THE RELATIONSHIP BETWEEN FINANCIAL ACCESS AND THE GENDER UNEMPLOYMENT GAP RATE, WOMEN ECONOMIC EMPOWERMENT AND INCOME INEQUALITY

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by

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LIST OF SYMBOLS

UNEM	Gender Unemployment Gap Rate
LFF	Female Labour Force Participation Rate
INE	Income Inequality
LFA	Financial Access Indicator
LBG	Number of Bank Branches per Thousand Kilometre Square
LBD	Number of Bank Branches per Hundred Thousand Adults
LAG	Number of Automated Teller Machines per Thousand Kilometre Square
LAD	Number Of Automated Teller Machines per Hundred Thousand Adults
IN	Inflation Rate
GDPG	Gross Domestic Product Annual Growth Rate
EDU	Gross Secondary School Enrolment (Percentage)
LTRA	Natural Logarithm of Trade Openness
LGDPC	Natural Logarithm of Gross Domestic Product Per Capita
EDUF	Gross Female Secondary School Enrolment (Percentage)
LE	Life Expectancy
ŋ	Unobserved Country-Specific Influence
ε	Uniformly Distributed Error Team
N	Number of Cross-Section or Individual Unit
T	Data Period
ε_{it}	Error Term
f_i	Random Variable

μ_i	Random Variable
β_1	Fixed Effect
ρ	Coefficient of the Lagged Dependent Variable
αi	Unit-Specific Effects
λ	Coefficient of the Lagged Dependent Variable
β	Coefficient Vector

LIST OF ABBREVIATIONS

AMG	Augmented Mean Group
AR1	First-Order Autocorrelation Test
AR2	Second-Order Autocorrelation Test
ARDL	Autoregressive Distributed Lag
ATM	Automated Teller Machines
CPC	Credit To The Private Sector
ECHP	European Community Household Panel
ECM	Error Correction Model
EU	European Union
EU-SILC	European Union Statistics on Income and Living Conditions
FAS	Financial Access Survey
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GFDB	Global Financial Development Database
GMM	Generalized Method of Moments
ILO	International Labour Organisation
IV	Instrumental Variables
MENA	Middle East And North Africa
NAFTA	North American Free Trade Agreement
NGO	Non-Governmental Organisation
NIDS	Nationally Representative National Income Dynamics Study

OECD	Organisation For Economic Co-Operation And Development
OLS	Ordinary Least Squares
SAARC	South Asian Association For Regional Cooperation
SDGs	Sustainable Development Goals
S-GMM	System Generalized Method Of Moments
SWIID	Standardized World Income Inequality Database
VECM	Vector Error Correction Model

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HUBUNGAN ANTARA AKSES KEWANGAN DAN KADAR PENGANGGURAN ANTARA JANTINA, PEMERKASAAN EKONOMI WANITA DAN KETAKSAMAAN PENDAPATAN

ABSTRAK

Tesis ini mengkaji implikasi akses kewangan terhadap kadar jurang pengangguran jantina, pemerkasaan ekonomi wanita dan ketidaksamaan pendapatan. Untuk kadar jurang pengangguran antara jantina dan penyertaan tenaga kerja wanita, ia diuji oleh data panel dari 51 negara antara 2004 hingga 2016; untuk ketaksamaan pendapatan, data panel dari 48 negara antara 2004 hingga 2016 digunakan. Kaedah sistem ekonometrik Kaedah- dinamik Umum Masa digunakan sebagai alat analisis untuk menjawab objektif kajian. Kaedah ini sesuai untuk menganggarkan model panel dinamik dan set data panel kecil. Beberapa kepentingan kajian dapat dikenal pasti dari objektif pertama. Kajian yang berkaitan, terutamanya yang menggunakan bilangan cawangan bank dan mesin juruwang automatik (ATM) sebagai petunjuk akses kewangan adalah terhad. Tambahan pula, tidak ada usaha untuk membandingkan kesan akses kewangan terhadap pengangguran wanita dan lelaki di sebilangan sampel negara yang sama. Hasil kajian menunjukkan bahawa petunjuk akses kewangan berkait positif dengan pengangguran wanita dan lelaki, mungkin disebabkan oleh kesan buruk pembiayaan terhadap penciptaan pekerjaan. Di samping itu, hubungan positif antara pekerjaan dan akses kewangan lebih penting bagi pengangguran lelaki daripada pengangguran wanita, yang mungkin berkaitan dengan hujah bahawa lelaki lebih terdedah kepada perkhidmatan kewangan formal. Tambahan pula, cawangan bank

mempunyai kesan yang lebih ketara dan pengaruh yang lebih kuat daripada mesin juruwang automatik dalam mempengaruhi kadar pengangguran wanita dan lelaki dan juga mempengaruhi kadar penyertaan tenaga kerja wanita, yang menunjukkan bahawa perkhidmatan cawangan bank mempunyai pengaruh yang lebih besar terhadap pemberdayaan wanita daripada mesin juruwang automatik. Bagi pemerkasaan ekonomi wanita, kebanyakan kajian terdahulu menganalisis pemerkasaan wanita secara amnya dan tinjauan adalah biasa digunakan. Tesis ini menyumbang dengan sasaran khusus pada pemerkasaan ekonomi wanita, dan menawarkan keputusan empirikal data panel yang belum pernah dijalankan sebelum ini. Penemuan penunjuk akses kewangan menunjukkan korelasi negatif dengan penyertaan tenaga buruh wanita, mungkin kerana diskriminasi wanita dalam akses kewangan atau kesan pendapatan yang disebabkan oleh akses kewangan yang lebih baik. kajian terdahulu juga menunjuk kemungkinan punca lain seperti dasar pembangunan boleh memintas wanita. Untuk mengatasi keadaan ini, kerajaan boleh menambah baik perkhidmatan kewangan mereka dan melaksanakan dasar penyasaran jantina untuk memastikan wanita menikmati hak yang sama dalam manfaat akses kewangan. Untuk ketidaksamaan pendapatan, tesis ini menyiasat isu secara menyeluruh melalui data sekunder yang membolehkan tempoh yang lebih lama dan memasukkan perubahan dalam pemerhatian yang sama dari semasa ke semasa. Hasilnya memberikan tafsiran tambahan tentang kaitan akses kewangan dan ketidaksamaan pendapatan. Tanda pekali positif penunjuk akses kewangan menunjukkan bahawa peningkatan dalam akses kewangan memburukkan ketidaksamaan pendapatan. Dalam konteks ini, salah satu langkah balas yang dipertimbangkan oleh penggubal dasar ialah penambahbaikan dalam akses kewangan dan juga melihat faktor-faktor yang menghalang golongan miskin mendapat manfaat daripada penambahbaikan akses kewangan. Dalam konteks ini, salah satu tindakan balas yang dipertimbangkan oleh pembuat dasar adalah peningkatan akses kewangan. Tesis ini menunjukkan bahawa kerajaan perlu memperbaiki sistem kewangan untuk mewujudkan kesan positif akses kewangan terhadap kadar jurang pengangguran jantina, pemerkasaan ekonomi wanita dan mengurangkan ketaksamaan pendapatan; dan mengurangkan kejutan negatif kepada ekonomi melalui institusi kewangan formal. Terakhir, saluran kewangan alternatif, seperti pembiayaan mikro, dapat dipromosikan sebagai alternatif institusi kewangan formal.

