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Abstract

Financial institutions are crucial for economic development. Lack of trust in financial institutions such as banks can have catastrophic consequences, as observed during past financial crises and the COVID-19 pandemic. Considering the importance of financial institutions, we examine the major factors influencing trust in financial institutions among the female population at a global sample. We explore the potential impact of contextual factors, such as institutional performance and country-level trust, on trust in financial institutions by employing logit and Probit models in a global data set. We find that women tend to trust banks more than men on average. We propose that greater gender equality in society and financial inclusion can decrease the gender gap in trust in banks at the country level.

Keywords: Trust in financial institutions; Economic development; Gender equality; Employment; Financial Inclusion

1. Introduction

Financial institutions play a fundamental role in shaping the economy. They pave the way for economic development and provide support to governments for improved service delivery. It was observed by McKillop, French, Quinn, Sobiech, & Wilson (2020) that in the past financial cooperatives (a type of financial institutions) were at the forefront during the global financial crises. These institutions functioned as safe havens for the common people by providing them with reliable means to deposit their savings and giving out loans to the small and medium enterprises (SME) as well as households in need of financial support. McKillop, French, Quinn, Sobiech, & Wilson (2020) indicated that such kind of financial institutions are becoming corner stone for providing support to the household and firms so that they may reap maximum benefits. The key role of financial institutions is also recognized by Gonzalez-Vega (1994), where he indicated that such institutes can be leveraged for the inclusion of poor and vulnerable groups of society into the economic development. An efficient system of financial services will facilitate and give vulnerable communities access to services like liquidity and risk management. It was further observed by Gonzalez-Vega (1994) that deposit facilities hold more importance for the poor than access to loans. This implies that the demand for loanable funds is a demand for trust in the form of strong client relationships among them and the financial institutions, based on which they can have a credit reserve. Gonzalez-Vega (1994) believes that there is a need to promote an efficiency in the services of the financial institutions because it is not only in the public interest but it will also help in affirming public trust on financial institutions. Resultantly, enhancing the economic development and poverty reduction.

Building upon this, Zulfiqar et al., (2016) also explained that in modern times not only establishing but also maintaining trust in financial institutions is of utmost importance. It is because when the public trusts its institutions then it will help the country in achieving financial stability and economic prosperity. This was also reiterated by Aslam & Ghouse (2022) that institutional reliability particularly in the realm of finance is fundamental because this ensures that complex socio-economic mechanisms of the society remain functional and contribute towards society's economic well-being. The importance of this phenomenon was observed by the entire world not once but twice, as it was indicated by Ghouse et al. (2021) that how lack of trust on financial institutions proved catastrophic during both financial crises of 2007 and then in COVID-19 pandemic.

In short, the public's trust in financial institutions is not limited to enhanced capital inflows but in fact, rationalize the operational side of the banks and in the long-term ensures fiscal stability of the country. Hence, it would not be wrong to suggest that there exists a positive relationship between trust in financial institutions and a stable economy. The aim of this study is to conduct a comprehensive examination of the factors that can influence the trust in financial institutions among female population. Trust in banks among women or females is determined by several factors. Research shows that women tend to trust banks more than men on average worldwide as indicated by Laurent, Weill, (2023). However, the level of trust in banks can vary across countries, suggesting the influence of country-specific factors (Zuzana et al., 2019). Factors such as experiencing a banking crisis can have a differential impact on trust in banks for men and women, with women showing higher trust among individuals who have experienced a crisis (Michiel et al., 2021). Additionally, greater gender equality in society and financial inclusion can increase the gender gap in trust in banks at the country level. Other determinants of trust in banks among women include income, age, education, access to television and the internet, religious, political, and economic values (Sang-Wook et al., 2018). We enhance the understanding of the trust in financial institutions, thus contributing to economic stability and the ways for strengthening of public confidence, with an end goal of inclusive policies that will provide support not only at the individual level but also help the country.

