

DataKind - Financial Inclusion - 2025

Data Sources:

1. Basic Statistics 2025 (CSV file), <https://data.adb.org/dataset/basic-statistics-asia-and-pacific>
2. Bangko Sentral Ng Pilipinas, <https://www.bsp.gov.ph/SitePages/InclusiveFinance/FinancialServiceAP.aspx>
3. Country: Philippines, <https://digitalgendergaps.org/dashboard/>

Data cleaning & Transformation methods

Data Source (1)

- Relevant columns, leaning towards financial inclusion selected for analysis
- Column names changed for improved readability
- Data transformed
 - o "Statistics" column → into separate columns
 - o "Regional Economy" → index column
 - o Null values depending on category was either dropped or replaced by mean value of respective column

Data Source (2)

- For each region, the data was divided according to province
- Column names changed for improved readability
- 87 Excel files → merged → single dataset
- Data transformed
 - o "Banks with ATM" was transformed into separate category
 - o Separate column created → "Region" → to get insights on data per region
 - o Values in "With ATM" column were replaced by YES/NO
 - "✓" → YES
 - Absent → NO

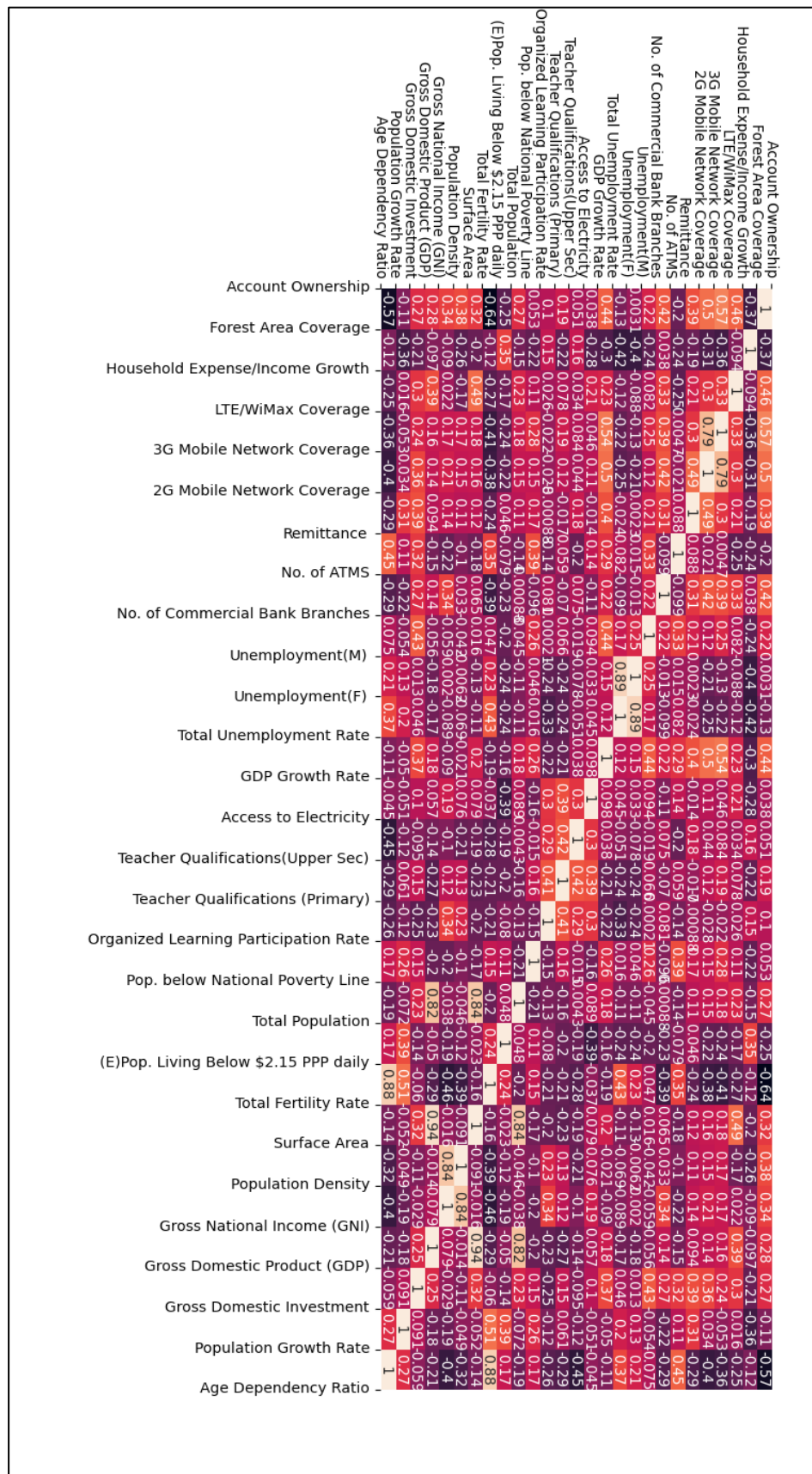
Data Source (3)

- Relevant columns selected for analysis, others were dropped
- Relevant data cleaning as for previous datasets

Some Insights and Visualizations

An overall heat map was generated to get a brief look on what kind of correlation existed among the categories.

Fig 1. Overall heat map



To get a better outlook on Account Ownership, two separate heat maps were generated. Certain columns were dropped from the overall heat map to check for columns with better correlation.

Fig 2. Heat map 1

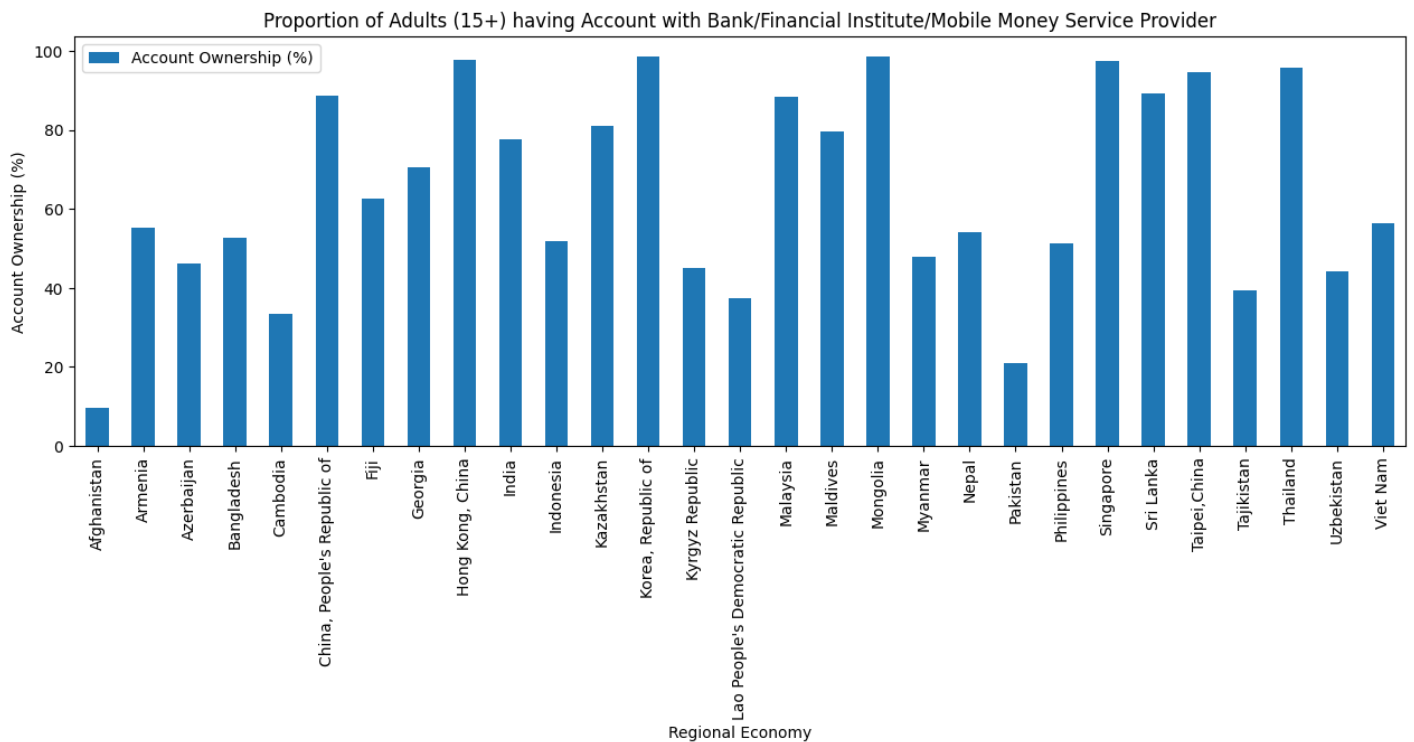


Fig 3. Heat map 2



A bar chart was plotted to find out how the countries fared in terms of Account Ownership.