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ABSTRACT

This thesis examines the implications from financial access to gender unemployment gap rate, women economic empowerment and income inequality. For gender unemployment gap rate and women labour force participation, it is tested by a panel data of 51 countries ranging from 2004 to 2016; for income inequality, a panel data of 48 countries ranging from 2004 to 2016 is employed. The dynamic panel system generalized method of moments (GMM) estimators is used as the analytical tool to answer the research objectives. This method is appropriate to estimate a dynamic panel model and a small panel dataset. A few significance of study can be identified from the objective one gender unemployment gap rate. Related studies, especially those using the number of bank branches and automated teller machines (ATMs) to proxy financial access indicators, are limited. Furthermore, no attempt has been made to compare the effect of financial access on female and male unemployment across a sample of the same countries. The results showed that financial access indicators positively associate with female and male unemployment, probably due to the detrimental effect of financing on job creation. In addition, the positive relationship between employment and financial access is more significant for male unemployment than female unemployment, which might be related to the argument that males are more exposed to formal financial services. Furthermore, bank

branches have a more noticeable impact and stronger influence than automated teller machines in affecting female and male unemployment rates and also affecting the female labour force participation rate, suggesting that bank branches' services have a more considerable impact on women empowerment compare to automated teller machines. For objective two women economic empowerment, most of the previous study analysis women empowerment generally and survey is common employed. Our thesis contributes by specifically target on the women economic empowerment, and to our best understanding, we offer a panel data empirical results which has not been conducted before. The finding financial access indicators demonstrate a negative correlation with female labour force participation, likely because female discrimination in financial access or the income effect caused by better financial access. Another likely cause is that the development policies could have bypassed women, as indicated by previous studies. To overwhelm this condition, governments could improve their financial service and implement a gender targeting policy to ensure that female enjoy an equal rights in financial access benefits. For objective three income inequality, this thesis tends to investigate the issue comprehensively through secondary data which allows a longer period and include changes in the same observation over time. The outcomes provide additional interpretations about the connection of financial access and income inequality. The positive coefficient sign of financial access indicator suggest that improved in financial access worsen income inequality. In this context, one of the countermeasures considered by policymakers is the improvement in financial access and also look into the factors that prevent the poor to gain benefit from financial access improvement. Based on the finding, this thesis suggests that governments need to improve the financial system to create the positive impacts of financial access on employment, women economic empowerment and reduce income inequality; and reduce negative shocks to the economy via formal financial institutions. Lastly, alternative financial channels, such as microfinance, could be promoted as an alternative to formal financial institutions.

CHAPTER 1

INTRODUCTION

1.1 Research Background

Financial development is fundamental to the long-run economic development and performs a critical part in the market's operations and the economy. Since the eighteenth century, researchers have identified how financial development contributes to economic growth, investment, employment, and productivity. As a result, plenty of empirical research has supported the importance of financial development (Demirgüç-Kunt and Maksimovic, 1996; Levine 1997; Rajan and Zingales, 1998; Levine and Zervos, 1998; Levine et al., 2000; Benhabib and Spiegel, 2000; Ndikumana, 2000; Rousseau, 2003; Sussman, 2019).

There are many ways financial market development could affect the economy. Grassa and Gazdar (2014) recognized financial development as a practice that helps to boost the quality and quantity of financial institution services and enhance the efficiency and effectiveness of the financial process, such as economic transactions in the economy, while Goldsmith (1969), Demetriades and Hussein (1996) and Valickova (2013) suggested that finance is a significant instrument in encouraging economic growth and linked financial development to positive economic growth.

Moreover, earlier studies showed that banking sector development positively affects economic growth. For example, Berthelemy and Varoudakis (1996) employed a theoretical model to prove the positive nexus between the number of banks and economic growth. The usefulness of financial development in promoting economic growth is proven, but the degree of financial development differed widely among countries, by income groups and regions, causing the impacts of financial development to vary across different countries[1]. Levine (1997) has verified the associations of banking level development and long-term economic growth and discovered that nations with developed banking sectors have better economic growth performance than nations with underdeveloped financial systems as the banking sector development is highly associated with economic development.

