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Financial Literacy and Gender: A Behavioral Perceptive, Evidence from G20 Nations

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Abstract
This research study is an attempt to explore the financial literacy index of G20 nations, focusing on the importance of financial literacy, the gender gap in financial literacy, and its impact on individuals and the economy. The research highlights the need for equal access to financial education and resources for both men and women, suggesting gender-specific programs, embedding financial education in curricula, and promoting inclusive financial services. It emphasizes the significance of the financial literacy index as a tool to measure financial knowledge and understanding within a population. By improving financial literacy, individuals can enhance their financial well-being, make better financial decisions, and avoid financial hardships. It also contributes to economic growth and stability at both individual and societal levels. The geometric mean tool is used by aggregating scores on three major financial index components. The findings of the financial literacy index for G20 nations indicate that most countries have above-average scores, indicating a relatively high level of financial literacy. However, some countries, such as Argentina and Italy, have lower scores, suggesting room for improvement in financial literacy education. Conversely, countries like Canada, China, France, Germany, Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, and the United Kingdom have higher scores, indicating a better understanding of financial concepts among their human dividends. The research study specifically highlights India as having a below-average financial literacy index score, emphasizing the need for improvement in financial literacy education. Given India's large population and growing economy, individuals need a good understanding of financial concepts to make informed decisions about their finances. In summary, the abstract presents a comprehensive overview of the financial literacy index of G20 nations, discussing its significance, providing key findings, and suggesting measures to bridge the gender gap and improve financial literacy worldwide.
Key words: Financial Literacy Index, G20 nations, OECD countries, Geometric Mean, GPFI.

Introduction

Financial literacy refers to the knowledge and understanding of personal finance and how to manage money effectively. It encompasses various components such as budgeting, saving, investing, understanding debt and credit, retirement planning, and financial goal setting. Financial literacy is the possession of knowledge and skills that allows individuals to make informed decisions regarding their financial resources. It includes understanding how money works, managing personal finances, and planning for the future (World Bank). In the age of financial globalization, financial literacy has become increasingly relevant due to the complex and interconnected nature of the global financial system. With globalization, individuals are exposed to a wide range of financial products and services, such as international investments, cross-border banking, and foreign exchange transactions. Without sufficient financial literacy, individuals may make uninformed decisions that can lead to financial losses or hardship. Additionally, global economic changes, such as fluctuations in exchange rates or economic crises, can have a significant impact on personal finances. Financial literacy equips individuals with the knowledge and skills to navigate these challenges and make informed decisions that align with their financial goals. Financial literacy plays a crucial role in the age of financial globalization. It provides individuals with the necessary tools to understand and manage their finances effectively, enabling them to make informed decisions in an increasingly interconnected and complex financial world.

The G20 is an international forum comprising of the world's major advanced and emerging economies. Representing two-thirds of the global population and 90% of the world's GDP, the G20 nations play a crucial role in world economic development. The G20's primary objective is to promote international financial stability and sustainable economic growth. They achieve this by facilitating cooperation and coordination among member countries, addressing global economic challenges, and implementing policies that promote economic resilience and inclusivity. The G20 nations have a significant impact on global economic development through their collective actions and policies. They have the power to shape trade agreements, promote investment, and foster economic reform. Additionally, their decisions on issues such as financial regulation, climate change, and development aid have far-reaching consequences for the global economy. Furthermore, the G20 serves as a platform for dialogue and collaboration between developed and developing countries. This enables sharing of best practices, knowledge transfer, and capacity building, all of which contribute to sustainable economic development worldwide. The G20 nations play a vital role in world economic development through their collective actions, policies, and commitment to cooperation. Their efforts are crucial in addressing global economic challenges and promoting inclusive and sustainable growth.