Fig 4. Bar chart showing Account Ownership



Categories that showed significant correlation relevant to financial inclusion were then plotted against account ownership. The regression plots are as below.

Fig 5. LTE/WiMax

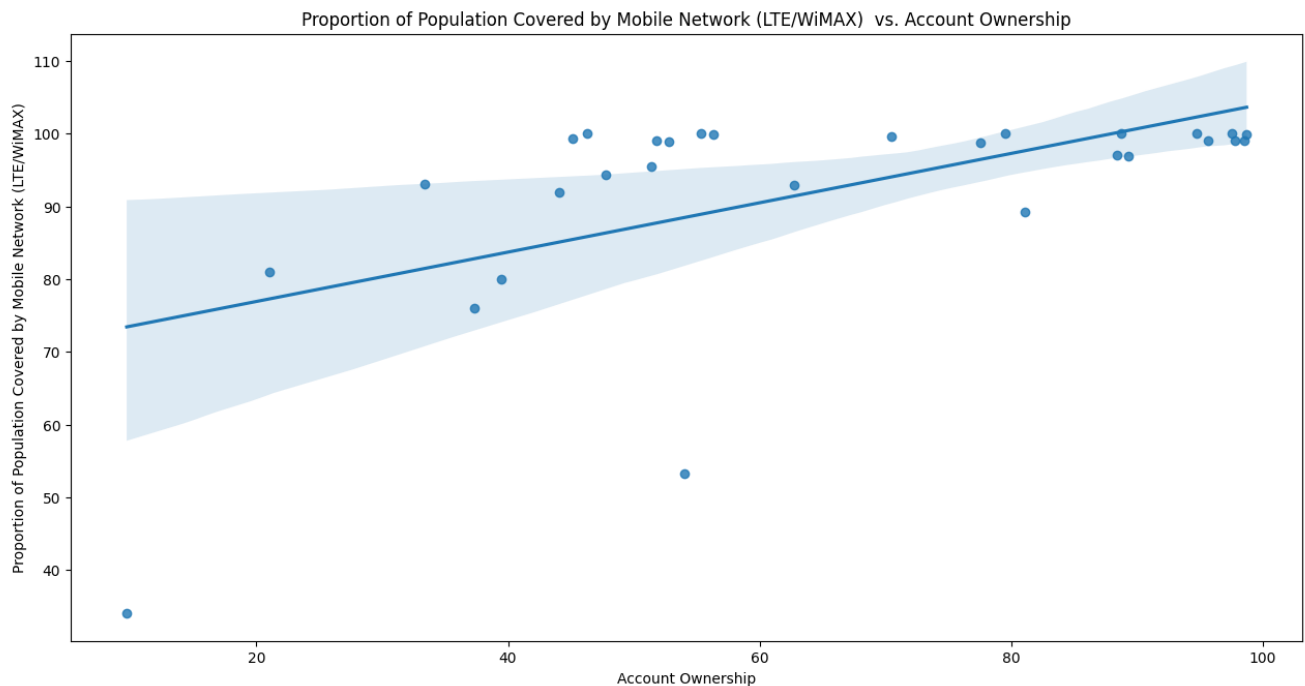


Fig 6. 2G

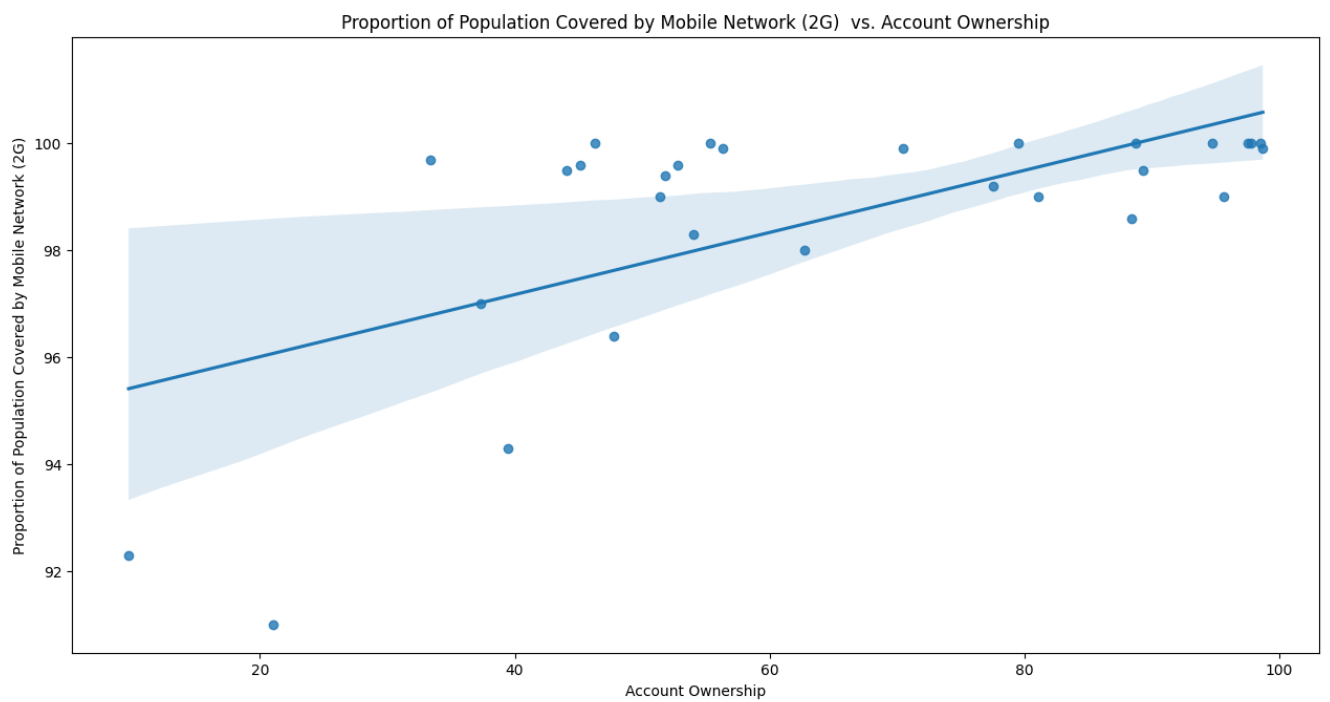


