THE INCLUSIVE FINANCE FACTOR OF HAPPINESS

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Abstract: *Inclusive finance is an emerging field that is considered crucial in promoting sustainable development and wellbeing. It is well known that financial flows are the backbone of economic growth, hence promoting equity and inclusiveness is important to intensify access to financial intermediation, either via traditional channels or by using modern, mobile means. It is undeniably important to solve gender inequality in closing the gap in funding, as well as the inclusiveness of disadvantaged area to support sustainable development. The question posed by the study is whether inclusive finance enhances happiness hence supporting durable development. The case of selected high, middle income and low-income countries are considered in determining the impact of the GDP/capita, human development and financial inclusiveness on the happiness index during 2012-2018.*
Keywords: *inclusive finance, sustainable development, positive externalities, social change*

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INTRODUCTION

Since the 2008 crises, the financial sector went through profound change, both from a practical and academic perspective. Before the crises, most financial intermediaries did not regard low-income individuals and small enterprises as an important source of profit, hence many being excluded as potential clients. In this regard, asymmetric information, moral hazard and adverse selection played an important part. In addition, lack of extended financial education (or even financial literacy in emerging economies), lack of adequate personal identification, no personal financial history, expensive financial products have excluded a large group of potential businesses from funding and prevented individuals to economically and financially evolve. According to Ernst and Young (EY, 2017) more than 200 million individuals have no access to bank funding, 40% from the lowest income countries, 30 % in middle income and 15% from the high-income countries. Thus, an important effect of the financial flow multiplier is disregarded, with a negative impact on GDP growth.

It is though, nowadays, perceptible that technological advances, the availability of connectivity and mobile banking are about to change trends by supporting inclusive finance as a prerequisite of sustainable economic growth. As inclusive finance is yet at an early stage, there is no straightforward or generally accepted definition. Nevertheless, it can be safely argued that it regards the relationship between microfinance, lasting economic growth and social wellbeing and ultimately happiness.

Academics and practitioners, as well, endeavour to clearly define a set of indicators that best illustrate the essence of financial inclusion. However, given the complexity of the issue and the multitude of determinants (economic, financial, social and technological) that channel the positive externalities of inclusion, it is rather difficult to encompass all in one aggregate index. Though there are still few empirical studies on the determinants and effects of financial inclusion at the micro-level, most of the analyses stress the relationship between such an approach and the alleviation of poverty and individual welfare. Although the literature agrees to some extent on the necessity to promote financial inclusion and on the underlying factors, it should also be recognized that there are personal obstacles, i.e. decision not to use bank services, lack of willingness to seek appropriate funding, biased perceptions related to financial issues, lack of financial education, inappropriate information etc. that prevent individuals and small enterprises to access funding.

The paper starts from the question of whether inclusive finance can complement sustainability-related indicators, such as the GDP/capita, Human Development Index (HDI), ICT and bank intermediation in enhancing the happiness index. The data is provided by The Global Findex database and applied for Finland, Poland, Saudi Arabia, Kenya, Romania during a timeframe of relatively stable economic evolution, i.e. 2012-2018. These countries, located on different continents and with different historical and cultural background, that endeavour to promote inclusive finance, were selected based on the average income (High, medium and low). The method applied is a linear regression (stepwise forward) build in R Studio software.

The paper contributes to the empirical analysis in the field. It concludes that sustainability-related factors are the main source of happiness as a manifest of the subjective perception of wellbeing. The paper is structured as follows: Literature review, Prerequisites of financial inclusion, Methodology and data, Results. The remainder of the paper is dedicated to Conclusions and policy lessons.

LITERATURE REVIEW

Literature has a broad view of financial inclusion, generally relating the topic to its impact on economic growth. From this perspective, it is a continuation of mainstream financial theory that, over the 20th century, analysed the financial phenomena either by stressing macroeconomic development, demand (or supply) related growth, innovation. Frequent financial and economic crises that have become even more worrying in the last two decades raised the question whether the structure of modern financial systems can further support growth unless other issues like poverty, income inequality, education, equitable access to funding are addressed. (Hathroubi S., 2019, p.79).