Previous empirical and theoretical research has also separated the functions of financial development into six primary functions, namely mobilising savings, improving the transaction, assisting the risk management, managing investments, introducing corporate governance, and producing ex-ante material concerning investment (Diamond, 1984; Ramakrishnan and Thakor, 1984; Levine, 1997; Boot and Thakor, 1997). Different types of financial services have been introduced in the financial development process to increase the mobilisation of savings, facilitation of transactions, and widening the credit availability to households and enterprises. By mobilizing savings, the low income may use their savings or borrow to reinvest in income-generating assets, and better access to financial services creates employment and raises incomes. Furthermore, financial development enhances the interactions between financial institutions and communities. Transaction or information costs in financial markets and intermediaries have significantly reduced because of financial development because the expansion of financial institutions helps collect investor's information and share the costs to improve resource allocation and

[1] The level of financial development penetration is correlated with income levels, gender and age groups. Typically, financial development provides more significant benefits, particularly in developed or developing countries rather than less developed countries and less able to promote economic growth in nations that more necessitate, for instance Africa (UNCTAD, 2014).

investment. Finally, corporate governance through financial development enhances capital allocation and promotes faster capital accumulation (Bencivenga and B. Smith, 1991).

Cihak et al. (2012) claim that financial development is a multi-dimensional process and can be measured from depth, access, efficiency, and stability. The International Monetary Fund (IMF) has defined financial depth (size of financial institutions and markets), access (the individual ability of access to financial services), efficiency (to deliver low-cost financial services and facilitate financial transactions) and financial market stability (the ability to process financial functions smoothly and confidencely). For example, Lynch (1996) included product range and transaction costs in the categories of financial development.

Meanwhile, Horvath, Horvatova and Siranova (2017) stated that nearly 40 determinants of financial development and seven different financial development measures are available. These include private sector credit to gross domestic product (GDP), stock market capitalisation to GDP, stock market total value traded to GDP, net interest margin, stock market turnover ratio, Bank Z-score and automated teller machines (ATM)s. Currently, empirical research usually applies the above mentioned indicators that have been accessible for a prolonged duration. It is crucial to identify a reliable financial development measurement. However, it is not easy to measure all financial development dimensions in a single indicator because of the complexity and several dimensions involved.

Among the published data, the IMF has released an annual report of the Financial Access Survey (FAS) that covers financial development from the aspect of accessibility to the financial service. In particular, the FAS database contains the annual data from 2004 to 2020. It provides annual geographic and demographic data on access to essential financial services worldwide. In contrast, the Global Financial Development Database (GFDB) published by the World Bank lists out a set of financial development indicators which contains measures of (1) size and liquidity of financial institution and markets (financial depth), (2) the availability of financial services and degree of individual access (financial access), (3) the capability of a financial institution in assisting financial transactions (financial efficiency), and (4) financial markets stability (financial stability).

Among these measures of financial development, there is growing attention placed on financial out-reach and inclusion in recent decades, and the topic of financial access has established excessive consideration from scholars as well as policymakers of emerging and developed nations. Improved access to finance is a long-term goal in economics, but unfortunately, the world today is still far from the ideal financial access level. In point of fact, according to Global Findex 2017, about 1.7 billion adults globally were considered as "unbanked," particularly, not owning an account at a financial institution (Demirguc-Kunt et al., 2018). Besides, rising financial access level also crucial to those who already have it because it could bring a more diverse marketplace which come along with more financial service providers and a wider range of financial services. Financial access improvement guarantee that all members of the society can access a broad range of financial products easily, designed according to their needs, and delivered at affordable costs.

Existing studies also support that extensive financial access able to delivered low-cost and quality financial services and this in turn, encourage individuals to capitalise on the benefits that can be offered in the financial system, helps in business investment and risk management and removes the price and non-price barriers (Claessens, 2006; Ashraf et al., 2010; Dupas and Robinson, 2013; Cull et al., 2014). Additionally, access to finance stimulates access to necessities, such as water, health services, schooling and higher social benefits. It also plays a vital role in how technology and new knowledge are produced, as the availability of financing encourages innovative thinking (Peachey and Roe, 2004; Beck et al., 2007).

It is worth mentioning that financial inclusion is used interchangeably with financial access in the literature as both of them hold similar functions. Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs and being able to have financial access such as owing a transaction account is a first step toward broader financial inclusion since a transaction account allows people to store money and to send and receive payments. Basically, these two terms work on the same direction and have been used interchangeably in previous studies. Birkenmaier, Despard, Friedline, and Huang (2019) has defined financial inclusion as the goal of financial access while the World Bank recommends that financial access is interchangeable with financial inclusion as both represent the same meaning, and financial inclusion is more common (World Bank, 2014). Singh (2017) held a similar idea and defined financial inclusion or access as a financial development component. Besides, Ramji (2009) also use financial inclusion and access to financial service interchangeably in the working papers and defined financial inclusion as the ability of the disadvantaged to access financial services.

The pivotal part of financial inclusion systems in enhancing growth in the economy and eliminating poverty has been discussed in numerous theoretical and empirical studies (Levine, Loayza and Beck, 2000; Honohan, 2004). Financial inclusion occurs when everyone has efficient financial services accessibility, including mobilising savings and monitoring transactions and helps to ensure low-income groups can access finance and sufficient credit at an affordable cost (Rangarajan, 2008). Furthermore, Demirguc-Kunt and Klapper (2012) indicate that financial inclusion allows all the transactions to be delivered reliably and helps people meet their demand to access financial products. Also, financial inclusion attempts to provide financial services at reasonable costs and benefits society. On top of that, financial inclusion will lead to efficient transactions, time, and cost-saving. Lacking financial inclusion will cause the poor' to suffer a more significant financial burden as they need to use up all their assets to invest in education, hoping for a better education return such as career opportunities (Beck et al., 2009).

Similarly, small and medium enterprises (SME) also have difficulty to access financial services and cannot generate benefits from promising growth opportunities without improvements in financial inclusion. The difficulty of SMEs getting financial access is also supported by the World Bank (2014), whose data showed more than half of all firms with less than 50 employees in Brazil, Kenya, Algeria and Peru identified access to financing as a significant restriction in business growth and production operation. Similar restrictions to financial access were discovered in Binks and Ennew (1997) and Stephanou and Rodriguez (2008). In particular, Binks and Ennew (1997) discover that the principle constraints to the development of SMEs in the UK include management, labour skills, guideline and absence financial access, while Stephanou and Rodriguez (2008) observe that financial access is one of the most extensive restrictions for SMEs in Colombia.