Fig 7. 3G

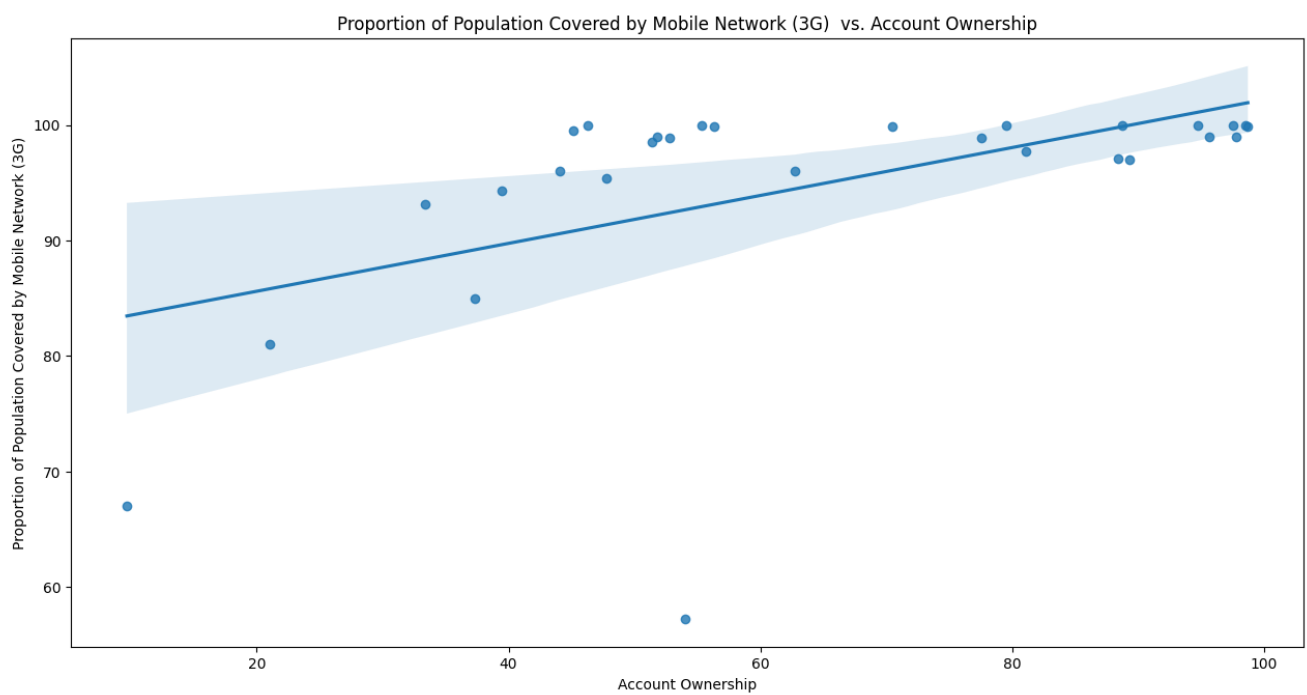


Fig 8. Bank Branches

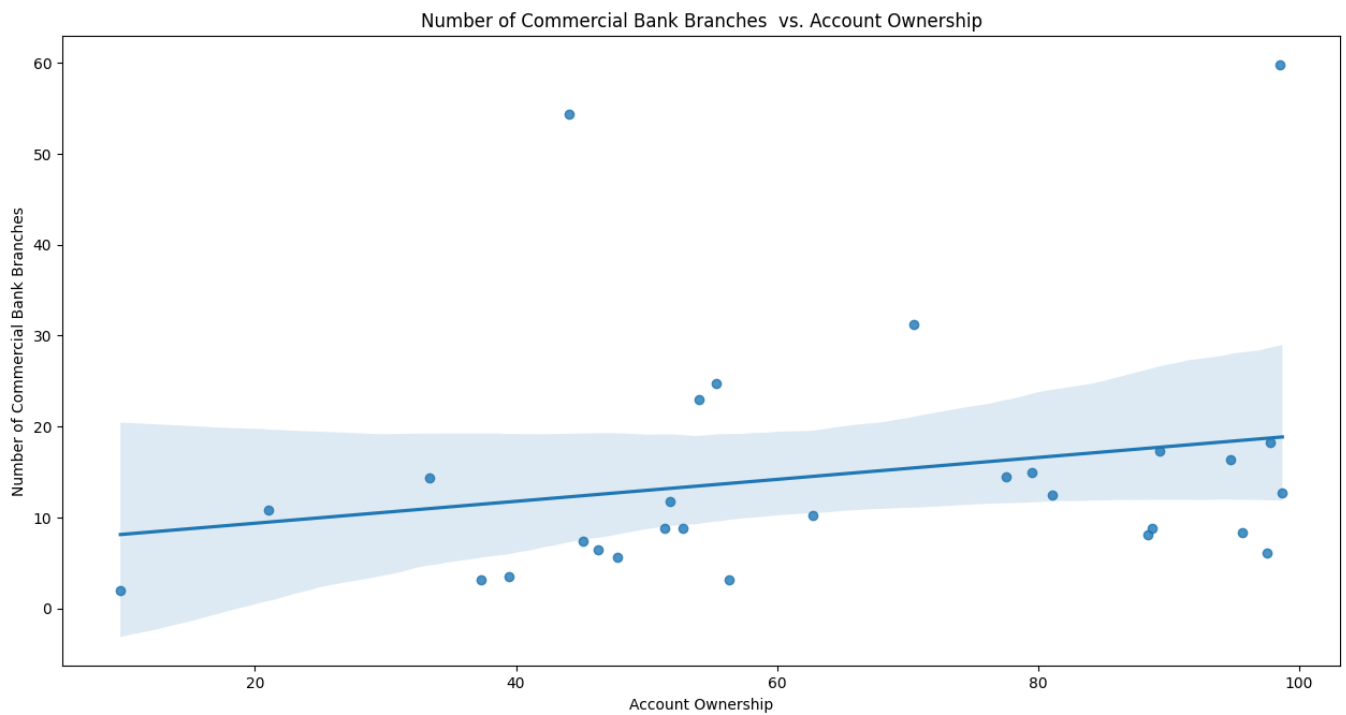


Fig 9. No. of ATMs

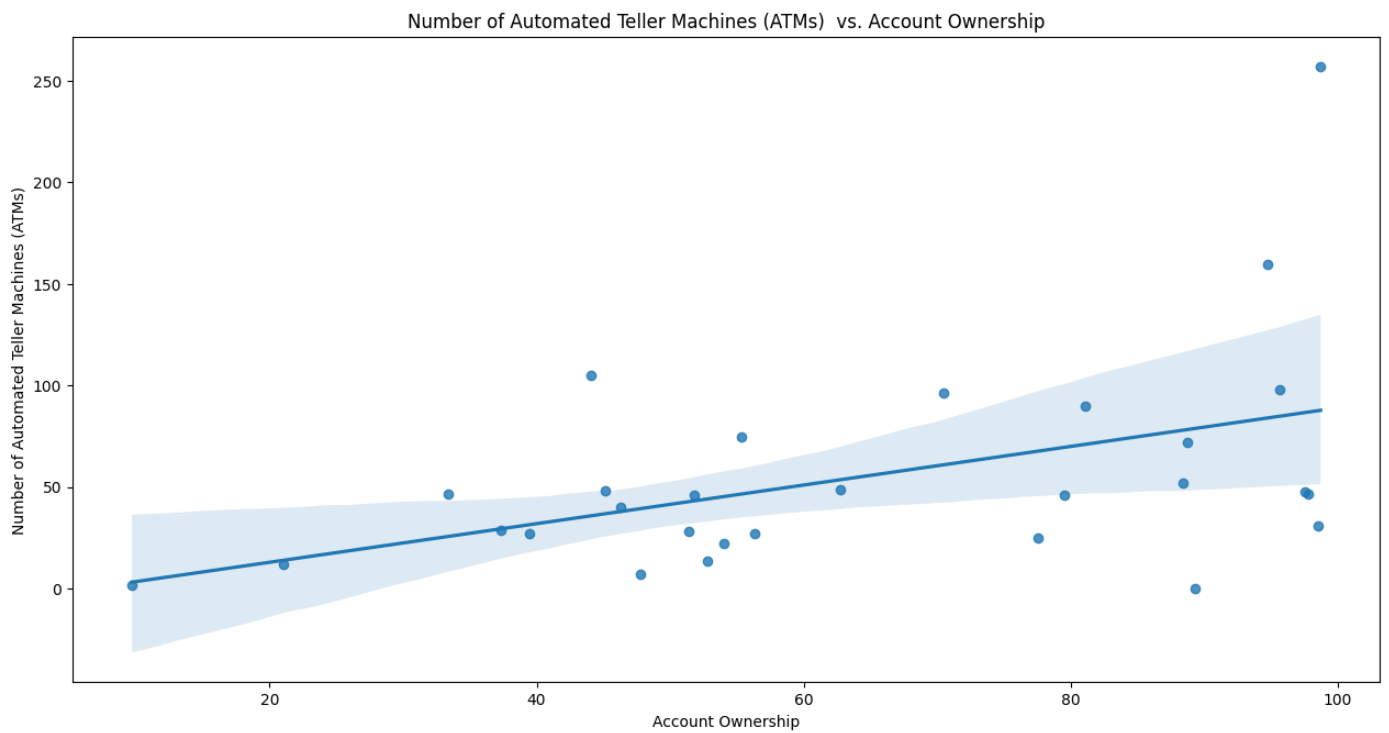


Fig 10. Gross National Income

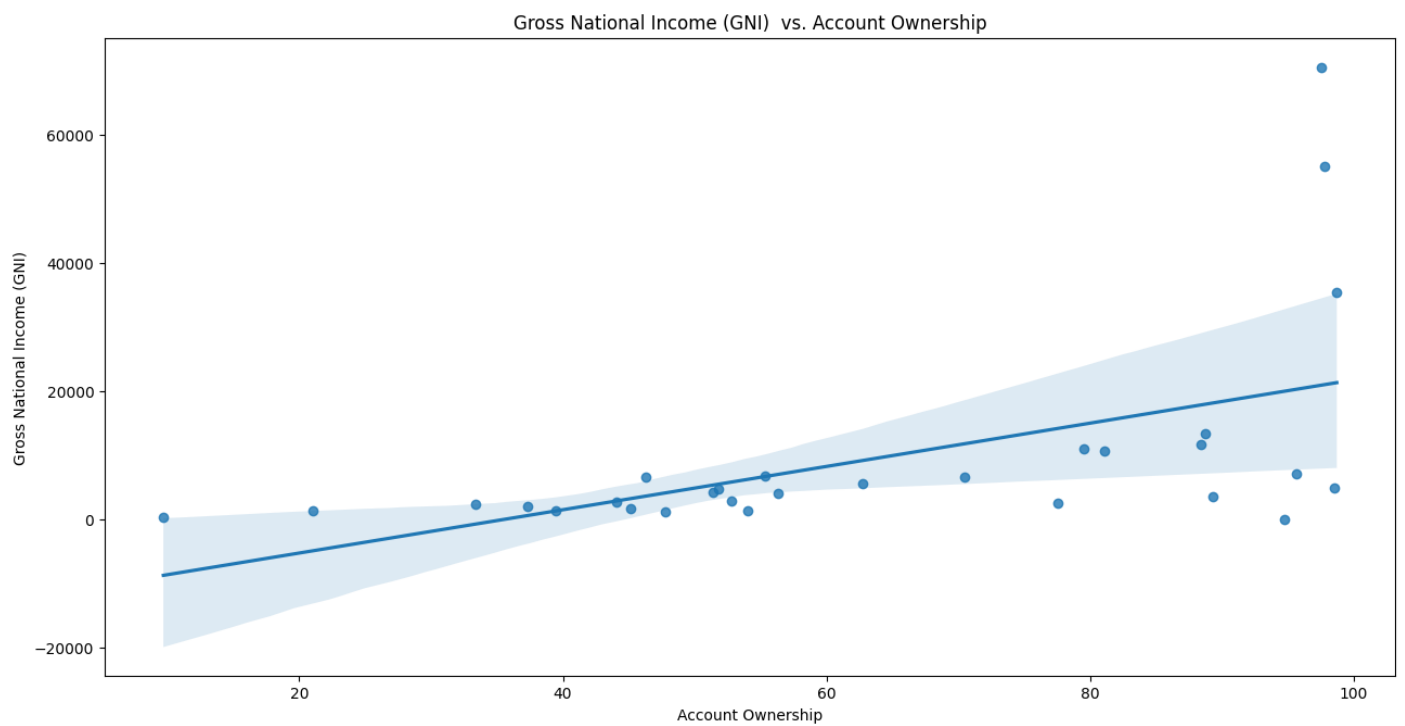