Once sustainable development came to the attention of academic and decision-makers and became a topic of general interest, the question of how could the financial sector adapt to the new economic, social and environmental requirements was raised. In its early stages, inclusive finance particularly addressed the possibilities to find the appropriate channels to fund low-income individuals and thus including them in the cohort accepted by banks and other financial institutions as potential beneficiaries of funding. The approach stemmed from the reality that poverty induced a vicious circle, preventing millions of individuals and small enterprises to develop and thus hindering economic development. Later, Mirakhor and Zamir (2012, p.34-65) expended the meaning of financial inclusion by identifying four dimensions: access to finance for all households and enterprises, sound financial institutions that are subject to financial regulation and supervision, the sustainability of financial institutions, alternative financial services that boost competition on the financial market.

Inclusive finance is often assimilated to microfinance, mainly as its integration in the established financial systems to ensure the accessibility of categories of individuals to funding (Schmidt et al., 2016). Corrado and Corrado (2017) further emphasise the role of microfinance as well as the role of governments in promoting financial inclusion policies. Starting from this point, further debates could argue that, given its positive spill over on the welfare of communities, and relying on the non-rivalry and non-excludability fundamentals, financial inclusion could be assimilated, to some extent, to public goods.

Demirguc-Kunt et al. (2017), discuss the financial channels that support financial inclusion as well as the disadvantages related to approaching it. The financial inclusion - economic development nexus has also posed challenges, economists identifying several obstacles (i.e. lack of adequate personal identification, no personal financial history, expensive financial products) that prevent its completion. Kempson et al. (2004) have already put forward a set of reasons that, generally, prevent financial inclusion, but which vary from country to country: bank terms and conditions, fees, distance to the bank in remote areas, and also behaviours, cultural or psychological influences.

Nevertheless, by finding solutions to these obstacles, the poverty issue could be extensively solved as a prerequisite of sustainable development (Beck et al., 2007). Authors (Datta and Singh, 2019, p.346) emphasise the importance of education and financial literacy can contribute to a better understanding of financial products, positively impacting on inclusion by introducing the HDI in the analysis. In line with this approach, Birochi and Pozzebon (2015) demonstrate the positive instrumental and transformative impact of financial education and ICT as essential determinants in promoting financial inclusion.

An increasing part of literature discusses financial inclusion from the perspective of social inclusion, mainly in rural or remote areas in emerging economies that have been extensively ignored by banks in the past. Vashisht and Wadhwa, (2015) provide analysis on financial inclusion in India, concluding that addressing the impact of financial inclusion on social change and consequently on bank effectiveness. Further on, as a continuation of the aforementioned literature trend, Le et al. (2019) attempt to identify some patterns in Asian countries find that there is a strong correlation between financial inclusion and financial stability, but the strength of the correlation varies among countries. On the other hand, the authors argue that by intensifying the participation in the financial market would only lead to costlier information and transaction and eventually to asymmetric information with all its embedded components.

As inclusive finance is mostly preoccupying in emerging economies that are challenged with deeper inequalities in accessing funding, a considerable strand of literature is dedicated to these countries. In this respect, one would consider that the Chinese case could be considered as the flagship in promoting the topic, mainly in the regional economy. Zhou et al. (2018) argue that the principles of financial inclusion are consistent with sustainable development (supporting growth by promoting social equity without endangering the environment), hence narrowing the development gap between regions.