Access to finance in emerging economies has been uneven across sources of financial institutions. A study on the challenges in the access to domestic finance can help provide a better understanding regarding the influences of access to finance in economic growth and social development. In particular, this thesis focuses on discovering whether improving financial inclusion will create a positive implication on female living standards through rising employment relative to the males, economic empowerment, and reduced income inequality. Most empirical research to-date has targeted a specified country, and there are contrasting results in such studies. The following discuss the linkage between financial access with unemployment, women economic empowerment and income inequalities.

1.1.1 Connection between unemployment, women economic empowerment and income inequality

Financial inclusion is positioned prominently as an enabler of other developmental goals in the 2030 Sustainable Development Goals, where it is featured as a target in eight of the seventeen goals. These include SDG1, on eradicating poverty; SDG 2, on ending hunger, achieving food security and promoting sustainable agriculture; SDG 3, on profiting health and well-being; SDG 5, on achieving gender equality and economic empowerment of women; SDG 8, on promoting economic growth and jobs; SDG 9 on supporting industry, innovation, and infrastructure; and SDG 10 on reducing inequality. Additionally, in SDG 17, on strengthening the means of implementation, there is an implicit role for greater financial inclusion through greater savings mobilization for investment and consumption that can spur growth. This thesis has selected SDG 5, SDG8 and SDG 10 as the research objectives, as these three sustainable development goals are connected to each other.

Firstly, under SDG 8, it is expected that promoting access to financial services supports productive activities, decent job creation, entrepreneurship, creativity and innovation and encourages the formalization and growth of micro-, small- and mediumsized enterprises. At the same time, better financial access could achieve higher levels of economic productivity through diversification, technological upgrading and innovation, leading to a focus on high-value added and labour-intensive sectors and reducing unemployment.

Resolving unemployment contributes to full and productive employment and decent work for all, including young people and persons with disabilities, as well as equal pay for work of equal value. Diminished workplace discrimination can remove the barriers that prevent women from joining the labour market. This is not only useful in reducing women's unemployment and avoiding the waste of labour resources but also promoting women's economic empowerment as more women become involved in the workforce and income-generating activities. This shows that achieving the goal of UN SDG 8 could advance the attainment of SDG 5 while accomplishing gender equality and women's economic empowerment. Besides, better financial access provides women with more asset control power and the ability to manage their savings. This leads to positive economic outcomes for women, including increasing productivity and profits and greater investment in their businesses. Having savings also makes women less likely to sell assets to address health emergencies, stabilizes their incomes in times of economic shocks and provides greater control over their funds.

In addition, reducing inequalities and ensuring no one is left behind are integral to achieving the Sustainable Development Goals. SDG 5 and SDG 10 are connected, as promoting women's economic empowerment would ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life. Providing women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, could lead to a reduction of income inequality. Better financial access could strengthen the financial system and reinforce economic security among the vulnerable, which progressively achieve greater equality.

Equally important, unemployment, women economic empowerment and income inequality are connected, and crucial actions are needed to tackle these issues. Widespread unemployment is universally recognised as undesirable due to its costs, both individuals and societal. For individuals, unemployment could lead to wastage of manpower resources and tends to increase economic overload. Prolonged unemployment also harms the mental health of workers and can worsen physical health and shorten lifespans. While for society, unemployment is a social evil because absent a wage-paying job, people may turn to crime to meet their economic needs.

Furthermore, the unemployment issue has urged for immediate attention as the gender unemployment gap occurs and males and females experience unemployment to different degrees of severity. If not tackling the widening gender unemployment gap and high female unemployment, it will affect the economic status of women either indirectly or directly. Discrimination in the labour force market and unequal economic opportunities could diminish women's role in society and violate their basic rights, creating a vicious circle of underinvestment in human capital which will weaken women empowerment and sustain gender inequalities. Increasing women's labour force participation and economic empowerment are so pressing as it is related to sustainability whereas improving women's labour force participation could benefit USD 12 trillion to the global economy, representing 16% of the global GDP in 2011 (Ferrant and Kolev, 2016).

In order to increase women economic empowerment, solving the unemployment gap issue is not the only concern, income inequality also has an indirect effect as it will reduce the women's ability to move up in the social ladder. Inequality can be a signal of lack of income mobility and opportunity; a reflection of persistent disadvantage for particular segments of the society. Widening inequality also has significant implications for growth and macroeconomic stability as increasing the concentration of incomes could reduce aggregate demand and undermine growth, because the wealthy spend a lower fraction of their incomes than middle and lower-income groups. It can concentrate political and decision-making power in the hands of a few, lead to suboptimal use of human resources, cause investment-reducing political and economic instability, and raise crisis risk.

Additionally, the economic and social fallout from the global financial crisis and the resultant headwinds to global growth and employment have heightened the attention on rising income inequality. High and sustained levels of inequality can entail large social costs and significantly undermine the minority group, limiting women's educational and occupational choices and hindering female empowerment. Hence, these three issues are intertwined and need to be dealt with immediately by examining the research objectives in this thesis.

1.1.2 Financial Access and Unemployment

Unemployment is an economic phenomenon in which people are without work for pay or profit, but have the ability to start work (ILO, 1998). Unemployment could lead to waste of resources, redistributive pressures and distortions on unemployed people, increase poverty, and promote social unrest and conflict. Today, the issue has become even more pressing since studies have indicated that males and females experience unemployment to different degrees of severity (Blau and Ferber, 1991; Rayman, 1987; Mattingly, Smith and Bean, 2011; Verick, 2009). Moreover, as unemployment persists, the conditions that worsen gender unemployment also need to be addressed. Hence, the causes of unemployment need to be investigated, in relation to the role of access to finance, labour market rigidities, low real wages, imperfect information and economic downturn.