2. Literature Review

Trust in financial institutions is a key factor in improving the economic health of any country. That is why a huge emphasis is given by policy makers on developing policies which harbor public trust in financial institutions. As it was explained by Baidoo & Akoto (2019) that to mobilize domestic saving, trust on the financial institutions is of utmost importance. The countries where the level of trust is low struggle with developing a healthy investment landscape. The reason explained by Baidoo & Akoto (2019) is that when public do not trust financial institutions of their host country then they tend to engage in informal modes of saving. While on the other hand, in the case of higher level of trust on the financial institutions lead to higher probability of using formal modes of saving

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management (Beckmann & Mare, 2017). This implies that the formal system of mobilization of funds has been deprived of substantial chunks of the savings. This will eventually lead to low levels of funds that can be extended to the private sector to manage and expand their businesses. Therefore, it is crucial that the public trust in the financial institutions is not only enhanced but also maintained over the period and this can be achieved only through amicable policies (Baidoo & Akoto, 2019). Education has a positive impact on trust in financial institutions, including banks, insurance companies, and pension funds. Trust in the institutional structures is also positively related to trust in the financial sector. Additionally, creating a trustworthy environment through trustworthy behaviors can boost employee trust and enhance individual and organizational performance in financial and banking institutions at micro-levels. Building trust in financial institutions among the poor can lead to increased savings but may not necessarily impact knowledge of the banking system or financial literacy. Considering the importance of public trust in financial institutions, it is necessary to explore the factors that contribute towards enhancing this phenomenon. It was indicated by (Crujisen et al., 2021a) Crujisen, Haan, & Roerink (2021) that one of the factors that contribute towards improving public trust is their level of literacy in finance. It was observed that when the users or beneficiaries of the financial institutions possess a high level of financial knowledge then they are more likely to trust the institutions in comparison to the users who are not financially literate (Crujisen et al., 2021a). Physically proximity of financial institutions also plays a role in increasing the level of public trust. It was observed by Filipiak (2016) that there is a decline in the level of trust on the financial institutions when individuals have to cover any distance which entails travelling for more than a day. This implies that even in today's digital economy and services, the physical presence of such institutions seems important and relevant when it comes to public trust (Filipiak, 2016)

So far, all the causes that were discussed are external in nature. It is important to consider the internal factors like provision of quality services by the financial institutions themselves which will lead to improved public trust is also important. It was discussed by (Park, 2020; Kabir & Rashid, 2017) that efforts should be made by the financial institutions in improving their services specifically towards the customer base which is younger in age and falls on the lower end of the wealth spectrum. This will not only lead to gaining their trust but also protect them from potential harm in the form of fraud (Khan, 2015; Park, 2020)

Ennew and Sekhon (2007) and Ennew & Sekhon (2007) highlighted another aspect of trust in financial institutions. It was indicated that when customers are purchasing different kinds of financial services, then they are facing a substantial amount of risk. Lack of knowledge of financial products makes them prone to a number of fiduciary risks, they have no other option but to trust the institutions. Under this situation, (Ennew & Sekhon, 2007) the level public trust is relatively high depending on their age and when the financial products they have purchased is managed by females and this level of trust decline as the customer age falls on the higher side. This implies that young people have a higher level of trust in comparison to the people who fall into the upper age bracket. (Ennew & Sekhon, 2007) This also aligned with the argument given above.

The phenomenon of public trust in financial institutions is aptly summarized by (Crujisen et al., 2021b) Crujisen, Haan, & Roerink (2021) which have indicated that there are many factors that impact the trust on financial institutions, however, some of the major causes that influence the level of trust include but are not limited to financial literacy, economic situations, behavior of financial institutions themselves and customer characteristics. (Crujisen et al., 2021b) Crujisen, Haan, & Roerink (2021) also gave a way forward to improve the situation by indicating that the policies of a country play an integral role and can be leveraged for enhancing the levels of trust.