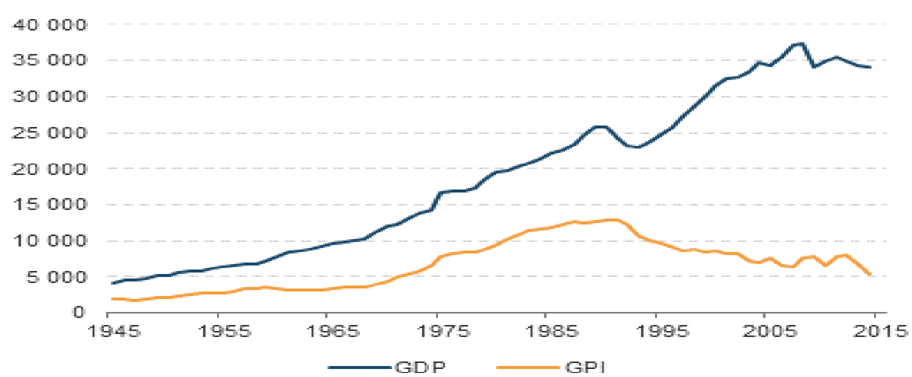
Authors have also endeavoured to identify the most appropriate indicators that best encompass financial inclusion. The indicators are meant to demonstrate that enlarging the group of people that participate in the economic and financial flow positively impacts sustainable growth (Gupte et al., 2012). Honohan (2007) consider the proportion of households that have access to financial institutions, corroborated with poverty and the Gini coefficient. Further, on Sarma (2008) relates the index to HDI when constructing an index based on access to banks. Starting from these considerations, Arora (2010) adds the geographical penetration of banks and factors that may ease access as well as the cost of transactions. Kumar (2017) argues that the GDP does not entirely capture the wealth, lacking direct reference to inclusion, green economy and wealth, proposing the Inclusive Wealth Index (IWI) that would provide policy-makers with an instrument to measure progress without endangering the environment.

The World Bank has developed a set of indicators, referring to formal and informal financial services considered in constructing the Global Findex (Demerguc – Kunt et al., 2017).

THE PREREQUISITES OF INCLUSIVE FINANCE

When measuring the need and impact of inclusive finance some prerequisites are to be set. When assessing economic development, the GDP/capita stands out as the most widely used indicator. However, considering the requirements of sustainable development and financial inclusion, other indicators are developed to encompass the welfare of society. Hence, The Genuine Progress Indicator (GPI) is a composite indicator, aggregating the three pillars of sustainable development (economy, society and environment). It is locally used in the USA to measure real progress in the constituting states and randomly, more on an experimental basis in other countries such as New Zeeland, Finland, China. (UNCTAD, 2016). To illustrate, Figure 1 shows the widening GDP-GPI (that includes income distribution, volunteering, resource depletion, crime, higher education, among others) gap in Finland, showing that economic growth does not necessarily translate in sustained wellbeing.

Figure 1. GDP- GPI gap in Finland

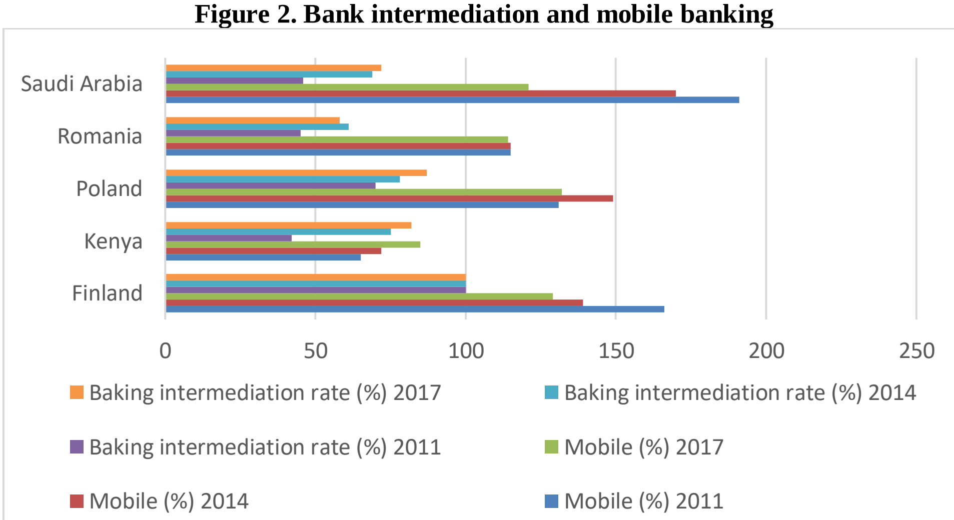


Source: UNCTAD (2016) citing Hoffrén J (2011)

To ensure durable development, one should also look to what extent the financial system of a country is inclusive enough. Measuring financial inclusion is not an easy task since it's complexity stems from the numerous indicators that are considered. It includes the possibility to saving and borrowing, gender equality in accessing funding, the extent to which financial transactions are made using the internet or mobile phones, online shopping, rural area access to funding, etc. Therefore, literature does not cite one size fits all index, it being adapted to countries specificities and the aspects authors want to highlight.