Economic policymaking is taking a growing interest in improving financial access worldwide, and both financial inclusion and employment are set as targets associated with one of the 17 new Sustainable Development Goals (SDGs) adopted by the United Nations (UN). The recent financial crisis, which caused massive job losses, particularly in countries with more developed financial sectors also raised a question about the role of finance in the labour market (Pagano and Pica, 2012). Meanwhile, it is commonly believed that increasing the accessibility of the weaker group in society to formal financial services would not only serve at the individual level but also graner a benefit at the national level.

Some articles have suggested that, based on business cycle theories and endogenous growth theories, financial development in terms of access to financial services acts a fundamental part in promoting sustainable economic growth as for these entrepreneurs, broad access to financial services would smooth project financing, positively impacting firm growth and business investment (Galor & Zeira, 1993). Reducing access to financial services for entrepreneurs prevents the start-ups of new firms, leading to unemployment (Acemoglu, 2001; Wasmer and Weil, 2004). Therefore, facilitating access to financial services could allow entrepreneurs to start new businesses and eventually grow in size, which could sequentially decrease the unemployment rate since new start-ups require more labour to improve the production process. Hence, more unemployed citizens will joined the workforce and gainfully employed (Calderón and Liu, 2003; Dromel, 2010; Hassan, 2011; Caporale, 2015; Dabla-Norris, 2015; Ayyagari et al., 2016).

Moreover, strengthening and developing access to financial services serve as the driver for the transformation needed to develop and integrate economic sectors, exchanged technology, innovate and improved economic competitiveness across different sectors, which has the highest potential to offer productive jobs that offer worthy employment prospects (Osikena and Ugur, 2016). At the same time, Zulfiqar et al. (2016) suggested that making improvements in financial outreach means making financial services available to the poor and offering them credit facilities according to their needs, thereby creating self-employment opportunities and helping to reduce unemployment. However, there is an opposing argument that financial development negatively affect employment, as improvement in financial access allows businessess to gain capital easier, hence, enhancing business investments and expansions. If the firms choose to substitute the labour force by employing more capital or machines, it could reduce job opportunities (Garmaise, 2007), Ayyagari et al, 2016). Goodwin et al. (2013) add that unlimited expansion in access to finance may cause financial instability. Based on the business cycle graph, financial instability will cause an economic recession, a reduction in investment, and consumption and an increase in the unemployment rate. For example, during the US subprime crisis of 2007, caused by unprecedented access to credit in mortgages, the US unemployment rate rose from 4.7% to 10%.

Besides, labour market rigidities are considered the main cause of high unemployment rates but are not accepted by all empirical papers. For example, Blanchard and Wolfers (2000) stated that labour market rigidities could not explain why the US unemployment rate was lower than the European unemployment rate. Otherwise, unemployment is also defined as an involuntary phenomenon. Higher price levels reduce real wages and worsen unemployment by lowering the labour supply (Keynes, 1936). Unemployment could also occur due to information gaps, low labour demand and wage adjustments due to fixed contractual settings (Brunner, 1978). Moreover, the effect of an economic slowdown could contribute to high unemployment, with small transaction size, small market size, and financial institution inefficiency in less developed countries contributing to persistent unemployment in Asia, Africa, Latin America and the Middle East regions (Aliero and Ibrahim, 2012).

1.1.3 Financial Access and Women's Economic Empowerment

Women's empowerment is an issue that is frequently debated under the United Nation's Sustainable Development Goals (SDGs) and become one of the recent priority issues in developing countries since women have fever salaried jobs. The United Nations Development Program has indicated that female economic empowerment is fundamental to attaining gender equality and economic sustainability as female economic empowerment enhances productivity, improves economic diversification, income equality and other positive development results, just to name a few. Additionally, women's freedom of choice in all areas of their lives is nonetheless dependent upon economic empowerment. It not only equips women to fight the obstacles and forms of violence they face but is also the key to developing their true potential and their independence. For instance, rising the female working rates in the Organisation for Economic Co-operation and Development (OECD) countries to match that of Sweden, can increase GDP by more than USD 6 trillion (PwC, 2018). Several articles identified women's empowerment from different angles, i.e. political, social, economic, and psychological perspectives. Economic power, in particular, refers to accessibility to economic activities such as generating income and making economic decisions (Young, 1993; Wangari and Friedmann, 1994; Karl, 1995; Rowlands, 1997; Fayyaz, 2002; Malhotra and Schuler, 2005). Women's empowerment can also be seen as a transformation of gender power relations by developing responsiveness to women's subordination and improving women's capability to make their own choices (Reeves and Baden, 2000). Empowered women can promote women's sense of self-worth, their ability to determine their own choices, and their right to influence social change for themselves and others.

Women's economic empowerment includes the process of expanding the female’s capability to participate and gain from financial development, gain control of productive resources and better access to work, achieve more recognition, and enjoy better self-esteem and benefits of growth progress (OECD, 2011; UN Women, 2018). Krishna (2003) stated that women’s empowerment is a process through which women can make their choices and renovate these choices into desired actions and outcomes. Economically empowering women is indispensable both to apprehend women’s rights and to achieve broader development goals such as economic growth, poverty reduction, and social welfare. Moreover, women economic empowerment is attained when individuals can seize control of their finances, develop their intellectual and ideological resources and improve their living quality (Batliwala, 1994; Sen, 1999; Nussbaum, 2001; Ravallion and Shaohua, 2001). Economic empowerment allows women the right to make their own decision, encourages their social and economic involvement and helps them to generate income. According to Golla, Malhotra, Nanda, & Mehra (2011), when women have the ability to succeed and advance economically as well as have the power to make economic decisions, women are said to be economically empowered.

