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Abstract

The main purpose of this study was to examine effects of the three behavioral dispositions/factors (self-control, confidence and social proof) on financial inclusion (FI). The study was grounded on the behavioral finance theories. Cross-sectional survey design was adopted with a target population for the study was the 2,194 licensed ME in Embakasi East Constituency of Nairobi County. Stratified random sampling technique was used to select a sample size of 486 respondents. Primary data was collected using a structured questionnaire. Data was analyzed using descriptive and inferential statistics. Findings indicated significant positive effects of the three behavioral dispositions; self-control (SC) ($\beta = .265$, $\rho=.000$), Confidence (C) ($\beta = .241$, $\rho=.000$) and Social proof (SP) ($\beta = .212$, $\rho=.000$) on financial inclusion. The study contributes to the development of finance theory through establishment of relationship between the three behavioral factors and FI. The main contribution of the study was on establishing the pivotal role of behavioral on usage of financial services, with positive disposition being empirically determined to be an enabler of FI. In addition, policy recommendations and areas for further study by finance scholars have been suggested.

Keywords: *Behavioral Factors, Confidence, Financial Inclusion, Social Proof, Self-Control*

1.1 Background of the Study

In the theory of Finance, financial inclusion (FI) which is majorly seen as the process of enhancing access and usage of formal financial services (FFS) has emerged as a serious matter of global concern and study. Indeed this sprouts from a generally agreed proposition held by most finance scholars and practitioners that, when one is included in the formal financial system, such

a person is able to meet their desired economic goals, optimize opportunities and possibly improve their wellbeing, a position that was augmented by the resolutions of the G-20 Summit held in Seoul (2010). An effective FS facilitates provision of payments services, mobilizes and pools savings, allocates capital appropriately and ensures provision of risk management systems and financial instruments to all those who require the services at the most competitive prices. It is therefore possible that inclusion into such a system shall indeed improve an individual's economic status and quality of life and propel a country's economic growth at macro level. (Allen, Demirgüç-Kunt, Klapper & 2016; Demirgüç-Kunt, Klapper, Singer, Ansar & Hess, 2018; Beck; 2016, Lanie, 2017; Neaime & Gaysset, 2018; Onaolapo, 2015; Zins & Weill, 2016).

Whereas the importance of FI is generally understood and accepted, there is scanty empirical data on the factors that fortify the same, thus a growing body of knowledge in this trajectory. Demirgüç-Kunt *et. al*, 2018; Grohmann, Klühs and Menkhoff, 2017; Xu and Zia, 2012, suggests that financial literacy (FL) and optimization of financial innovations holds the key in enhancing FI. Beyond skills and knowledge, budding studies on behavioral finance theory recognizes the impact of psychological or behavioral factors (BF) such as risk aversion, overconfidence, imitation, self-control among others on financial decisions. (Houston, 2010; Jurevičienė & Ivanova, 2013; IOSCO & OECD, 2018). Behavioral finance theory (BFT) continues to gain prominence arising from its recognition of diversity of factors that comes into play in the individual's decision-making process beyond the rational thinking subscribed to by classical economics/finance scholars (Jurevičienė & Ivanova, 2013; Odean & Barber, 2004; among others). There is a growing body of research that considers effects of behavioral factors (BF), broadly classified as emotions, framing, heuristics, market influence and perceptions, on financial decision making (Aşıkoğlu & Boyukaslan, 2016; Binoy & Subhashree, 2018; Gathergood, 2012; Strömbäck, Lind, Skagerlund, Västfjäll & Tinghög, 2017; Jurevičienė & Ivanova, 2013; Waweru, Mwangi & Parkinson 2014).

It has been conjectured that behavioral biases are responsible for sub-optimal financial decision-making. For example, studies suggest that consumers' preference for materialism leads to higher indebtedness (Nye & Hillyard, 2013). In addition, self-control issues may make people to deviate from their long-term plans for financial security and engage more in debt for immediate satisfaction and less saving. Similarly, inadequate long-term planning, preference for mental accounting (separating money into different accounts based on some criteria, which in most case is illogical), occurrence of critical events among others, influence decision-making and ultimately financial well-being. On the other hand BF such as possession of self-control, confidence in use of financial information, deliberate thinking, optimism, willingness to take informed risks have been suggested to lead to optimal usage of FS. (Benton, Meier, Sprenger, 2007; Binoy & Subhashree, 2018; Gathergood, 2012; Miotto & Parente, 2014; Strömbäck *et al*, 2017).