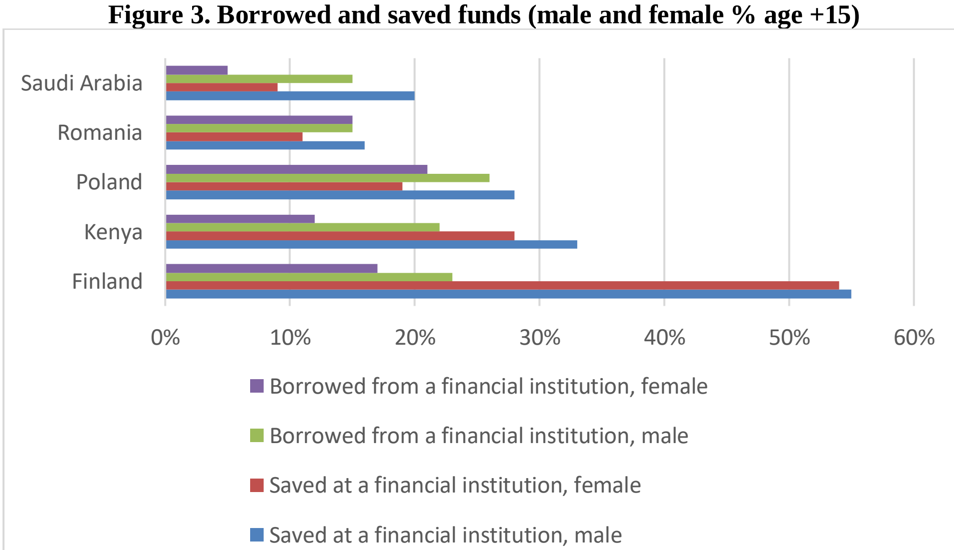
For the purpose of the paper, access to bank intermediation, mobile banking, savings/borrowing, debit card and digital payments are illustrated below for the selected countries.

Figure 2. Bank intermediation and mobile banking



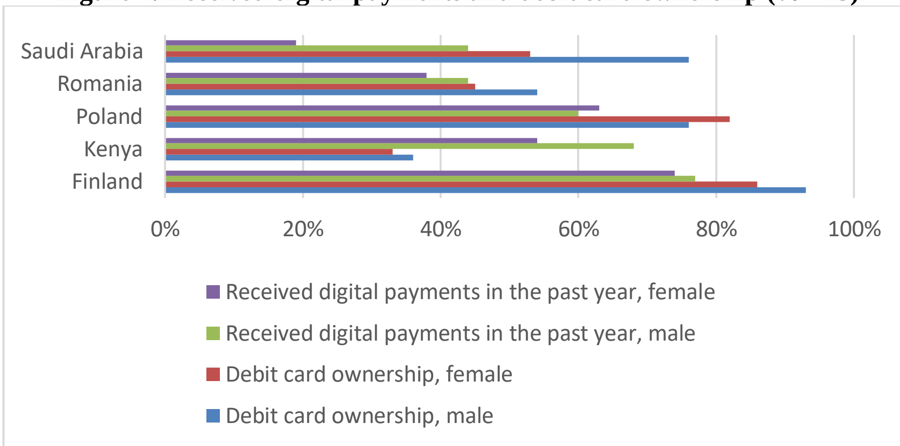
Source: Global Findex

Figure 3. Borrowed and saved funds (male and female % age +15)



Source: Global Findex

Figure 4. Received digital payments and debit card ownership (% +15)



Source: Global Findex

As figures show, the inclusive finance stance is different for the selected countries. Finland and Saudi Arabia top in mobile bank intermediation, followed by Poland (that is quite fast in catching up mobile banking), and Romania, but Kenya still lagging. Concerning gender equality in saving, all countries, except Finland, show discrepancies, but when it comes to borrowing, in Romania females equal males. Concerning digital payments and debit card ownership, Poland and Finland are most advanced in inclusiveness, but Saudi Arabia shows the largest gap. The differences between these countries concerning inclusive finance are rooted in their economic development, illustrated by the GDP/capita, in the cultural and historical financial behaviour.