The argument of public trust on financial institutions given above is discussed in generic terms, for the sake of this paper it is important to explore the factors affecting the trust, particularly for women, in financial institutions. (Fungáčová et al., 2019) analyzed the cross-country data of 52 countries using world value survey from 2010 – 2014. The results clearly indicate that women have higher inclination to place their trust in financial institutions, in comparison to men. Moreover, this level of trust further enhances if they hold favorable economic views. (Fungáčová et al., 2019) Other factors include level of income, age and education, access to television and internet. It was observed that trust has a positive relationship with the level of income but negative relationship with age and education. Furthermore, the level of trust increases with the access to television but declines with the access to internet (Fungáčová et al., 2019) Interestingly, individuals who possess higher religious values also place higher trust in banks.

The findings given above were confirmed by Heyert & Weill (2023); where they have conducted a similar study using the same world value survey from 2017 – 2021 for 53 countries. The findings of the study clearly indicate that women across the world have a higher level of trust in financial institutions in comparison to men. However, Heyert & Weill (2023) observed that there are differences among different countries which can be attributed to the independent contextual factors that varies from country to country, but overall, the level of trust remains higher for women. (Heyert & Weill, 2023) The plausible explanation for this difference is that financial crisis of 2007 – 2008 have higher negative impact on men in comparison to the women, hence leading to a decline in trust by men in financial institutions. Intriguingly, the countries which are active in ensuring gender equality and have higher level of gender financial inclusion also experience higher level of trust in financial institutions by their female population. (Heyert & Weill, 2023)

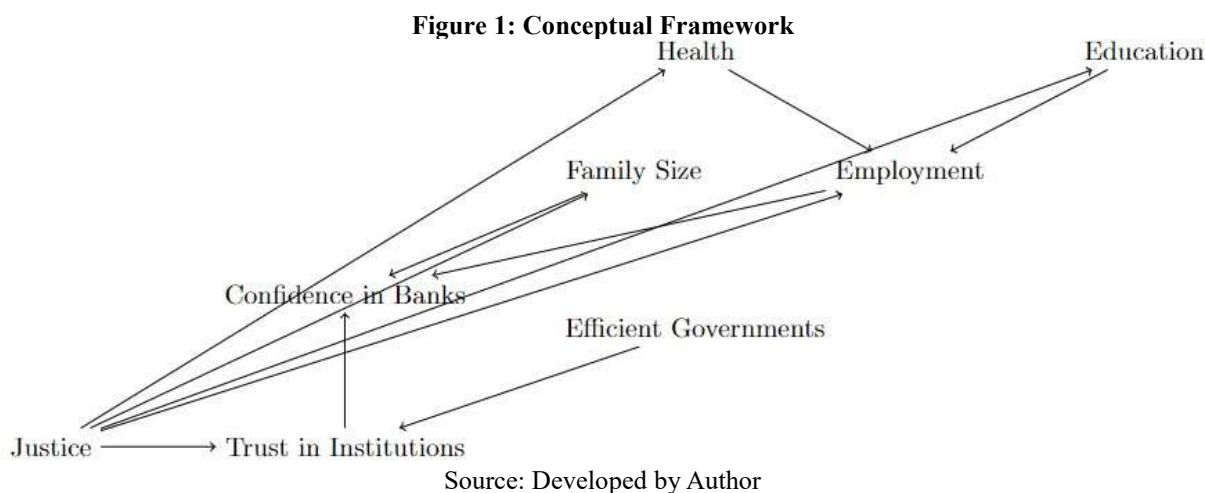
Alternatively, the financial institutions also have a higher level of trust on women in comparison to women. It was indicated by Aggarwal, Goodell, & Selleck (2015) that financial institutions particularly, microfinance institutions prefer women to lend their money over men. There are two main reasons behind that, one of them is that lending to women have a higher social impact and other reason is women being more trustworthy. (Aggarwal et al., 2015) They further elaborated that such practices are more elaborated in countries which fall on the lower end of trustworthiness spectrum and in countries where formation for social trust is driven by behavioral values.