However, ME's face a number of constraints that mainly revolves around funding, with the main sources being savings, loans from friends and family, and other informal sources. To encourage greater bank-led financing, CBK has been championing for ways to enhance increased funding to the sector. Shortage of operating funds due to increased operating expenses, declining income

and losses incurred from the businesses, was main factor for closure of business as reported by 29.6% of the firms that closed in the year of study (2016). The study further observed that utilization of mobile financial services were gaining ground amongst ME, though majority did not have a dedicated pay bill account. On utilization of loans the survey findings was that it was more difficult for enterprises to access loans from commercial banks than from other small financial institutions. Reasons for not taking loans included high interest rates or lack of collateral to support the loan application among others. Other challenges faced by the enterprises are numerous regulatory requirements, lack of markets, stiff local competition, poor infrastructure (roads, power and water supply) and insecurity. Owing to the financial constraints faced by ME in Kenya, despite their huge potential in shaping the country's economic growth, this study found it ideal to study the practices of the owners of the firms in utilizing formal financial services and the effects of the explanatory variables that were studied.

1.2 Statement of the Problem

Despite increase in number of studies that examines drivers of financial inclusion, studies that recognize BF on utilization of financial services are at nascent stages (Binoy and Subhashree, 2018). Furthermore, majority of the emerging studies that have attempted to establish the relations between behavioral disposition and utilization of financial services have dwelt on investments decisions as regards assets traded in securities markets (Aşıkoğlu & Boyukaslan 2016; Waweru, Mwangi & Parkinson, 2014). Thus, this study contributed to enrichment of finance theory through empirical examination of the relations between behavioral dispositions and financial decisions by actors (Micro Enterprises), outside securities exchange in Kenya. The study therefore contributed towards comprehensive documentation of factors that affect FI to inform policy directions and theory growth from an emerging economy perspective.

1.3 Objectives of the Study

The main objective of the study was to examine the effects of behavioral dispositions on financial inclusion of Micro Enterprises in Kenya.

Specifically, the study sought to examine the effects of:

- i. Self-control on Financial Inclusion of Micro Enterprises in Kenya
- ii. Confidence on Financial Inclusion of Micro Enterprises in Kenya
- iii. Social proof on Financial Inclusion of Micro Enterprises in Kenya

2.0 Literature Review

2.1 Theoretical Framework

Life cycle hypothesis theory attributed to the classic economic studies of Modigliani (Ando and Modigliani, 1963) theorized that individuals plan their spending over their lifetimes, taking into account their future income; however, scholars (such as Thaler and Benartzi (2004); Shefrin and Thaler, (1998), have contested the conclusions. The arguments being put forward are that there is need to recognize imperfections in financial markets, differences in expectations on income and consumption hence emergence of modified version thereof referred to as the behavioral life cycle hypothesis, accredited to (Shefrin& Thaler 1988). (Thaler & Benartzi, 2004). They attempted to

make the theory behaviorally realistic by introducing effects of self-control in postponing consumption, mental accounting in portioning of income between current and future consumption and framing of wealth/income when received in lump sum as compared to regular income. Briefly, the theory looks at the decisions based on actual but not rational behavior. Behavioral Finance Theories (BFT) has generally been used to model anomalies/ sub-optimal decisions making due to various form of biases (cognitive and prospects theories), the theories have proved useful in complex decision making such as where there is information overload and individuals have to make decisions based on their judgements (Zaleskiewicz, 2006). Strömbäck et al. (2017) extended applicability of the theory in determining financial behavior and financial wellbeing and observed that high self-control and optimism results into positive financial behaviors. Following the line of thinking of Binoy and Subhashree (2018); Strömbäck *et al.* (2017) among others, this study attempts to use BFT to identify an empirically test identified psychological factors that are expected to drive positive behaviors for optimal utilization of financial services by individuals outside the securities exchange markets, micro enterprises in Kenya. BFT is considered relevant to the current study that attempted to understand the relationship between behavioral factors (self-control, confidence and social proof) and usage of financial services (FI), the latter of which has been theorized to enhance quality of life. Given the way BFT has been operationalized by other Finance scholars, this study selected measurement items that focus on the three behavioral factors being studied as documented in the behavioral factors section of the data collection tool.