Fig 11. Growth Rate of Household Income/Expenditure Per Capita

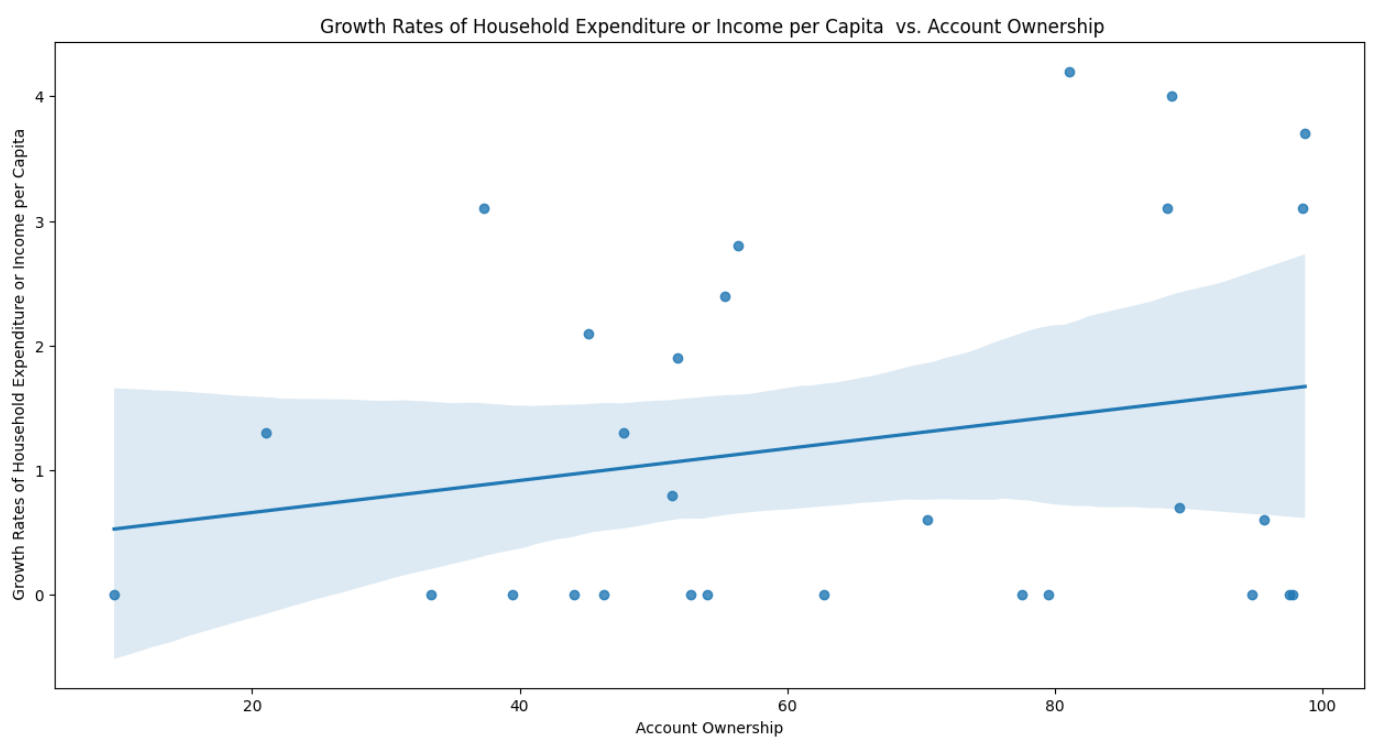


Fig 12. Surface Area

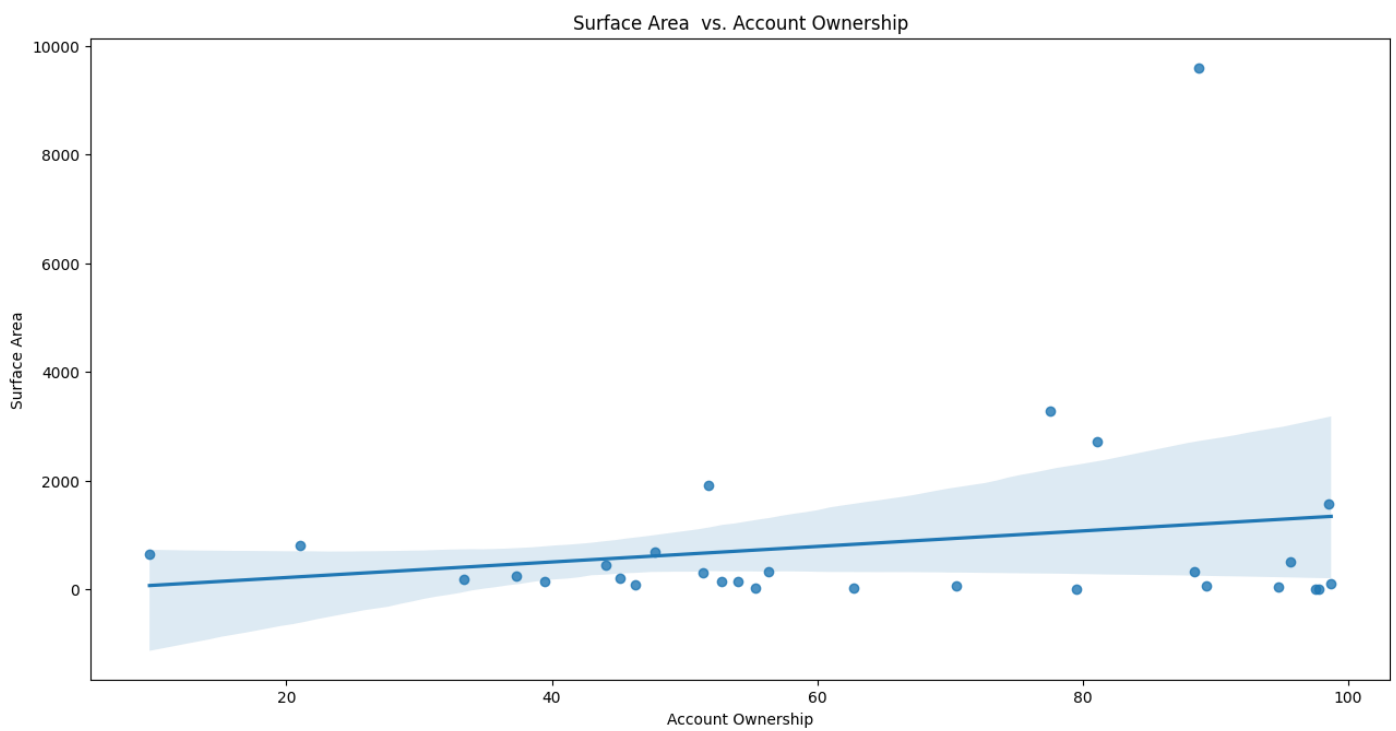


Fig. 13 Fertility Rate

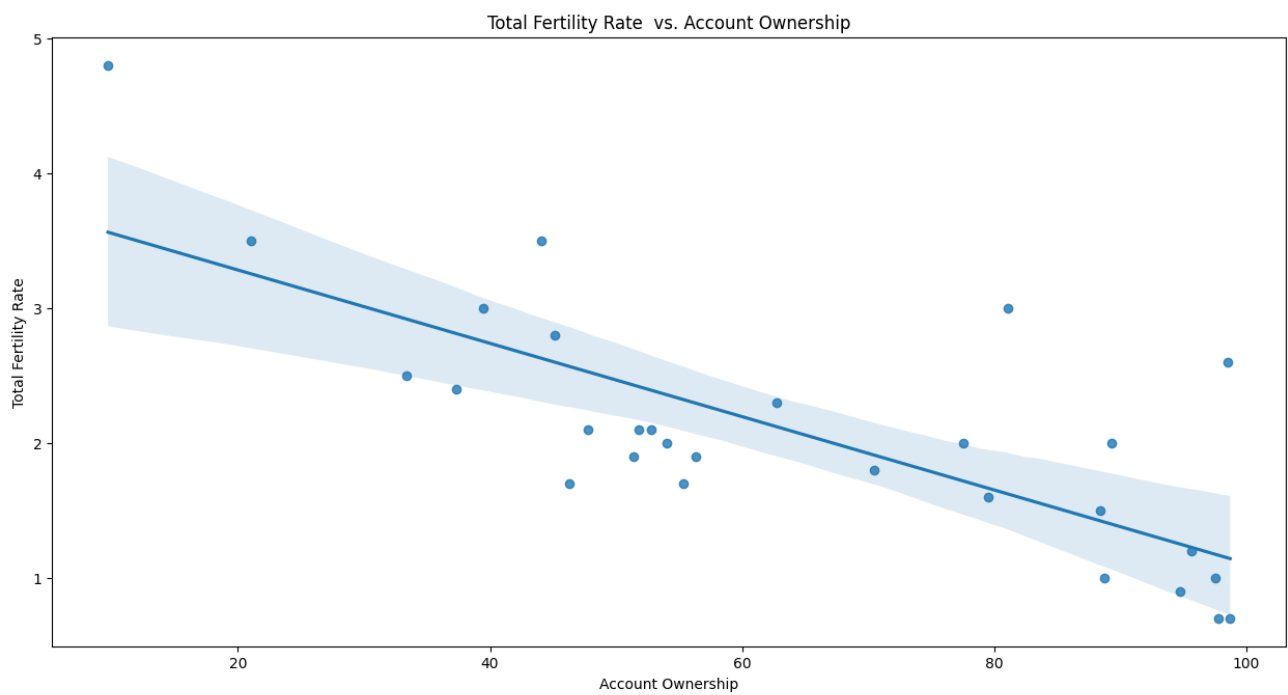


Fig 14. Population Density

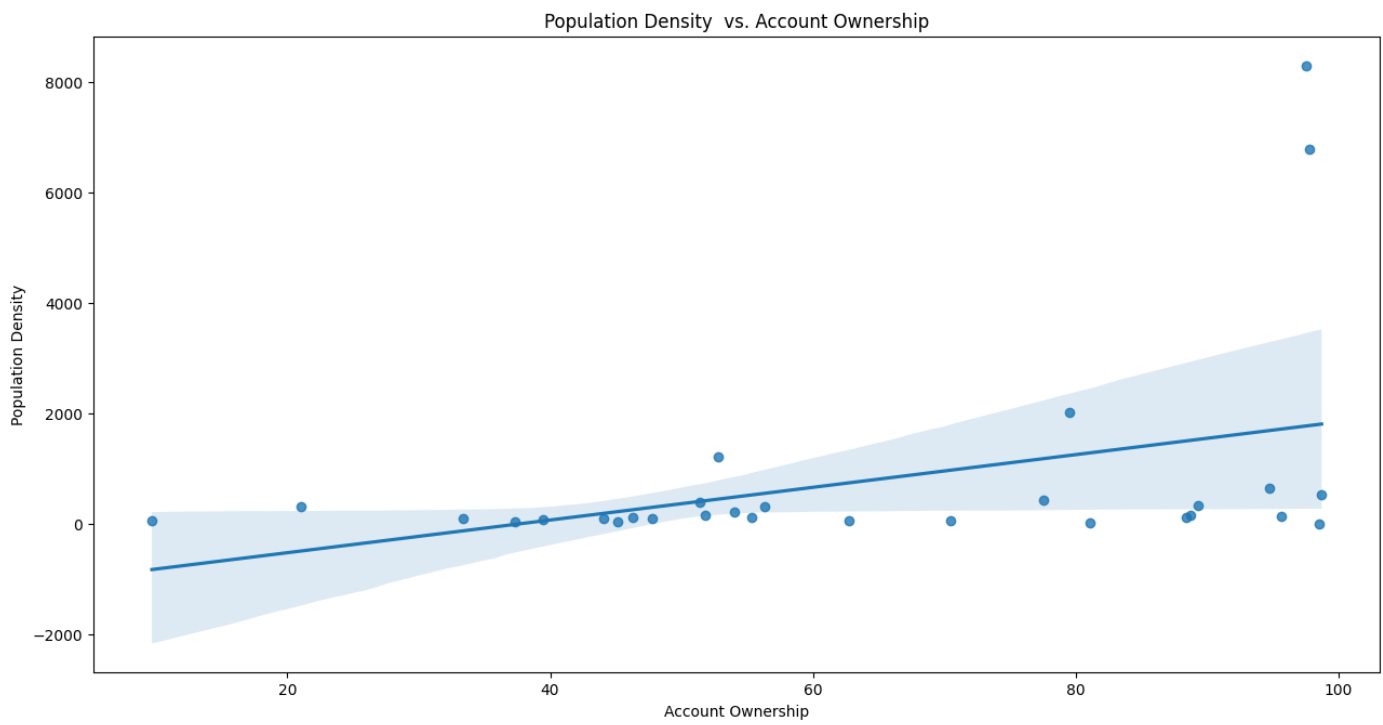