The review tends to generalize factors influencing trust without delving into contextual variations across different countries or regions. Trust dynamics can significantly differ due to cultural, economic, and political factors. Many of the studies cited are relatively recent, potentially overlooking historical shifts in trust dynamics. The review often discusses factors associated with trust without establishing causation. For example, the positive correlation between financial literacy and trust doesn't necessarily imply a

direct causal relationship. The focus on gender-based trust perceptions is insightful, but the literature tends to oversimplify the relationship between gender and trust. More nuanced analyses could consider the intersectionality of factors influencing trust among diverse groups of women. The relationship between women's trust in financial institutions and their economic views is discussed but lacks a deeper exploration. A more detailed examination of how economic conditions and policies shape trust is necessary for a comprehensive understanding. Lastly, hardly any study above has adequately addressed the role of cultural nuances in shaping trust. Cultural factors can significantly impact how individuals perceive and place trust in financial institutions. Public trust in financial institutions is important for the economy to thrive as it ensures usage of formal mode of savings management leading to availability of higher amount of funds for investment. However, this level of trust is affected by far reaching and diverse factors and can be enhanced using friendly policies and provision of quality services by the institutions. Moreover, it was observed that women tend to have a higher level of trust in financial institutions in comparison to the men.

3. Conceptual Framework

In this section elaborates conceptual framework of important determinants of trust (confidence) in financial institutions (Banks). The aim of this framework is to develop the expected relationship among the important variables that have been included in this paper.



In figure 1 given above, we explore the factors that may impact people's trust (confidence) in financial institutions (banks), taking insights from economic theories. One of the important theories is Social Capital Theory. It suggests that a functional society relies on trust and cooperation between its members, citizens, organizations, and formal and informal institutions and it was observed that the trust in institutions is in alignment with this theory (Rothstein & Stolle, 2008). Moreover, the level of justice in society is positively related to the level of trust in financial institutions. This relationship holds true since the legal system of a country plays a critical role in nurturing trust and confidence in those institutions. A better justice system encourages people to trust banks by relying on their efficiency and mechanism as they know they are accountable if they violate any of their promises to their customers (Jalil & Rahman, 2010). This can be achieved by instilling an efficient and effective governing as well as a justice system. Another important linkage shown in figure 1 is the size of the family and level of trust in banks. This relationship resonates with the Family Systems Theory, which indicates that family dynamics can influence a person's economic well-being (Bavelas & Segal, 1982; Haefner, 2014; Rothbaum et al., 2002) and, in turn, their confidence in banks. Larger families hold more money in their hands as compared to savings in banks and this can impact their confidence in banks (West et al., 2017).

Furthermore, if we consider the Human Capital Theory (HCT), then it can be observed that dependent variables pertaining to health and education and their effects on employment, closely align with it. This HCT emphasizes the relationship that exists among an individual's skills and his health, which directly affect their ability to secure and retain employment (Nafukho et al., 2004). Whereas employed people have a higher level of confidence in banks as they have a greater need for financial solutions in the form of savings management etc.

The theories mentioned above sets the background for contribution towards stable income levels and low interest rates (depending upon the macro-economic needs of the country) may contribute to economic stability, which in turn positively influences public trust in banks (financial institutions). It should be kept in mind that these relationships hold true for conventional financial institutions, however fintech may bring different consequences.

4. Data and Methodology

The data has been collected from World value survey (Wave 7), which has updated data till 2022 from female respondents only. The details of data provided are given in the table 1 below:

The focus or the dependent variable identified here is "confidence_banks." This variable indicates the level of confidence or trust people have in banks. In order to gauge its impact a Likert Scale is used; this scale has a range of one (1) to four (4). One being the lowest level of confidence and four being the highest level of confidence in banks. Since it is in categorical form having 4 answers, the most suitable model in this case is ordered logit model. The independent variables include justice, trust on government, education, employment, family size, age and health. The variable "justice" is being used here to determine the confidence of individuals on the

justice system of their respective residing country. In order to observe the role of government on level of trust in financial institutions “confidence_government” variable is used. This is also measured with the help of the Likert Scale ranging from one (1) to four (4), where one represents lowest level of confidence and four represents highest level of confidence. An in-depth impact of education on independent variables is observed with the help “lower_education” and “high_education”. The impact of both the variables is ascertained by binary values, where 1 identified the respondents who have attained that level of education and 0 indicates respondents who have not. The relationship of level employment with trust in financial institutions if observed with the help of “employed” variable. The impact of family size on trust level is gauged with the help of three variables; namely, “no_children”, “two_or_less_children” and “three_or_more_children”, the function of the variable is self-explanatory, keeping in view their name: The impact of individuals health on trust levels has been signified by the “healthy” variable. The relationship between age and level of trust is depicted using two variables one being “age” and other being “age_square”. As it is evident from the name, the first variable shows the age of the respondents in the range of 16 to 103 years. Whereas age squared is used to investigate the prospects of non-linear relationships that may exist between age and confidence in banks.

Table 1: Data for OLOGIT Regression

Variable	Obs.	Mean	Std. dev.	Min	Max
Confidence_in_banks	39,293	0.567938	0.495369	0	1
Justice	39,293	2.435014	0.928187	1	4
Confidence_in_govt	39,293	2.609345	0.975854	1	4
lower_education	39,293	0.325885	0.468711	0	1
high_educationn	39,293	0.322068	0.467275	0	1
Employed	39,293	0.612272	0.487238	0	1
no_children	39,293	0.190034	0.392333	0	1
two_or_less_children	39,293	0.424376	0.494254	0	1
three_or_more_children	39,293	0.126129	0.331999	0	1
Healthy	39,293	0.728323	0.44483	0	1
age_square	39,293	2034.69	1482.216	256	10609
Age	39,293	42.2106	15.90478	16	103

Based on the independent and dependent variables defined above, given below is the equation which is used for estimation using ordinal logistic regression model. It is important to note that in the equation, the coefficients ranging from β_0 to β_{11} are aligned with the independent variables and the error term given in the end caters to the or random factors which are specific to each individual represented in the data set.

Equation 1: The Regression Model

$$confidence_banks_i = \beta_0 + \beta_1 Justice_i + \beta_2 confidence_government_i + \beta_3 lower_education_i + \beta_4 high_education_i + \beta_5 employed_i + \beta_6 no_children_i + \beta_7 two_or_less_children_i + \beta_8 three_or_more_children_i + \beta_9 healthy_i + \beta_{10} age_i + \beta_{11} age_square_i + \varepsilon_i \dots (1)$$

As far as the source of the data is concerned, it was taken from the latest wave i.e., wave 7 of World Value Survey (WVS). The time period of the data is comprised of years ranging from 2017-2022. Furthermore, the reason for using ordinal logistic regression is that the measurement scale used for dependent variable “confidence in banks”, is ordinal in nature. Therefore, it is appropriate to use this type of regression for analyzing as well as modelling the relationship between the independent and dependent variables.

5. Results

This section of the paper will discuss the finding of the regression analysis, see table 2 given below, with an aim to explain the relationships that exist between the dependent variable, "Confidence in banks," and independent variables.

It is apparent that a clear association can be identified between the dependent variable "confidence_in_banks" and both the variables "justice" and "confidence_government". It is worth noting that these variables serve as indicators of the level of trust placed in institutional structures. Consequently, it can be deduced that as the overall level of confidence in the government and a country's justice system, or any other institutions, increases, the confidence in the banking system experiences a decline (Fungáčová et al., 2019). This phenomenon can potentially be attributed to the fact that when individuals possess a heightened sense of trust in the institutional performance of their country, they tend to adopt a more critical perspective towards the perceived shortcomings of the banks. This critical outlook ultimately leads to a decrease in trust. These results are an unexpected and novel.