2.2 Empirical Review (hypothesis development)

This section outlines previous studies undertaken on the relationship between the various explanatory variables (behavioral factors, and financial inclusion. Emergent empirical studies have considered different behavioral factors and their influence in the use of financial services (FI). For example, Lown, Kim, Gutter and Hunt (2014) studied the relationship between self-efficacy (SE) and savings among middle and low-income households in the United States of America (USA). The study, which was premised on the Social Cognitive Theory observed significant positive effects of high self-efficacy with savings behavior. Meier and Sprenger (2010) studied the effect of present-biased preferences (desire for immediate consumption) on credit card borrowing among USA households. The results were that those that lack of self-control are bent to heavy credit thus the results agreed with behavioral economics models of present-biased preferences, as regards usage of financial services.

Gathergood (2012) considered the effect of self-control and financial literacy on consumer over-indebtedness on usage of FS, data having been collected in the United Kingdom. The study concluded that lack of self-control and FL are positively associated with non-payment of consumer credit and self-reported excessive financial burdens of debt. Thus, users of FS who exhibit self-control problems have a tendency to use quick-access but high cost credit items such as payday loans are likely to suffer income shocks, credit withdrawals and unforeseen expenses on durables hence exposed to diverse risks. Self-control was seen to have a higher impact on over-indebtedness as compared to FL. In order to appreciate how people make decisions on use of FS (financial decisions), Strömbäck *et al.* (2017) investigated the effect of individual

differences in self-control, optimism, deliberative thinking in financial decision-making. The study was a cross sectional survey wherein data was collected for Swedish population. It extended the behavioral lifecycle hypothesis beyond savings behavior, to include general financial behavior; savings, debt management, planning and investment. The control variables in the study were income, age, sex, educational attainment and financial literacy. The findings suggests that people with good self-control are more likely to save money earned, have better general financial behavior, feel less anxious about financial matters, and feel more secure in their current and future financial situation. Optimism and deliberative thinking were found to have positive effects on savings behavior independent of self-control. In addition, FL, income and being a female have a positive effect on savings behavior. The study confirmed applicability of BLC beyond savings hence credence for use of the theory in the resent study.

Binoy and Subhashree (2018) undertook an exploratory research on behavioral factors that influence the continued usage of formal financial services among the low Income households in India using behavioral finance theories. Factor analysis of 31 behavioral features/variables derived from various literatures was considered during the study. It was concluded that twenty-five items thereof grouped into five categories; impulsiveness, commitment to goals, social proof, self-efficacy, comfort level and privacy concerns had a strong relationship with continued usage of formal financial services among the Low Income Households. The ones with the highest internal consistency based on Cronbach's alpha value, which were impulsiveness (self-control), social proof, and self-efficacy (confidence), were subjected to further study through this current research with the items being adjusted appropriately to suit the context of the study.

Social proof (SP), which entails the tendency for individuals to be influenced by social pressure, socio-economic environment and/or to seek approval from peers, family and friends to validate their decisions or behavior, has been theorized as a behavioral factor that affects financial decision making. (Brown, Ivković, Smith & Weisbenner, 2008; Mehla & Ghalawat, 2014). Social proof theory is attributed to earlier scholars such as Festinger (1954) and has been widely used to explain diverse human behaviors such as returning a lost wallet, littering in a public place, donating funds to charity, deciding whether and how to commit suicide among others. (Cialdini, Wosinska, Barrett, Butner & Gornik-Durose, 1999). The relationship between financial/economic decisions and social relationships continues to garner attention given the emergence of social networking sites such as Facebook and LinkedIn, which continue to be optimized for peer-to-peer lending, crowd funding, rentals and other social commerce activities. (Lee, Lee and Chae, 2012; Liu, Brass, Lu & Chen, 2015).

In an empirical study that was aimed at determining the behavioral factors that affect individual investors' decision making processes in Turkey, Aşikoğlu and Boyukaslan (2016) tested 35 specific propositions with 460 individuals. Their study was premised on behavioral finance theories with outcome confirming tendencies for the individuals to demonstrate optimism, risk aversion, avoiding regret, herding, and representative bias, gambling and framing biases. Their study identified five behavioral variables named as Affirmation, Hetero-Emotional, Prophecy, Contrast and Adverse Advertisement / Social Circle Tendency, which they recommended for further studies. While pursuing this gap, this study undertook further studies on two of the

variables; self-confidence and social circle tendency (herein referred to as social proof) for further testing on their impact on financial decision making in order to enhance knowledge creation on behavioral finance theories.