Access to the financial system facilitates creating equal opportunities, and enables economically and socially excluded people to integrate better into the economy and protect themselves against economic shocks. Financial inclusion could empower individuals and families, especially women to be included in the formal financial system and a well-functioning financial systems enrich whole countries. Better access to financial improves women's economic empowerment from an aspect of asset control and also contributes to reducing widespread financial distress suffered by women working in the informal sector. This is because improved financial access could diminish lending practices adopted by local money lenders and provides a formal financial platform for women to invest in income-generating activities resulting in higher income and household welfare improvement (OECD, 2011; Holloway et al., 2017). Furthermore, improving women's access to finance allows women to gain more control over economic resources, which is essential in eliminating gender discrimination that could stop women to involve in economic activity (Kabeer, 2009). Through being included in the formal financial system women will have additional assets in their accounts which will intensify their bargaining power of them within their households and also will have more ability to manage their daily financial matters. Financial inclusion could, by means of insurance, assist them to diversify risk and thus reduce women's vulnerability.

Nonetheless, some research observed that financial inclusion programs did not aid in the economic upliftment of the poor women (Navajas, Schreiner, Meyer, Gonzalez-Vega, & Rodriguez-Meza 2000; Mosley 2001). From previous literature, the empowerment and resources are mainly concentrated on males, causing women's deprivation. Evidence shows that a large portion of the hard-core poor are the women because they face social barriers in accessing economic assets such as property and credits that make it much harder for them to overcome poverty and they are more susceptible to becoming poor when they lose the male earning member of the family due to abandonment, divorce or death. The economic position of women is generally lower than men from the credit access aspect, especially in less developed countries and women mainly depend on informal or semi-formal financial sources (World Bank, 2014). Continued disparities between women and men in employment and income opportunities, education, and control over assets demonstrate that development activities are centered on men. In that situation, it is essential to advance female empowerment to transform the existing circumstances.

Previous studies have illustrated that women have deficient access to finance in less developed countries, and many factors can determine women's empowerment. For example, Ellis (2004) discovered that women only had 7 per cent access to formal credit in Kenya. According to Ellis, Manuel and Blackden (2005), women's access to available credit was only 9 per cent in total, and even lower in Uganda's rural areas with only 1 per cent. The main reason for women's low access rate to finance is the high barriers for women in accessing start-up finance, restricting business development for female entrepreneurs. This problem may lead to low female economic empowerment.

According to Figure 1.1[2], given that the world average data in terms of general, women and youth are 72%, 65% and 56% accordingly, the proportion of women with formal bank accounts is below the world average in African regions and low-income countries, especially in the Middle East & North Africa and Sub-Saharan Africa, probably because of community and cultural discrimination and also because women do not benefit from financial access development. In addition, differing access to different financial instruments, such as ATMs, bank branches, and microfinance, may have varying effects on women's economic empowerment levels. For example, Brana (2012) identified that microcredit helped men more than women and created a financial access gap between genders. Nonetheless, it is difficult to prove that access to finance has an undesirable influence on women's economic empowerment by only using microfinance as a proxy for access to finance; microfinance is too complex because there is no standard definition or measurement of microfinance schemes. Furthermore, microfinance is a new product. It has limited data and inconsistent data duration across countries making it difficult to draw reliable conclusions from an empirical estimation.

[2] Figure 1.1 has excluded the North American region due to data limitations.

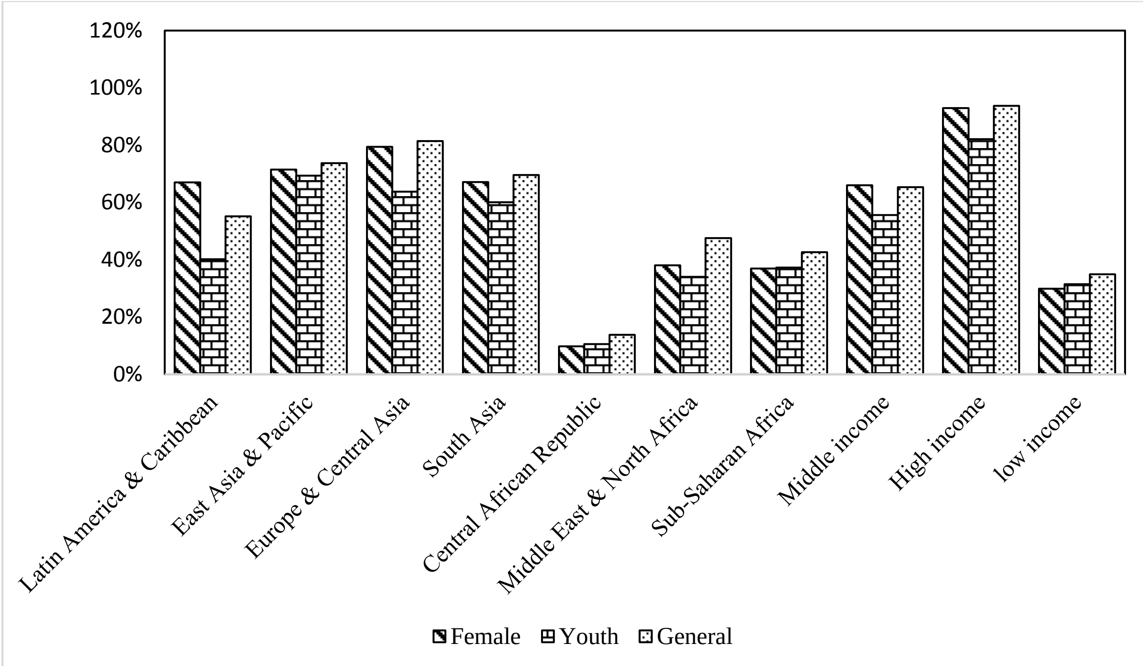

Figure 1.1 Proportion of people with a formal bank account by income and region, 2017(percentage)

Adapted from: World Bank (2022)

1.1.4 Financial Access and Income Inequality

Today, rising income inequality has become a major economic challenge and is hotly debated by economists and policymakers (Peterson, 2017). The challenge is caused by the influence of income distribution on resource allocation and savings decisions (Aghion et al., 1999; Bagchi and Svejnar, 2015). OECD indicates that the income inequality gap has expanded considerably over the years and continuous income inequality can lead to underinvestment in human capital, therefore resulting in an inefficient allocation of talent, decreasing aggregate demand, hampering intergenerational mobility and posing social stability risks (Corak, 2013; Carvalho and Rezai, 2014). This phenomenon has propelled researchers to devote additional effort to uncovering the root causes of rising inequality.