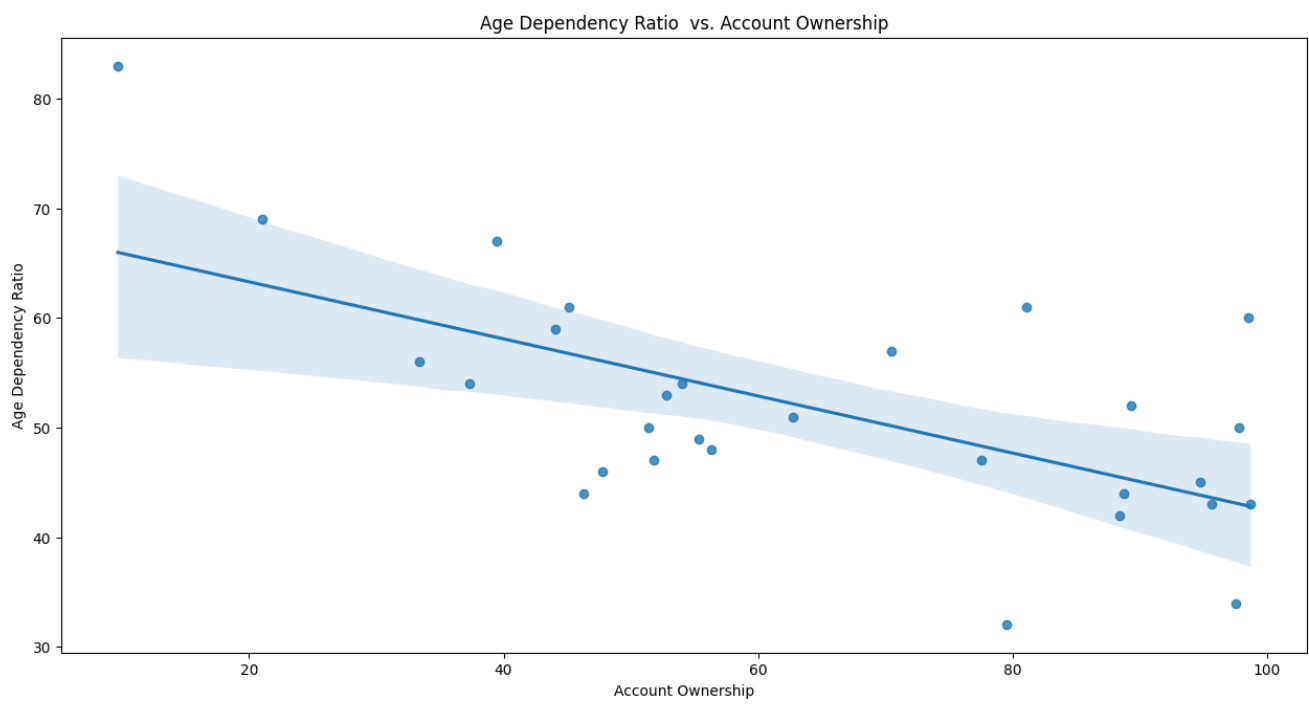


Fig 15. Age Dependency Ratio



For most of the plotted categories above, except for Age Dependency ratio and Fertility rate, there is a positive trend in the data.

#Note: With these categories in mind, I was looking for data on Phillippines, especially anything in the regional or provincial level. I couldn't find much, but I did find data from Data Source 2 and 3 that had some data on regional and provincial levels. Since they were relevant to the categories from Data Source 1 in regards to financial inclusion, I wanted to find what I could glean from these datasets.