The empirical studies reveals the various ways in which the relationships between the explanatory variables; behavioral factors have been modelled with diverse dimensions of financial inclusion, commonly access and usage of FS. Studies on the various variables are generally reported to be at nascent stages, whereas the FI continues to capture global attention with the target being to achieve universal FI by the year 2020 while also recognizing that the phenomenon (FI) is a catalyst for realization of Global Social Development Goals by the year 203. (WB, 2018). In addition, from the literature reviewed above, it is observed that the variables under investigation have been considered in isolation and commonly direct relationships have been pursued without attention being given to derivation of a comprehensive understanding of how behavioral factors affect usage of FS (FI). From the foregoing and to the best of our knowledge, a comprehensive model that aims at understanding the extent to which behavioral dispositions (self-control, confidence and social proof) influences FI , therefore the study hypothesized that;

H₀₁: There is no statistically significant direct effect of self-control on Financial Inclusion of Micro Enterprises in Kenya

H₀₂: There is no statistically significant direct effect of confidence on Financial Inclusion of Micro Enterprises in Kenya

H₀₃: There is no statistically significant direct effect of social proof on Financial Inclusion of Micro Enterprises in Kenya.

3.0 Research Methodology

3.1 Sample design and Measurement

The research focused on the research problem and hypotheses outlined in the sections above, adopted cross sectional survey and explanatory strategy aimed at contributing to practical solutions and outcomes in the Finance field. Having adopted a quantitative research design, the study utilized a cross-sectional survey strategy to collect quantitative data on perceptions on the variables that were being studied with the explanatory strategy being adopted to study the relationship between the variables. The target population for the study was the 2,194 licensed ME in Embakasi East Constituency of Nairobi County, which comprised of 71 enterprises in the Manufacturing Sector, 1,465 establishments in commerce/trade sector and 658 establishments in the Service and other sectors of the economy. For this study, the following formula outlined in Singh and Masuku (2014) based on the work of Yamane (1967), herein given below, was used to calculate the sample size of 486. Stratified random sampling procedure was applied and primary data collected using a structured questionnaire that comprised of both positively and negatively worded items for the Likert type questions, the latter of which were included to minimize response bias. Thereafter, data was successfully collected from 413 participants (85%) which was greater than 50 percent of the targeted sample, hence considered adequate for further analysis as suggested by Kim (2013).

$$n = \frac{N}{1+N(e)^2}; \quad n = \frac{2,194}{1+2,194 (0.04)^2} = n=486$$

This study adopted the usage dimension of measurement of FI as used by other scholars such as (Binoy and Subhashree, 2018; Grohmann et al, 2017; Singh and Roy, 2015), with modifications to suit Kenya’s environment as informed by measures adopted in FSD (2016). Thus, usage of financial services (FI) was measured through perceptions on usage of payment services, money transfer services, savings, credit and investments made through formal financial institutions. Usage of these services were expected to be outcomes of optimal decision making arising from positive behavioral factors, mediated by adoption of financial innovations and moderated by possession of requisite financial knowledge and skills. Furthermore, the study measured the entrepreneurs’ behavioral dispositions using three variables: self-control, confidence, social proof based on items in the data collection tool all of which have been tested and considered reliable by other studies (Fernandes *et. al.*, 2014; Nye and Hillyard, 2013; Strömbäck *et al.*, 2017). The control variables for the study were the age and gender of the ME owner/representative as well as the main economic activity being undertaken by the business. Age was measured in terms of years whereas gender was measured as either male or female as was used in FSD (2016 and KNBS, 2016). Economic activities were categorized as manufacturing, commercial/trade as well as service and other sectors. To inform the identification of the relevant economic activity category, sampled ME were requested to select one sector based on their highest source of income in the previous year, as was adopted by KNBS (2016).