According to a study by the Organisation for Economic Co-operation and Development (OECD), women tend to have lower levels of financial literacy compared to men. This gender gap in financial literacy can have serious consequences, as it may lead to women being less confident in managing their finances, making poor financial decisions, and facing greater vulnerability to financial hardships.Addressing the gender gap in financial literacy is important for achieving gender equality and economic empowerment. Governments, educational institutions, and financial institutions should focus on providing equal access to financial education and resources for both men and women. This may include implementing gender-specific financial literacy programs, embedding financial education in school curricula, and promoting inclusive financial services that cater to the specific needs of women. By improving financial literacy among women, we can bridge the gender gap and promote greater financial security and independence for all. The Financial Literacy Index is a tool used to measure the level of financial knowledge and understanding within a population. It consists of various dimensions, including knowledge, skills, behavior, and attitude towards financial matters. The index helps to identify the areas where individuals may need further education and support to make informed decisions about their finances. By improving financial literacy, individuals can enhance their financial well-being, make better investment choices, and avoid falling into debt or fraud. It also promotes economic growth and stability at both the individual and societal levels.

Objective of the study

- To analyze the financial literacy levelas per gender status in G20 nations.
- To examine the behavioral factors in terms of investment literacy among men and women in G20 nations.

Literature review

Dr. Abdul Azeez N. P and Prof. S.M. Jawed Akhtar (2020.In the research paper titled "Gender Differences in Financial Literacy: Evidence from India explore the disparities in financial literacy between men and women in India. The study provides evidence suggesting that women have lower financial literacy levels compared to men. These findings are significant as financial literacy plays a key role in individuals' financial decision-making. The authors highlight the importance of gender-sensitive financial literacy programs to bridge this gap and empower women economically. The paper provides valuable insights into the gender dynamics of financial literacy in India and offers potential solutions to address the issue.

Bucher-Koenen and Lusardi (2020) examine the state of financial literacy among women in Asia, Europe, and Central America. The authors find that women consistently exhibit lower levels of financial literacy compared to men. Furthermore, they highlight the importance of financial literacy for women, as it positively impacts their financial behavior and outcomes. The paper provides valuable insights into the gender gap in financial literacy and emphasizes the need for targeted interventions and educational programs to improve women's financial knowledge and decision-making abilities.

Lusardi and Mitchell (2011).The research paper by authors investigates the relationship between financial literacy and retirement planning in the United States. The study uses data from the Health and Retirement Study and finds that individuals with higher levels of financial literacy are more likely to engage in retirement planning activities, such as saving in a retirement account or calculating retirement needs. The authors also find that financial literacy is positively associated with retirement wealth. However, they note that many Americans lack basic financial knowledge, which can lead to poor financial decisions and inadequate retirement savings. The paper highlights the importance of financial education and suggests policy interventions to enhance financial literacy. Overall, this study provides valuable insights into the relationship between financial literacy and retirement planning, emphasizing the need for improved financial knowledge among individuals to ensure better retirement outcomes.

Research Methodology

The study is based on secondary data obtained from the Global Partnership for Financial Inclusion (GPFI). The research will focus on three primary parameters of the Financial Index, namely financial knowledge, financial behavior, and financial attitude, to examine the gender gap in financial literacy in G20 nations.

Research Design:

The research will follow a quantitative research design. Secondary data will be collected from the GPFI, which is a credible and reliable source for financial inclusion-related information. The data collected will be analyzed using statistical techniques to establish the relationship between financial literacy and the gender gap in G20 nations with help of Python software. The financial literacy Index has been calculated by incorporating three financial literacy scores on each sub construct and their geometric mean.

Study Period:

Year 2017 has been taken as reference year in absence of data availability on each indicator pertaining to financial literacy index for period 2019.

$\text{FI} = \text{GM}\sqrt[3]{aij * b\alpha j * c\beta j}$

GM is Geometric Mean notation.

Here, a,b and c are Financial Literacy Index variables

i, α β are each parametric scores under sub dimension of financial Literacy Index of j^{th} country in sample of G20 countries.

Data Presentation, Analysis and Discussion

Table:1

Country	Account, female (% age 15+)	Account, male (% age 15+)	@index
Argentina	48.71	50.76	95.96
Brazil	70.04	67.51	103.75
Canada	99.73	99.85	99.87
China	79.53	75.66	105.12
France	94.00	91.29	102.98
Germany	99.14	99.20	99.94
India	79.88	76.64	104.22
Indonesia	48.86	51.35	95.14
Italy	93.79	91.62	102.36
Korea, Rep.	98.24	98.06	100.18
Mexico	94.85	94.69	100.18
Russian Federation	36.93	33.29	110.95
Saudi Arabia	75.76	76.13	99.51
South Africa	71.70	58.17	123.26
Turkey	69.22	69.99	98.90
United Kingdom	68.59	54.29	126.33

Source: www.gpfi.org

@ Gender Gap Index on Financial Literacy

$\frac{Female\ Account}{Male\ Account} * 100$

The data from above table shows the percentage of women and men with bank accounts in various G20 nations, as well as the gender gap index for each country. The gender gap index is a measure of gender equality, with a score of 100 indicating complete equality.

