin, M., Sultana, B., Haider, Z., & Khatoon, R. (2021). Impact of Women's Education on Economic Growth: An Evidence from Pakistan. *Journal of Economic Impact, 3*(2), 113-120.