3.2 Data Processing and analysis and Model specification

Data analysis was undertaken through SPSS and results presented through tables outlined in chapter next section below. To facilitate testing of the hypotheses of the Study, the multiple regression equation outlined below were utilized for inferential analysis.

$$Y = i + \beta \text{Gender} + \beta \text{Age} + \beta \text{Sector} + b_1 \text{Self-control} + b_2 \text{Confidence} + b_3 \text{Social proof} + \epsilon_Y \dots\dots$$

Equation 1

Where; Y= Financial Inclusion; *i* = constant term; β coefficients of Age, Gender, Economic activity respectively in the model; b_1 to b_3 are regression coefficients of the three behavioral dispositions (Self-control, confidence and social proof respectively) in the model; and ϵ_Y = error term.

3.3 Reliability and Validity of Data Measurements

The study measures were validated and their reliability tested using factor analyzing and Cronbach alpha and presented in Table 1. The principal component analysis with varimax rotation was performed to identify the underlying factors for variables. The results depicted high factor loading scores by all items that were all above the minimum recommended value of .50 (Hair *et al.*, 2014). As outlined in Table 1, the items loadings were above .5 hence all the items were considered important in the explaining the financial inclusion, social proof, confidence and self-control construct. The Exploratory Factor Analysis cumulative extracted variance of were

above 50% (Hair et. al. 2014; Yong & Pearce, 2013). Thus, all the items were considered appropriate to explain the variable. Moreover, Bartlett's Test of Sphericity produced a significant Chi-Square (χ^2) ($p < .05$) and Kaiser – Meyer - Olkin measure of sampling adequacy above the acceptable value of .50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on this variable of social proof, confidence and self-control construct (Leech *et al.*, 2013). Having observed that all items met the criteria are supported by finance theory and statistical analysis in terms of loading, Eigen values and significant contribution to the explained total variance they were all retained for further analysis. Cronbach alpha for each variable based on the average of inter-item correlation was above .70.

Table 1: Reliability and Validity of Data Measurements

n=413	Mean	loadings	AVE	CV%
Financial Inclusion(Cronbach's Alpha=.731, KMO=.694, Bartlett's Test of Sphericity=2063.81*)	3.00		.83	84.84
Repayment of loans ...	2.55	.98		
Receiving money	2.66	.96		
Making payments	2.67	.96		
Saving funds for future	2.67	.90		
Obtaining loans or credit facilities	3.04	.91		
Paying for insurance and other investments	3.23	.85		
Receiving insurance and other benefits	3.62	.83		
Self-Control(Cronbach's Alpha=.887, KMO=.783, Bartlett's Test of Sphericity= 1662.839*)	3.00		.69	69.40
I have a tendency to spend more money if there is more cash.....	3.45	.93		
I am prepared to spend money now and let the future	3.44	.91		
I prefer to follow the gut feelings/instincts to take financial decisions	3.38	.79		
When I am anxious on financial matters, I tend to postpone	3.28	.79		
I'm good at resisting temptation	3.25	.73		
Confidence(Cronbach's Alpha=.929, KMO=.78,Bartlett's Test of Sphericity2316.59*)	3.09		.64	78.02
I know what investments to look	3.63	.91		
When facing difficult situations in my	3.62	.90		
I trust banks, SACCO's and Mobile money providers	3.61	.88		
I do not know where to get the right sources	3.56	.87		
I lack skills related to financial planning	3.55	.86		
Social proof(Cronbach's Alpha=.915,KMO=.732,Bartlett's Test of Sphericity=2043.80*)	3.13		.75	74.70
I prefer to follow the patterns of my friends.....	3.68	.87		
I use mobile financial services	3.66	.86		
The social- economic factors	3.57	.88		
I feel more comfortable and secure when my financial decisions	3.55	.86		
I'm not comfortable investing and saving in groups	3.53	.84		

*P<0.05

Source: Research Data, 2019

4.0 Research Findings and Discussions

4.1 Descriptive Statistics

Descriptive statistics in Table 2 showed that the rate of usage of the diverse forms of financial services was high given the mean of 3.001 with a standard deviation of .623. This signified that the respondents fairly agreed that formal financial services are integral to running of MEs in Kenya hence the high level of frequency of usage of the services. Further findings showed that entrepreneurs had moderate self-control and moderate confidence from the findings, Social proof had the highest mean (3.129) followed by Confidence (3.092). Self-control had a mean of (3.001). The implication is that the social proof has exhibited superior factor in enhancing usage of financial services thus enhancing financial inclusion of micro-enterprises in Kenya. The standard deviations for all the variables were less than 1 indicating less variations in the responses. Further, the values of the skewness (asymmetry) as displayed in Table 2 are within the acceptable values of not larger than 2 for skewness and not larger than 7 for kurtosis. (Kim, 2013; Watkins, 2018). Therefore the normality assumption appears not to have been violated.