Fig 16. Regional level

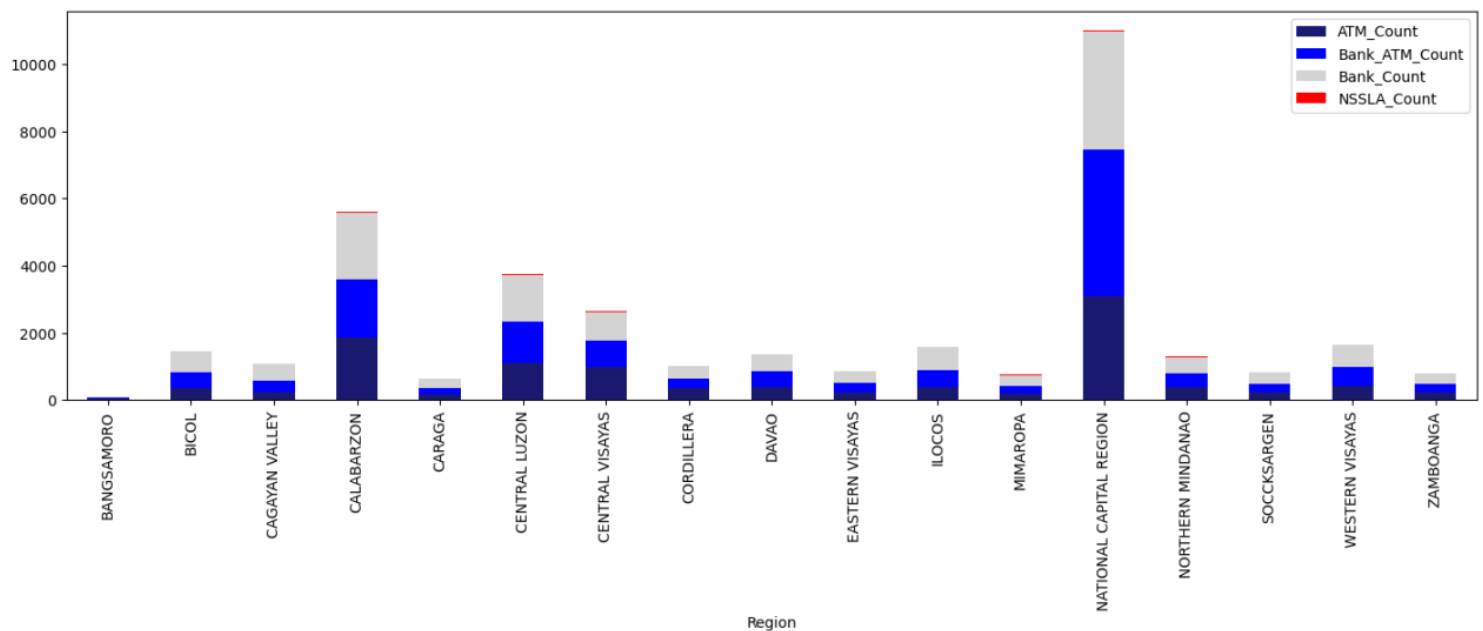
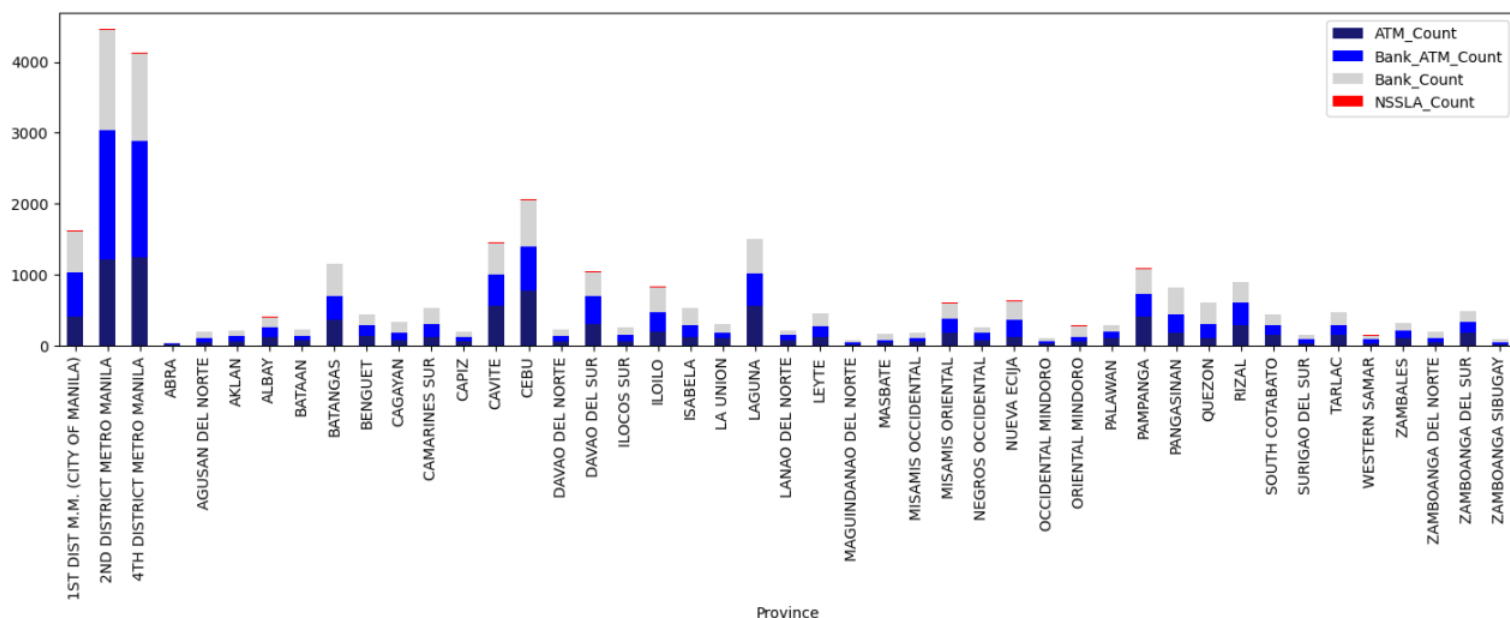


Fig 17. Provinces

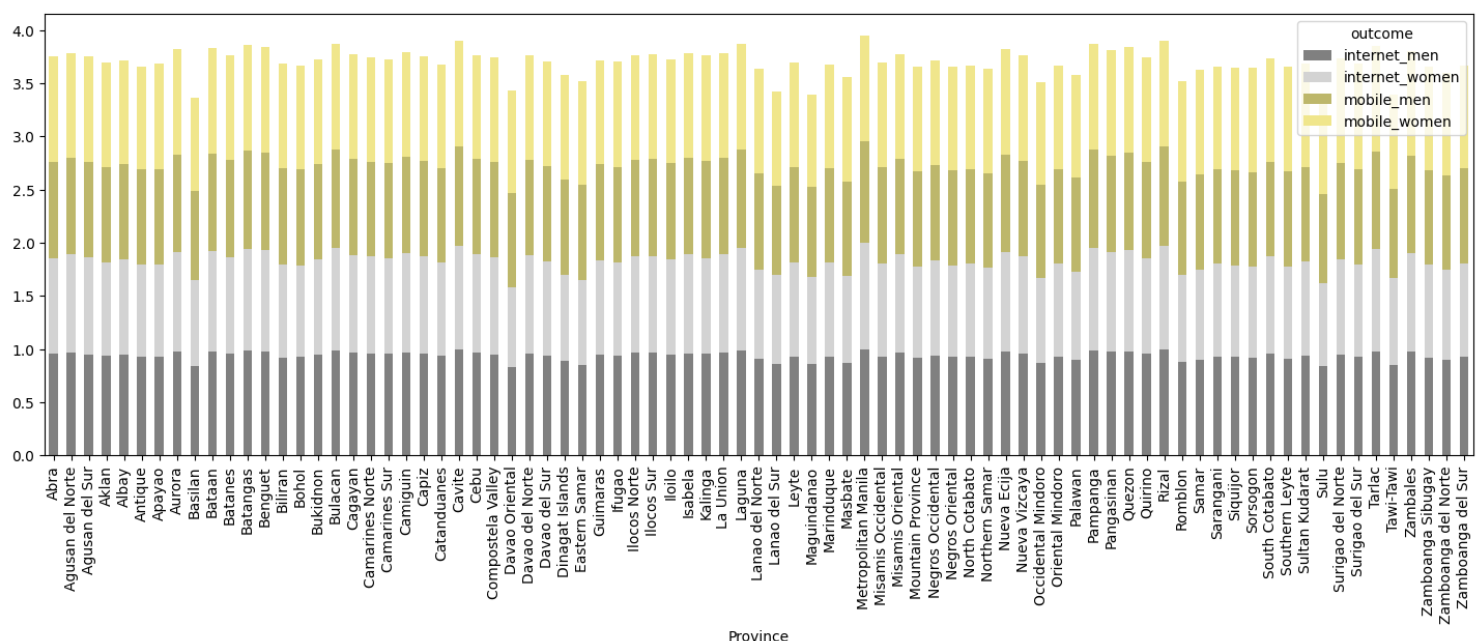


From a regional level, as seen in Fig 16, urban areas such as National Capital Region, Calabarzon, Central Luzon and Central Visayas have a high proportionate of Banks, ATMs and Banks with ATMS. However, according to the Philippines Statistic Authority (<https://psa.gov.ph/content/urban-population-philippines-2020-census-population-and-housing>), Davao and Soccksargen are also highly urbanized regions, but have relatively low counts of financial services available. Bicol, Ilocos, Eastern Visayas, Bangsamoro and Cagayan Valley were noted for having low levels of urbanization, but according to the abovementioned figure, Bicol and Ilocos were having counts of financial services available close to Davao, and were relatively more than Soccksargen. In general, there is an overall disparity in the availability of financial services such as Bank, ATMs and Non-stock Savings and Loan Associations (NSSLA) between the rural and urban regions. However, some regions which were thought to be of less urbanized levels had an increase in their availability of financials services.