In terms of financial literacy, Canada has the highest percentage of both women and men with bank accounts, with 99.73% and 99.85% respectively. This suggests that the population in Canada has a high level of financial understanding and access to financial services. Germany and France also have high levels of financial literacy, with over 99% of both men and women having bank accounts.

On the other hand, Argentina and Indonesia have relatively low levels of financial literacy, with less than 49% of women in Argentina and less than 49% of men in Indonesia having bank accounts. This could indicate a lack of access to financial services or limited financial education in these countries.

In terms of the gender gap index, South Africa has the highest score, indicating a relatively high level of gender equality. This is followed by the United Kingdom and Russia. On the other hand, Turkey and Indonesia have the lowest scores, suggesting a larger gender gap in these countries.

Overall, there seems to be a general correlation between financial literacy and gender gap index. Countries with higher levels of financial literacy also tend to have higher gender equality scores. This suggests that improving financial education and access to financial services could help reduce the gender gap in these countries.

Table: 2

Country	Adults who actively budget/ keep track of their money (%)	Adults who shop around for financial products (%)	Adults who understand simple and compound interest (%)	Adults who understand the relationship between risk and return (%)	Adults who understand inflation (%)	Adults who understand risk diversification (%)
Argentina	38.54	28.12	8.11	67.91	91.23	59.47
Brazil	36.12	53.65	17.93	84.35	58.36	77.25
Canada	58.38	59.18	38.52	86.33	92.12	68.16
China	72.04	69.31	42.33	74.39	77.13	57.48
France	76.49	77.95	33.73	86.85	86.59	74.97
Germany	32.27	30.30	39.06	76.92	79.72	64.74
India	54.45	33.66	15.03	77.63	73.13	49.82
Indonesia	67.40	83.30	35.70	73.30	66.50	47.80
Italy	31.24	22.92	22.57	73.26	71.24	36.61
Korea, Rep.	70.88	63.19	34.78	88.46	80.44	80.93
Mexico	36.98	8.46	2.96	79.69	87.15	63.88
Russian Federation	47.14	45.92	26.80	78.32	66.50	41.29
Saudi Arabia	59.11	53.00	33.00	66.69	70.89	60.30
South Africa	42.61	44.00	12.86	75.91	85.90	55.28
Turkey	67.93	52.81	18.85	90.11	84.18	74.23
United Kingdom	51.25	32.17	36.46	74.33	79.92	52.40

Source: www.gpfi.org

Financial literacy plays a crucial role in enabling individuals to make informed decisions about their personal finances and investments. The data provided above gives us insights into the financial literacy levels and behavioral perspectives of investment determinants across G20 nations.

From the above table, it is evident that Looking at the percentage of adults who actively budget or keep track of their money, we can see that the highest levels are in France (76.49%) and the lowest in Italy (31.24%). This indicates a significant difference in the financial discipline and awareness of individuals in these countries.

As for shopping around for financial products, Brazil (53.65%) and Indonesia (83.3%) have the highest percentages, suggesting that individuals in these countries are more proactive in seeking out the best financial options available to them. Conversely, countries like Mexico (8.46%) and Italy (22.92%) have much lower percentages, indicating a lack of awareness or initiative in exploring different financial products.

Understanding the concepts of interest, risk, and inflation are essential in making informed investment decisions. While countries like China and Korea, Rep. have relatively high percentages of adults who understand simple and compound interest, countries like Argentina and Mexico have significantly lower percentages. This suggests that there is a need for more financial education in these countries to improve the understanding of basic financial concepts.

In terms of risk and return, Turkey (90.11%) and France (86.85%) have the highest percentages of adults who understand the relationship between risk and return. On the other hand, countries like China (74.39%) and Russia (78.32%) have relatively lower percentages. This indicates that individuals in Turkey and France are more likely to consider the risk associated with different investments and make informed decisions accordingly.