4.2 Correlation Analysis

The results as outlined in Table 2 below indicate that there is a positive and significant correlation between the independent variables and financial inclusion. Particularly, the correlation results showed that Self-control had a positive and significant moderate relationship with financial inclusion ($r = .592, \rho < .01$). Confidence positively correlated with financial inclusion ($r = .568, \rho < .01$). Moreover, results indicate that Social proof positively and significantly relates to financial inclusion ($r = .545, \rho < .01$). Gender ($r = .021, \rho > .01$) and age ($r = .007, \rho > .01$) respectively showed a positive but insignificant correlation with financial inclusion whereas sector had a negative but insignificant relation with the dependent variable ($r = -.001; \rho > .05$). Based on the above results there is an indication of linear relationship between all predictor variables on the predicted variable (financial inclusion) of micro enterprises in Kenya, hence there need to perform advanced analysis through multiple regression models to show the cause-effect relationships.

Table 2: Correlation Analysis Results

	Mean	STD	Skew	FI	SC	C	SP	gender	age	sector
FI	2.998	.695	-.149	1						
SC	3.001	.752	-.116	.592**	1					
C	3.092	.776	-.183	.561**	.450**	1				
SP	3.129	.772	-.274	.545**	.471**	.404**	1			
gender	1.43	.496	.27	.021	.007	.054	.038	1		
age	1.68	.745	.924	.007	.029	.03	.036	.441**	1	
sector	2.28	.524	.199	-.001	-.002	-.045	-.057	.226**	.245**	1

** . Correlation is significant at the .01 level (2-tailed).

Source: Research Data, 2019

The labels of the variables used in the Table 2 above were: *FI= Financial inclusion* , *SC= Self-control*, *C= Confidence* and *SP= Social proof*.

4.3 Hypotheses Testing

Before undertaking regression analysis diverse statistical assumptions were tested to establish if the data met the normality, linearity, heteroscedasticity, multicollinearity and autocorrelation assumptions (Garson, 2012; Hayes, 2013; Osborne and Waters, 2002; Williams, Grajales & Kurkiewicz, 2013). Without undertaking the tests, the meaningfulness of the interpretation of the regression coefficient in the diverse models would have been at risk. It was because of these results, that the tests of associations and prediction were subsequently performed. The results confirmed that normality of the data was not a problem because tests of K-S and S-W of all the variables were not significant. Hence, the data distribution in the study was reliable for multivariate analysis. The results indicated that there is a significant linear relationship between all the predictor variables and the predicted variable (financial inclusion). This implied non-violation of the linearity assumption. This further connotes that linearity of the predictor variables with the response variable enabled the researcher to perform further regression analysis to infer on the casual-effect between the variables in the study. The findings revealed that basing on Levene’s statistic; homoscedasticity is not a problem given that all the variables had p-values > .05. The findings in Table 3 revealed that the VIF values for all the independent variables were below 4.0 and the tolerance values were all below .2. This means that for all the predictor variables, multicollinearity was not detected. Further, from the findings in Table 3 below, the observations are independent (not auto correlated) since the Durbin- Watson values for the are all between 1.5 and 2.5. Therefore, it is observed that the study data does not violate the independence test (no autocorrelation) assumption.

Regression analysis was performed to test the model fit and to establish the predictive power of the study models. Multiple linear regression analysis was performed to calculate the effects of the control and predictor variables on financial inclusion. The combined prediction of all the variables accounted for approximately 56 % of the total variation in financial inclusion ($R^2 = .513$, Adjusted $R^2 = .506$). The ANOVA model showed that the joint prediction of all the independent variables as depicted in Table 4.28 below was statistically significant ($F = 71.256$, $\rho = .000$). Thus, the model was fit to predict financial inclusion using self-control, confidence, social proof, financial innovation and financial literacy. Based on the collinearity statistics, the VIF values were all less than 4 (Garson, 2012) and the tolerance values were all above .2 (Kutner *et al.*, 2005) indicating that multicollinearity was not a problem in the study.