METHODOLOGY AND DATA

The question of the study is whether financial inclusion impacts wellbeing alongside other sustainable development-related variables. For the purpose of the paper, the happiness index is used as a proxy for the perceived wellbeing and ICT stands for financial inclusion.

The multiple linear regression (forward stepwise) method was used in R studio program to estimate the variance of selected variables in time perspective. The methodology consists in analysing the interdependence between the human development index (HDI), ICT and GDP per capita (GDP) as independent variables, and World Happiness Index (WHI), as a dependent variable.

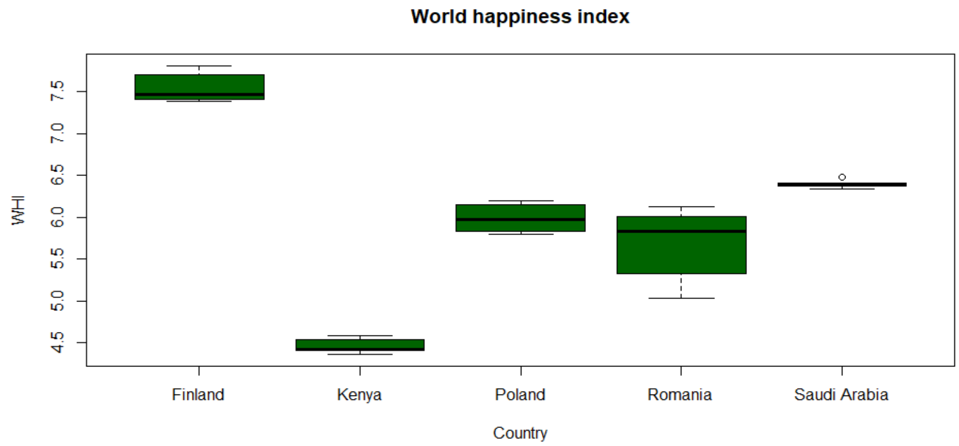
The equation is:

$$WHI=\beta 0HDI + + \beta 1ICT + \beta 2GDP +\varepsilon \ (1)$$

Where: WHI – world happiness index (annual index for each country); HDI – human development index (annual index for each country); ICT - Mobile banking subscriptions (per 100 people), GDP – GDP/capita

The Happiness Index is given in Figure 5, with Finland at the top of the chart, Poland, Romania and Saudi Arabia at the middle and Kenya at the lowest level, among the considered countries.

Figure 5. World Happiness Index



Source Global Findex produced in R studio

World Happiness Index is used as a proxy for subjective wellbeing given that the latter is strongly correlated with sustainable development indicators. Another important indicator is Human development index (HDI) that was selected given that it is a composite index that measures key dimensions of human development and it is considered as being a significant contribution to the growing body of research on how to understand wellbeing, development and progress. ICT stands for financial inclusion. It is measured based on the percentage of the population with access to an account via a financial institution or mobile-money-service provider and was considered for the research as being an important determinant of financial inclusion. In the absence of relevant data concerning the Genuine Progress Indicator (GPI), economic prosperity is measured using the GDP/ capita. The sample of countries - Finland, Poland, Romania, Kenya and Saudi Arabia were chosen based on their average income. The data covers the 2012-2018 time frame. The data source is the Global Findex Database.

According to the results, there is a significant correlation between the world happiness index and the other variables, 0.87% of the variance being explained by independent variables.