Furthermore, it became evident that the variable "confidence_in_banks" exhibits a positive correlation with the variable "lower_education" while displaying a negative correlation with the variable "high_education". This finding suggests that as the level of education among individuals increases, their trust in banks experiences a decline. Interestingly, this finding aligns with the conclusions drawn by Fungáčová et al. (2019), who also assert that the level of trust in banks tends to decrease as the level of education rises. One of the reasons could be that they trust low on banks and institutions and switch to other options for financial needs.

Moreover, the influence of employment on trust in financial institutions shows interesting results as well, it becomes evident that there is a favorable correlation between being employed and expressing trust in banks for their financial decisions. This implies that

individuals who are employed are more likely to exhibit higher levels of trust in the banking system. It is evident that the variables "confidence_in_banks", "justice", "confidence_government", "lower_education", "high_education", and "employed" all play a significant role in shaping the level of trust placed in the banking system.

Table 2: Results OLOGIT Regression

Variables	(1) Logit Model	(2) Margins
confidence_in_banks (dependent variable)		.
Justice	-0.416*** (0.0131)	0.6596*** (0.0087)
confidence_government	-0.645*** (0.0136)	0.5246*** (0.0071)
lower_education	0.203*** (0.0281)	1.2255*** (0.0344)
high_education	-0.0335 (0.0271)	0.9670 (0.0262)
Employed	0.188*** (0.0244)	1.2071*** (0.0295)
no_children	0.122*** (0.0350)	1.1300*** (0.0396)
two_or_less_children	0.168*** (0.0316)	1.1825*** (0.0374)
three_or_more_children	0.116*** (0.0434)	1.1224*** (0.0487)
Healthy	-0.0751*** (0.0252)	0.9276*** (0.0234)
age_square	0.000181*** (4.30e-05)	1.0002*** (0.0000)
Age	-0.0267*** (0.00414)	0.9737*** (0.0040)
Constant	3.544*** (0.0942)	34.5951*** (3.2581)
Observations	39,775	39,775

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Another variable of our interest is family size and its impact on trust in banks. The variable is measured by "no_children," "two_or_less_children," and "three_or_more_children". The results from the logit model suggest that individuals with varying numbers of children tend to exhibit greater confidence in banks relative to those without children. This may also suggest that marital status has an impact on the trust in banks. However, it was indicated by (Zyberi, 2021) that personal factors like marital status do not have any significant impact on the level of trust in banks. Hence, we have considered relatively more important variable, which is number of children or family size in impacting the trust on financial institutions. The health indicator which is represented by "Healthy" has a negative relationship with "confidence_in_banks" implying that individuals with good health conditions tend to have lower levels of confidence in banks. However, this counterintuitive outcome may necessitate further investigation. As it was indicated by (Crujisen et al., 2022) that there exists a positive relationship between level of health and trust in institutions like banks. Lastly, the regression results show that the level of trust in banks declines with age, as it is evident from the negative coefficient for "Age". Indicating that as an individual ages, his trust in banks declines. As the consumer ages his trust in banks declines. However, the positive sign associated with "Age Square" indicates the presence of a quadratic relationship between age and confidence in banks. This suggests that initially, as individuals age, their confidence in banks appears to increase but eventually this effect wanes off as individuals continue to age. Moreover, younger population tends to place higher level of trust in banks in comparison to the population who falls in upper age bracket (Ennew & Sekhon, 2007).

6. Conclusion

We determine that public trust in financial institutions is influenced by different important factors, particularly institutional trust measuring trust in government and justice in a country. We show that countries that prioritize gender equality and financial inclusion for women experience higher levels of trust among their female population. This finding is significant for developing countries, especially, where improving women's trust in financial institutions could lead to a more stable economy and increased investment. Additionally, the paper suggests that building trust in banks encourages the use of formal savings management and reduces reliance on informal methods, ultimately improving the country's economic conditions, particularly for those who are employed individuals. In addition, the investigation lays the groundwork for future policy creation centered on augmenting female reliance in banking institutions via financial inclusion and gender mainstreaming.

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