Among the multitude of factors influencing inequality issues, the access and usage of financial services have gained the attention of scholars and policymakers. Claessens and Perotti (2007) and Aslan et al. (2017) believe that unequal access to finance and ultimately unequal opportunities, which can reinforce economic inequality and income inequality are associated with inequality in financial inclusion. The presence of access to finance could reduce inequality in the financial frictions, remove the information and transaction costs that binding on the poor who lack collateral and credit histories, so that relaxation of these constraints will disproportionately benefit the poor, improving the efficiency of capital allocation and reducing income inequality by facilitating funding to poor talented individuals (Galor and Zeira, 1993)

Financial inclusion is capable of facilitating the development of the financial sector (as a whole) by making all transactions more agile, safer, and cheaper, along with better efficiency and helps to eliminate income inequality by allowing poorer populations to access financial services such as deposits, loans, and savings, as well as facilitating investments and financial control. In a way, it helps people take control of their financial lives (Klapper et al., 2016; Fouejieu et al., 2020). Burgess and Pande (2005) concluded that income redistribution and poverty alleviation can be achieved by improving the coverage of bank branches in India because more bank branches allow people easier access to loans, which helps them make capital investments in business and improves their standard of living. Greater financial access can help reduce income inequality if it focuses on increasing access or reducing financial participation costs of the poor. Also, the World Bank (2014) criticized that the absence of finance inclusion could worsen poverty traps and lead to income inequality because people with low access to finance reduce their education investment which affects their job opportunities and indirectly causes income inequality. In addition, the low financial access and the oligopolistic aspect of the bank sector may harm the most vulnerable, and this lack of competition may increase interest rates, especially for poor people which cause the poor to suffer greater financial costs and worsen income inequality.

Furthermore, an inverse relationship between financial inclusion and income inequality could emerge if consumers and producers make long-run consumption and investment choices through access to finance and reduce the hardships of unexpected short-term shocks that would, in turn, decrease income inequality. Similarly, Brune et al. (2011) indicate that better access to finance in rural Malawi advances the welfare of low-income families by enhancing their control over saving and improving their access to agricultural input.

The social significance of financial access is also discussed by Petersen and Rajan (2002) and Guiso et al. (2004). According to them, better outreach of bank branches is fundamental in improving income inequality because it eases household borrowing constraints and improves income equality. This is supported by Beck et al. (2007), who confirmed the association of banking development with inequality and considered the number of bank branches as the primary measurement of financial inclusion. Finally, financial inclusion allows low-income individuals to improve their access to finance and invest in education, thus mitigating inequality (Galor and Zeira, 1993; Aghion and Bolton, 1997; Galor and Moav, 2004).

1.2 An Overview of Financial Access Survey Data in Some Examined Countries in This Thesis

Kim (2018) indicates that financial service access enables individuals to save more for basic necessities and invest in income-generating activities which help in eliminate inequality. In this matter, the World Bank has worked towards achieving universal financial access in 2020. Under this objective, they reduced the number of unbanked people to less than 2 billion people in a few years. Most of them are from developing countries.

The number of Automated Teller Machines (ATMs) and commercial bank branches has been identified as the financial access indicators in the Financial Access Survey established by International Monetary Fund (IMF). The figures and tables below elaborate on the development of ATMs and bank branches in some selected countries. The complete ATMs and bank branches data are presented in Appendix A.

The following discussion will focus on some countries. In particular, Figure 1.2 shows the ATM per 100,000 adults in some European countries. Otherwise, Table 1.1 and Table 1.2 show the same data for countries from American, African and Asian, respectively.[3] For the bank branches, the data is presented in Figure 1.3 to Figure 1.5. From these tables and figures, one can notice that high-income countries, such as the European and American regions, have a much higher demographical penetration of ATM and bank branches than selected African and most Asian Countries. This conclusion is not surprising as the financial penetration is higher in Europe and America. However, the geographical

[3] The data for American and African countries, and Asia countries are presented in tables because of the large gap in the data range making the bar chart and line chart unsuitable. The classification of countries region is based on Geographic Regions from United Nations Statistics Division.

differences of some countries, such as Bangladesh, Indonesia and India are wide, and the hilly regions in a country could create travel obstacles for rural areas people. The weak internet connectivity could be another factor.