H₀₁ predicted that there is no significant direct effect of financial services users' self-control on financial inclusion. However, the results presented in Table 4 below showed a positive and significant association between financial services users' self-control and financial inclusion ($\beta = .328$, $\rho = .000$). Therefore, the hypothesis was not supported. The findings indicate that self-control tendencies of an entrepreneur will likely determine if he/she will optimally use financial services. The findings are similar to those of Lown *et al.* (2014) who suggested that higher self-efficacy and middle incomes are associated with a higher likelihood of savings, an element of financial inclusion. Strömbäck *et al.* (2017) made similar conclusion based on their observation of significant positive effects between good self-control and better general financial behavior, less nervousness about financial matters, and confidence in their current and future financial situation, all of which contribute to enhanced financial inclusion. The findings suggest that entrepreneurs who possess high levels of self-control improve their financial inclusion are further supported by Gathergood (2012) findings that lack of self-control is positively associated with non-payment of consumer credit and self-reported excessive financial burdens of debt. Thus, self-control has a higher impact on financial inclusion. Similarly, Aşikoğlu and Büyükaşlan (2016) findings that people with good self-control are more likely to have better general financial behavior that might result to increase in financial inclusion were supported by the findings of this study. Findings on effects of impulsivity (lack of self-control) demonstrated similar as those of this study given its significant effects on level of credit and number of credit card in a study conducted by Peltier, Pomirleanu, Endres, and Markos (2016).

H₀₂ proposed that there is no significant direct effect of financial services users' confidence on financial inclusion. However, the results as presented in Table 3 indicate that there is a positive and significant relationship between financial services users' confidence and financial inclusion ($\beta = .307$, $\rho = .000$), thus, the hypothesis was rejected. This means that if the level of financial services users' confidence is enhanced, there will be an increase in the financial inclusion of micro-enterprises in Nairobi, Kenya. Thus, entrepreneurs who possess confidence tendencies on financial matters and financial institutions are expected to optimally use financial services, hence enhanced financial inclusion. Fernandes *et al.* (2014) obtained similar results on significant effect of confidence as regards willingness to take risks on usage of financial services. Similarly, the study undertaken by Lown *et al.* (2014) theorized that higher self-efficacy (confidence) are associated with a higher likelihood of savings, debt management, planning and investment. From the study, respondents with low self-efficacy (confidence) were likely to have less savings and

investments compared to those with high confidence scores. A study conducted later by Rahmawati and Asandimitra (2018), had similar results given significant relationship between self-efficacy and saving behavior, which is an element of financial inclusion.

H₀₃ claimed that there is no significant effect of financial services users' social proof on financial inclusion. As observed in Table 4, results demonstrate a positive and significant link between financial services users' social proof and financial inclusion ($\beta = .270, \rho=.000$). Consequently, the hypothesis was not upheld. The results indicates that social pressure, influence of one's socio-economic environment and approval from peers, family, parents, spouse, and friends have a significant impact in financial inclusion of micro enterprises in Kenya. Mauldin, Henager, Bowen and Cheang (2016) obtained similar findings on the impact of social on savings by low to moderate-income households. The study results were also in line with those of Binoy and Subhashree (2018) who observed that social proof and self-efficacy (confidence) had a strong relationship with continued usage of formal financial services among the low-income households. Aşıkoğlu and Büyükaslan (2016) further observed that social environment contributes to herding and representative biasness, both of which have effect in investment decision making. The findings were attested in this study that confirmed significant effect of social proof tendencies on usage of diverse financial services (beyond investment services that was studied by Aşıkoğlu and Büyükaslan (2016). Social proof behaviors may lead to sub-optimal usage of financial services such as credit, choice of investments options among others given the significant effects thereof. At the same time positive social proof behaviors may lead to optimal financial decisions for FI as observed by Peltier et al (2016), whose findings suggested that positive parental involvement on credit usage was significantly associated with lower debt usage.