In Fig 17, the trend continues. The provinces in the National Capital Region (1-4 District Manilla), Laguna, Cavite, (Calabarazon), Pampanga (Central Luzon) and Cebu (Central Visayas) have high counts of financial services. However, though there is an overall decrease in the financial services available in the less urban areas, provinces such as Albay(Bicol), Oriental Mindoro(Mimaropa region) and Western Samar(Eastern Visayas) do have the availability of NSSLA, which is of low numbers in high urban provinces such as Laguna and Batangas.

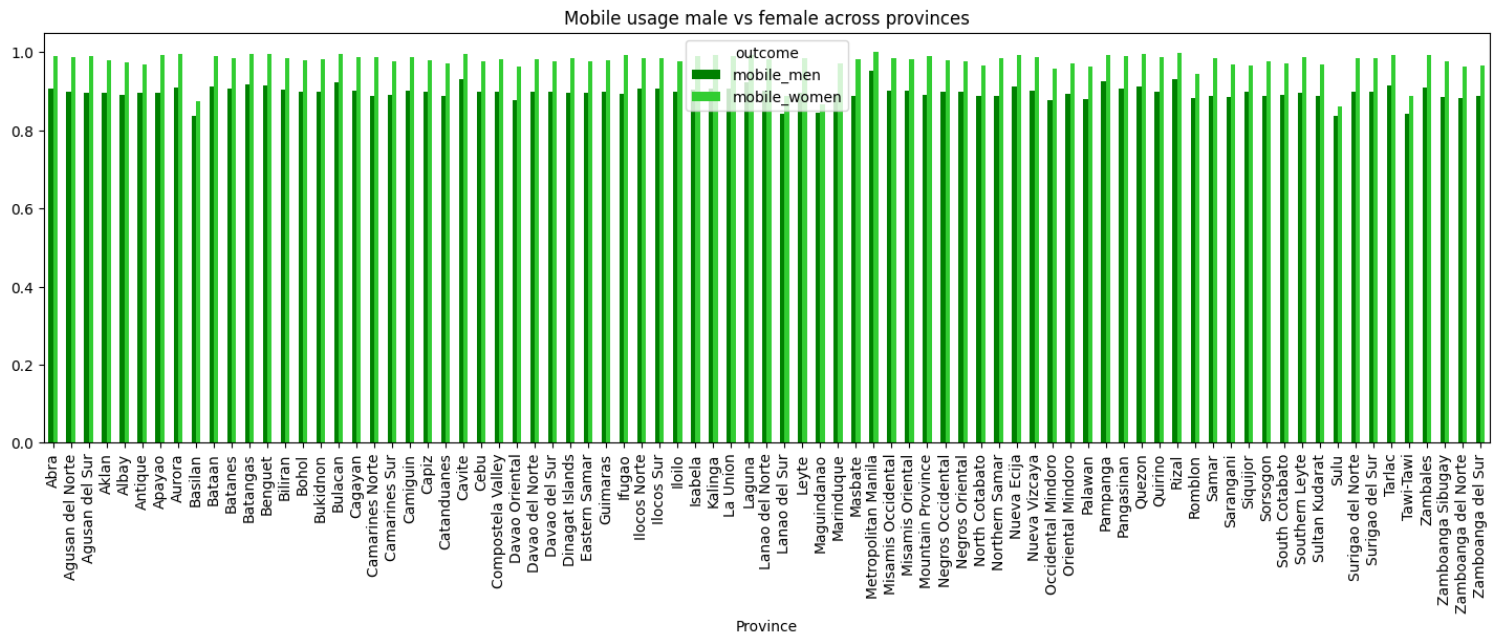
According to the Financial Brand (<https://thefinancialbrand.com/news/banking-branch-transformation/how-the-role-of-the-branch-is-being-reimagined-186964>), there is a rise in the number of bank branches and ATMs that are being built. By redesigning the layouts of bank branches, a more compact and inviting environment can be built to pull in more customers. ATMs are also undergoing many changes wherein they are deviating from their traditional purpose of cash withdrawals to becoming an extension of the bank where several banking features are accessible even in rural areas. ATMs are also available every day of the week, 24 hours a day. Overall, this could lead to better customer relationships and entice new customers, improving the financial literacy amongst the general public of a country such as Philippines.

Fig 18. Digital Gender Gap – Provincial Level



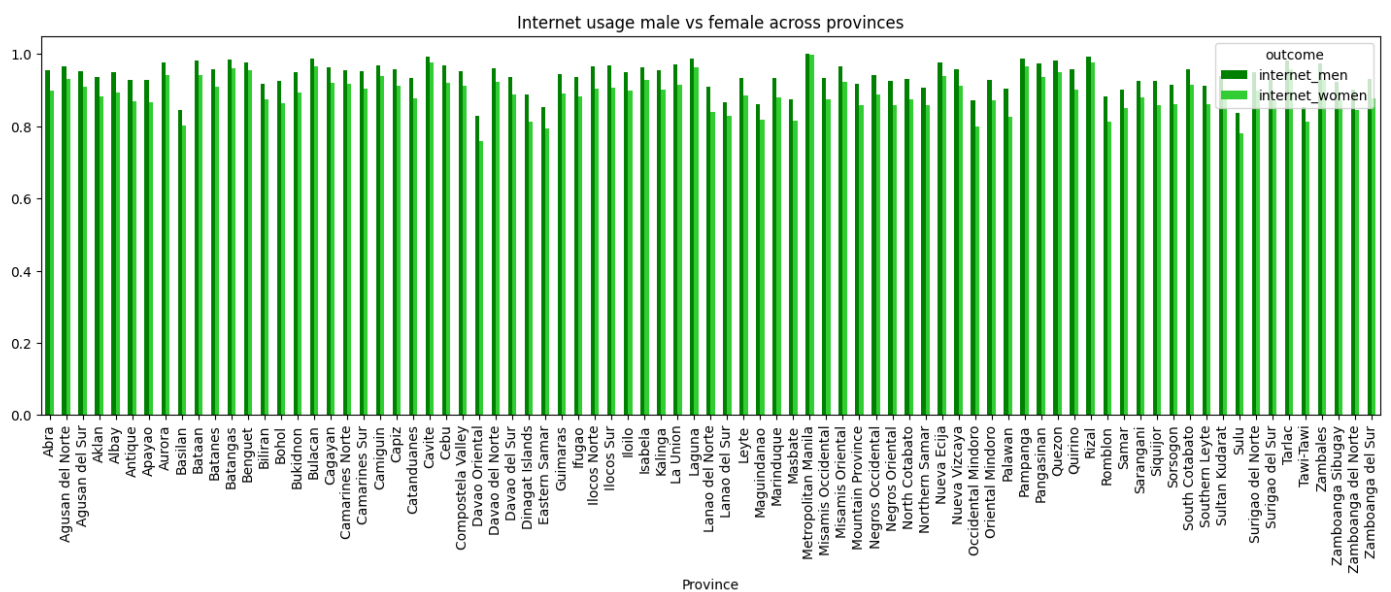
In Fig 18, the digital gender gap amongst men and women were estimated in the provinces. Mobile men and women show users from both groups who own a mobile. Internet for both groups shows internet usage in the recent months. From the above figure, with the exception of Basilan, Maguindanao and Lanao del Sur, there was a high usage of mobile and internet users. Overall, there was also little disparity between mobile and internet users among both men and women.

Fig 19. Mobile users



From Fig 19, the gap between men and women is close as both groups are close to 1. However, there is a slightly higher increase in the number of mobile users amongst women than men.

Fig 20. Internet users



From Fig 20. It can be observed that there is some disparity across the provinces among internet users. Provinces such as Davao Oriental, Dinagat Islands and Eastern Samar show lower internet usage compared to their previous estimates in the graph showing mobile ownership. Overall, there is a slight increase in the number of men on the internet than women.

In general, there is little digital gender gap between men and women across the provinces in the Philippines, except for a few exceptions. The government could use this trend to perhaps improve their online banking services and innovate with services such as AI to make the banking experience seamless.