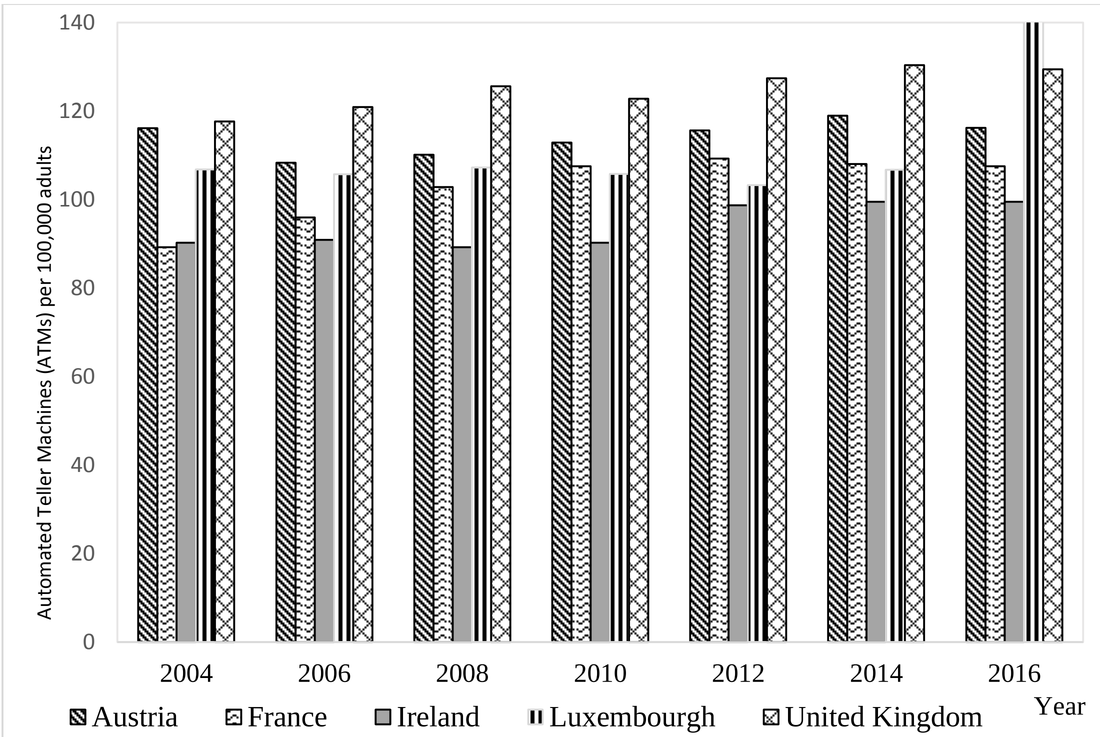

Figure 1.2 Automated Teller Machines (ATMs) per 100,000 adults in European Countries

(Source from: Financial Access Survey, International Monetary Fund 2018)

Table 1.1 Automated Teller Machines (ATMs) per 100,000 adults in selected American and African Countries

	Canada	**Dominican republic**	**Algeria**	**Honduras**	**Egypt**	**Madagascar**
2004	184.76	21.54	1.37	5.12	2.59	0.28
2006	206.48	25.33	3.03	9.03	4.34	0.74
2008	217.74	27.14	4.74	14.44	6.32	1.23
2010	218.15	29.24	5.98	18.81	8.44	1.4
2012	203.11	32.13	6.33	22.40	10.1	1.71
2014	221.14	35.13	7.85	23.06	11.85	2.05
2016	222.98	36.30	8.23	23.38	12.35	2.8

(Source from: Financial Access Survey, International Monetary Fund 2018)

Table 1.2 Automated Teller Machines (ATMs) per 100,000 adults in Selected Asian Countries

	Israel	**Australia**	**Japan**	**Korea**	**Bangladesh**	**Indonesia**	**Bhutan**	**India**
2004	68.77	138.65	124.37	210.15	0.13	8.56	0.49	2.29
2006	76.89	150.42	124.12	226.24	0.34	10.5	0.45	2.74
2008	87.47	152.03	125.45	244.47	0.82	13.11	3.16	4.29
2010	120.9	163.94	130.92	273.32	2.05	13.02	8.31	7.27
2012	122.84	163.65	127.9	288.55	3.92	35.78	7.69	10.99
2014	123.11	163.72	127.49	278.62	5.6	49.45	21.99	17.8
2016	132.97	164.85	127.79	276.28	7.76	54.7	32.25	21.23

(Source from: Financial Access Survey, International Monetary Fund 2018)

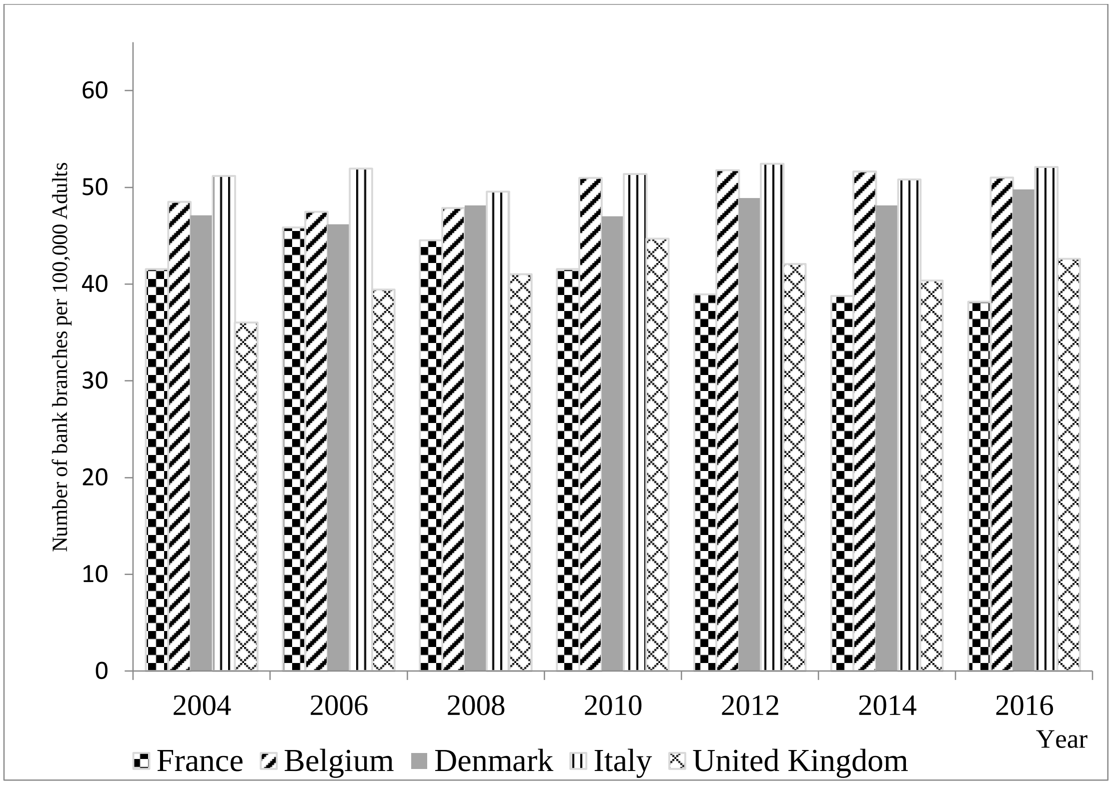

Figure 1.3 Numbers of Bank Branches per 100,000 adults in selected European countries

(Source from: Financial Access Survey, International Monetary Fund 2018)