Table 3: Multiple Regression Results

	Unstandardized Coefficients		Beta	Standardized Coefficients		Collinearity Statistics	
	B	Std. Error		t	Sig.	Tolerance	VIF
(Constant)	.690	.153		4.498	.000		
Gender	-.005	.049	-.004	-.111	.912	.787	1.270
Age	-.024	.033	-.029	-.730	.466	.783	1.278
Sector	.044	.043	.037	1.021	.308	.915	1.092
Self-control	.271	.034	.328	7.889	.000	.696	1.437
Confidence	.247	.032	.307	7.671	.000	.747	1.339
Social proof	.218	.033	.270	6.643	.000	.728	1.373
Model Summary Statistics							
<i>R Square</i>	.513						
<i>Adjusted R Square</i>	.506						
<i>Std. Error of the Estimate</i>	.43815						
<i>Durbin-Watson</i>	2.015						
Model Fitness Statistics							
<i>F</i>	71.256						
<i>Sig.</i>	.000						
a Dependent Variable: Financial Inclusion							

Source: Research Data, 2019

5.0 Conclusions, Recommendations and Future Research

5.1 Conclusions and Recommendations

From the findings, the study concluded that behavioural tendencies (self-control, confidence and social proof) have a significant effect on MEs usage of financial services (Financial Inclusion). Based on the findings the following are recommended; providers of formal financial services such as banks, mobile financial services institutions, insurance companies and cooperative and saving societies among others should focus on influencing the behaviors of their customers (mainly owners of MEs) to develop those character traits that enhance optimal use of financial services. Thus, customer communication and training sessions should focus on building self-control tendencies in order for financial users to avoid mistakes such as excess credit, delays in repayment of loans, which leads to negative repercussions, business and personal financial planning among others. Formal financial services (FFS) providers should further recognize the importance of gaining the confidence of MEs on their institutions and the products such as investment options, financial advice, saving plans among others. The critical role of socio-economic environment, social pressure and approval from peers, family and friends in financial

decision-making cannot be underscored hence formal financial service providers should focus on developing that are aligned to diverse needs of MEs and their socio-economic environments. Providing financial services through community based groups (*chamas*) such as loans among others would encourage uptake of products and optimal use thereof.

FFS and business associations such as Kenya bankers association, association of Kenya insurers, Kenya Union of Savings and Credit Cooperatives Society (KUSCCO) among others, should make use of the findings of this study to appreciate the key role of financial innovations in carrying the effects of positive behavioral factors to higher levels of financial inclusion. Whereas these institutions have been and cooperating with other service providers such as mobile finance providers (Safaricom, Airtel, Telkom Kenya among others), it is recommended that these new products and dissemination of information thereof be aligned in a manner that builds on MEs behavioral traits in order to create more value. BFT attest that human being are influenced by psychological and social factors. Therefore innovative products that spur confidence, appeals to owners of MEs and their circle of friends/family, encourage planning and responsible credit use, among others will create sustainable benefits to FFS institutions in the long run, instead of championing emerging financial innovations for the sake of making quick wins.

The research findings of this study have several implications for academics and others involved in theory building. Firstly, this study extends previous studies by providing empirical data that helps to establish the direct effects of various factors (self-control, confidence, social proof, financial innovations and financial literacy) on financial inclusion. Thus, the study has attempted to contribute to the growth of behavioral finance theory through focusing on financial activities outside financial markets. Furthermore, the study attempted to contribute to growth in financial theory by formulating and testing of a more comprehensive framework that incorporated seldom-studied drivers of financial inclusion from an emerging economy. The contributions are expected to have cemented the foundation for further studies, premised on the promising behavioral finance theory and the financial inclusion phenomena which practitioners and academia generally belief, that it holds the key to improved wellbeing and economic prosperity at national and global arena.

5.2 Limitations and Future Research

The study offers significant contribution to academic research and practices. However, it had some limitations that open up opportunities for further future research. Firstly, the study context of on Micro Enterprises in Nairobi County limits the generalizability of the current findings to other counties in Kenya. Hence there is need to replicate the study in other counties, however many MEs in Kenya are located in Nairobi County (KNBS, 2016) and are considered key economic players, who require to be facilitated by actors in the financial sector for enhanced financial inclusion and realization of Kenya's economic growth targets. Secondly, the study used a cross-sectional design and cannot reflect the lag time or long-term effects of self-control, confidence, social proof, of financial inclusion. Therefore, future studies could consider taking a

longitudinal approach, to examine the relationship between these financial inclusion drivers over a long time-series context.

6.0 References

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