R Studio results:

```
Call:
lm(formula = WHI ~ HDI + ICT + GDP, data = Test)

Residuals:
    Min      1Q  Median      3Q     Max 
-0.7495 -0.1593 -0.0614  0.2272  0.9055 

Coefficients:
              Estimate Std. Error t value Pr(>|t|)    
(Intercept)  1.825e+00  6.277e-01   2.907 0.006684 ** 
HDI          5.799e+00  1.037e+00   5.591 3.94e-06 ***
ICT         -1.146e+00  4.215e-01  -2.718 0.010653 *  
GDP          3.339e-05  8.159e-06   4.092 0.000282 ***
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Signif. codes:  
0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.3832 on 31 degrees of freedom
Multiple R-squared:  0.877,	Adjusted R-squared:  0.8651 
F-statistic: 73.66 on 3 and 31 DF,  p-value: 3.361e-14
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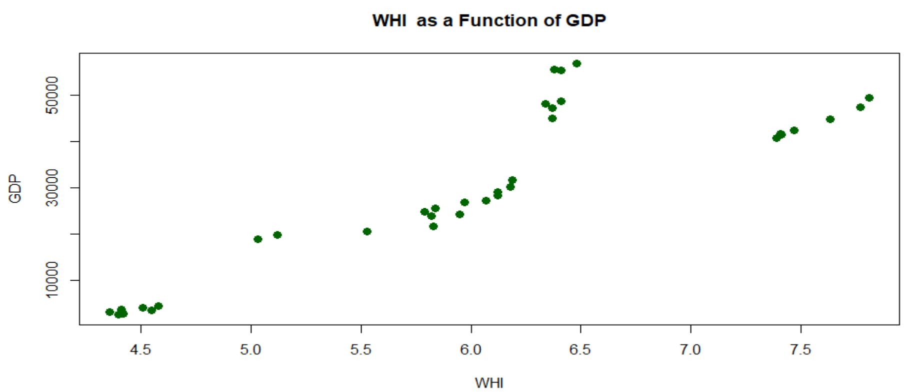
Source: authors ‘calculations in R Studio using data from the Global Findex database

Above results show that WHI variation has a positive correlation with HDI and GDP growth, but a negative correlation with ICT growth.

RESULTS

Financial inclusion is a key element in the fight against poverty and the pursuit of inclusive development (as a prerequisite of wellbeing and happiness), hence stimulating an increasing focus on financial inclusion policies and initiatives. Data covering the major components of sustainable development and financial inclusion is critical in formulating policies and monitoring the effect of initiatives (GPFI, 2016). Nevertheless, economics, more than any other field, traditionally assumes that indicators like a high GDP/capita, a long life expectancy, or a low unemployment rate are the keys to human contentment. But, economic growth does not always guarantee rising happiness. While per capita output is indeed correlated with other variables (wealthier countries can provide more social services, for example), the differences in factors other than GDP seem to explain much of the variance in happiness for countries at the top of the list. Though the GDP/capita is high in Saudi Arabia and Finland, the happiness index is higher in Finland.

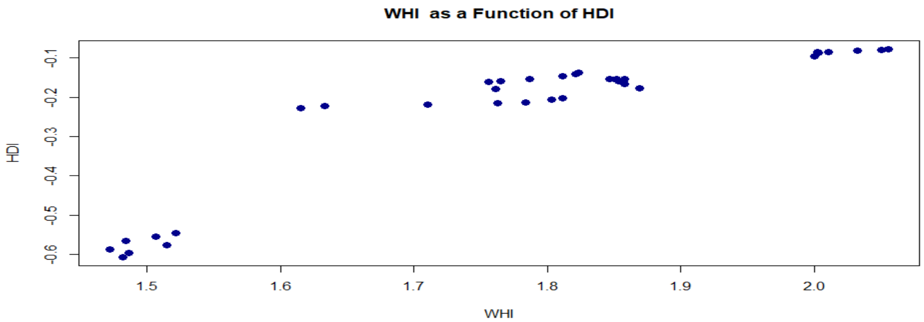
Figure 6. WHI as a function of GDP



Source: Global Findex produced in R studio

Many theories have been put forth to explain the high level of Nordic countries happiness, from successful durable development, social and economic inclusiveness, the ability to support the vulnerable groups and, last but not least enhanced social capital (World Happiness Report, 2020). From a mainstream approach, the Nordic countries are characterized by a virtuous cycle in which various key institutional and cultural indicators of an inclusive society are interwoven, including good governance, generous and effective social welfare benefits, low levels of crime and corruption and trust. The upper-middle-income and middle-income countries (Poland, Romania) also experience lower levels of the happiness indicator (comparable with Saudi Arabia which has a higher GDP/capita). Kenya with the lowest GDP/capita, among the considered countries, also shows the lowest value of the happiness index. Correlation between happiness and HDI can also be identified, which is hardly surprising since cultures are sometimes defined in terms of the social norms they embody (Hall, J. & Helliwell, J., 2014).