Lastly, understanding risk diversification is crucial for building a well-balanced investment portfolio. Germany (64.74%) and South Africa (55.28%) have relatively higher percentages of adults who understand risk diversification, while Italy (36.61%) and France (74.97%) have significantly lower percentages. This suggests that there is a need for more education and awareness around diversifying investments in these countries.

Table: 3

Country	Financial knowledge score (0-7, high)	Financial behavior score (0-9, high)	Financial attitudes score (0-3, high)	GM	FI
Argentina	4.05	4.37	2.94	3.74	Below Average
Brazil	4.32	4.62	3.13	3.97	Above Average
Canada	4.93	6.16	3.47	4.72	Above Average
China	4.74	6.21	3.12	4.51	Above Average
France	4.92	6.75	3.19	4.73	Above Average
Germany	4.75	5.82	3.24	4.48	Above Average
India	3.65	5.61	2.63	3.78	Below Average
Indonesia	3.91	5.72	3.73	4.37	Above Average
Italy	3.52	4.43	3.08	3.64	Below Average
Korea, Rep.	4.91	5.80	3.18	4.49	Above Average
Mexico	4.12	5.01	2.95	3.93	Above Average
Russian Federation	4.14	5.11	2.90	3.95	Above Average
Saudi Arabia	3.87	5.64	0.05	1.03	Above Average
South Africa	3.67	5.40	3.11	3.95	Above Average
Turkey	4.61	4.83	3.06	4.08	Above Average
United Kingdom	4.21	5.58	3.28	4.26	Above Average

Source:www.gpfi.org

Calculated GM = 3.81

GM> 3.81 is Above Average, GM < 3.81 Below Average

The financial literacy index of G20 nations shows that most countries have above-average scores, indicating a relatively high level of financial literacy among their populations. Argentina and Italy have the lowest scores, suggesting that there is room for improvement in the financial literacy education in these countries. On the other hand, Canada, China, France, Germany, Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, and the United Kingdom have higher scores, indicating a better understanding of financial concepts among their populations. Financial literacy is crucial for individuals to make informed financial decisions and manage their money effectively.

It can also be seen that India has a below-average financial literacy index score of 3.78. This suggests that there is a need for improvement in financial literacy education in India. With a large population and a growing economy, it is essential that individuals in India have a good understanding of financial concepts to make informed decisions about saving, investing, and managing their money

Conclusion

In conclusion, the data from the financial literacy index of G20 nations highlights both the strengths and areas for improvement in terms of financial literacy within these countries. Overall, countries like Canada, Germany, and France have high levels of financial literacy, with a high percentage of individuals having bank accounts and understanding key financial concepts. On the other hand, countries like Argentina, Indonesia, and India have lower levels of financial literacy, indicating a need for improvement in financial education and access to financial services. Further, addressing the gender gap in financial literacy is crucial for achieving gender equality and economic empowerment within the G20 nations. By providing equal access to financial education and resources for both men and women, governments, educational institutions, and financial institutions can promote greater financial security and independence for all. The Financial Literacy Index serves as a valuable tool to measure the level of financial knowledge and understanding within a population, helping to identify areas for further education and support. By improving financial literacy, individuals can enhance their financial well-being and contribute to economic growth and stability at both the individual and societal levels.

Based on the research study, here are coupe of recommendations to enhance financial literacy:

1. Increase financial education programs: Governments and educational institutions should prioritize financial literacy education from an early age. This can be done by introducing financial literacy courses in schools and universities and providing resources and workshops for adults.
2. Enhance access to financial services: Countries with lower percentages of individuals with bank accounts, such as Argentina and Indonesia, need to improve access to financial services. This can be achieved by increasing the number of banks and financial institutions in underserved areas and promoting financial inclusion initiatives.
3. Promote financial awareness campaigns: Governments and organizations should run awareness campaigns to educate individuals about the importance of financial literacy and the benefits of making informed financial decisions. These campaigns can be conducted through various mediums such as television, radio, social media, and community workshops.

By implementing these recommendations, countries can improve financial literacy levels, empower individuals to make better financial decisions, and ultimately contribute to economic growth and development.

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