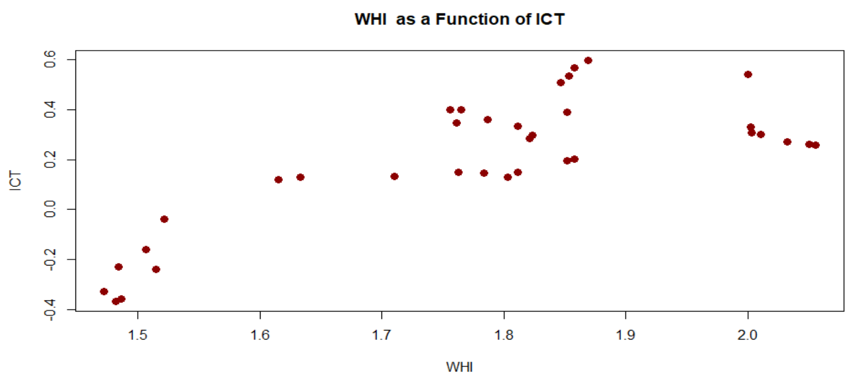
Figure 7. WHI as a function of HDI



Source: Global Findex produced in R studio

In terms of bank intermediation, ICT, measured by mobile banking subscription, all the considered countries have made progress, with Finland and Saudi Arabia at the top of the chart.

Figure 8. WHI as a function of ICT



Source: Global Findex produced in R studio

Despite battling extreme poverty, Kenya endeavoured to extend mobile bank intermediation, promoting higher financial inclusion. In 2017, more than seven in 10 adults were financially included (73%); and of these financial account holders, 98% held mobile money accounts (FII, 2018). In 2017, the digital financial services (DFS) market in Kenya continued to develop beyond basic transfers as active mobile money users continued their rapid uptake of new and existing products and services for merchant and bill payments, government payments and transfers, and credit, savings, investment and insurance. In addition to mobile money, financial services are available through a diverse group of institutions, including banks, nonbank financial institutions and informal financial groups. Nevertheless, on an average, there is a negative correlation between the happiness and ICT for the sample countries, no clear cut conclusion being observable, meaning that, either ICT is not necessarily correlated with happiness or individual analysis of each country is needed, under particular circumstances, including the obstacles that might prevent the large acceptance of ICT, i.e. decision not to use mobile bank services, biased perceptions related to financial issues, lack of financial education, inappropriate information etc.

CONCLUSIONS

The Group of Twenty (G20) recognizes the key role of financial inclusion as a key element in the fight against poverty and the pursuit of economic development and wellbeing. All countries (high, medium and low income) are making steps towards financial inclusion, knowing that it will contribute to their long term growth, positively impacting on the economy, society and environment. As the paper shows, happiness, as subjective wellbeing, is strongly related to the GDP/capita as a measure of economic growth, the HDI as an index of social capital. Nevertheless, there is a negative correlation between happiness and ICT, as a proxy for financial inclusion, showing that further investigation is needed concerning the impact of mobile bank intermediation and the perception of its influence on enhanced wellbeing (and ultimately happiness) in each of the considered countries. The obstacles (either economic or behavioural) that prevent financial inclusion will be further researched.

Nevertheless, it seems that in less developed countries it is a large understanding of the fact that customers across all income levels are increasingly empowered by using modern means of financial transactions. They expect to bank on their terms, anytime and anywhere, and to be in control of their banking experience (World Happiness Report, 2020), but it will be the test of time that will show whether ICT will become a leading determinant of happiness.

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