CUSTOMER CAPITAL AND INCOME DIVERSIFICATION: AN EMPIRICAL ANALYSIS

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Abstract

The purpose of this empirical study was to examine the relationship between customer capital and income diversification. The study used panel data extracted from annual financial reports from the period 2008-2017. The sample consisted of 31 commercial banks that yielded 310 year observations. Data collected was analyzed through descriptive and inferential statistics. The hypothesis was tested through multiple regression analysis. The results revealed that customer capital had a positive and significant influence on income diversification in Kenyan commercial banks. The study concluded that market knowledge resources are beneficial to a firm’s diversification strategy.

Key words: Customer Capital, Income Diversification, Competitive Advantage, Banks

1. Introduction

The global banking sector is facing numerous challenges that include technological revolution, competition from nonbanking entities, regulatory pressure and rising non-performing loans. These challenges have distorted banks revenue model in particular interest income thus forcing banks to diversify by venturing into non-intermediation activities that generate noninterest income. Non-interest income consists of fee and non-fee incomes. Activities that generate fees income include loan processing, bill discounting, letters of credit and guarantee, account keeping, service and management (Lepetit et al., 2008; DeYoung & Roland, 2001). Non-fee income arises from foreign exchange transactions, investment in government and corporate securities, rental premises owned by the bank and gains from the sale of premises (Rushdi & Tennant, 2003). Previous studies show progressive growth in non-interest income over the last two decades which
is estimated to be approximately 40% of banks total operating income (Kiweu, 2012; DeYoung & Rice, 2004). Studies have addressed the relationship between income diversification and performance though the findings are mixed (DeYoung & Rice, 2003; DeYoung & Roland, 2001; Abedifar et al., 2014; Calmès & Théoret, 2015; Lepetit et al., 2008; Maudos & Solis, 2009; Nguyen et al., 2012). Despite the inconsistencies in the findings, these studies have emphasized the growing importance of income diversification in present day banking (Rime & Stiroh, 2003; Winton, 1997). However, little attention has been paid to unearth drivers of income diversification which may ultimately affect performance. From a similar perspective, DeYoung and Rice (2004), Rogers and Sinkey (1999) noted that some banks reported more non-interest income than other which confirms a synergic relationship between non-lending activities and intangible resources. For knowledge based economies, a firm’s diversification strategy must focus on leveraging knowledge resources and customer satisfaction (Chang & Tseng, 2005). Furthermore, it would be unreasonable for firms to invest on production of goods and services, marketing and advertising if such goods and services fail to attract customers and meet their expectations. Therefore, the success of income diversification hinges on how best a bank is able to build and maintain its customer relationships. Customer relationships management depicts customer capital, a sub-construct of intellectual capital, as a fundamental source of competitive advantage (Edvinsson & Malone, 1997). Duffy, (2000) avers that customer capital influences present and future revenue. While previous studies focused on customer capital and performance causality (Inkinen, 2015; Danai et al., 2018; Hendricks et al., 2007; Yang and Kang, 2008) no attention has been given to establish the importance of customer capital to income diversification. Thus, this study contributes to existing literature by examining the effect of customer capital on income diversification.

2. Literature Review

2.1 Concept of customer capital

In the knowledge era, the value of tangible assets as drivers of competitive advantage has gradually diminished. Presently, knowledges resources in particular intellectual capital plays an important role in creating competitive advantage and sustained superior performance. So, intellectual capital is regarded the most valuable asset. Besides, human and organizational capital, the other sub component of intellectual capital is customer capital, which focuses on the firm’s relationships with customers (Edvinsson and Malone, 1997). Roos and Roos (1997) expanded customer capital to relational capital to integrate the interaction between internal structures and external structures. It is believed that a firm long-term relation with customers represent is the basis for success in a dynamic environment couple by competition,
technological revolutions and evolving customer needs. Consequently, customer capital encompasses relationships between customers and businesses, the knowledge contained in marketing channels and customer relationships, the value of the relationships between the business and its customers (Bontis et al., 2000). Though there is no universal meaning of customer capital, there seems to be a general consensus among researchers that customer capital denotes the relationship between a firm and its customers, or rather value embedded on such relationships. Previous studies have also linked customer capital with organizational performance (Chen et al., 2004) and sustained competitive advantage (Duffy, 2000). Similarly, Liu and Lin (2007) view customer capital as value generated through customer relationships. Moreover, researchers opine that customer is the end product from the interaction between various sub constructs of intellectual capital (Anderson et al., 1994). This study conceptualizes customer capital as the value of relationships between the firm and its customers. Therefore, present managers must focus on building strong and long-term partnerships with customers for sustained competitive advantage and survival. It is also believed that customer capital depicts the value of a firm’s intellectual capital (Wang & Chang, 2005). This assertion is corroborated by Kamakura et al., (2002) and Liu and Lin (2007) who claim that customer capital thrives on other firm knowledge resources comprising of human capital, process capital and innovation capital.

In the last two decades customer capital has expanded to relational capital that captures relationships with customers, suppliers, competitors and government (Bontis, 1998; Roos & Roos, 1997). Liu and Lin (2007) assert that customer capital thrive on knowledge management systems that captures market expectations then delivers valuable goods and services for competitive advantage and improved performance. As a result, organizations are moving from product and brand orientation towards customer orientation a phenomenon referred to customer relationships management (Reinartz, et al., 2004).

Studies show that customer capital is a source of competitive advantage so positively influences firm performance (Khalique et al., 2015; Bin Shaari et al., 2018; Weiss, 2016; Berger et al., 2010; Boschma et al., 2017). According to Anderson et al., (1994) customer satisfaction leads profitability owing to customer loyalty, price stability, reduced marketing cost and improved reputation. Besides, Danai et al., (2018) and Arvan et al., (2016) assert that customer capital influences firms bottom-line through enhanced customer loyalty, higher customer retention and increased market share.

Dimensions of customer capital cited in literature include market share, customer databases, customer based services, intelligent customers’ perspectives, marketing intensity, service quality and customer loyalty (Liu et al., 2002; Chen et al., 2004; Kamakura et al., 2002). Different management models estimate the

2.2 Income Diversification

Amid a turbulent operating environment, banks are searching for new ways of generating income to cushion themselves against deteriorating interest income and for survival. The theoretical underpinning of income diversification is Markowitz (1952) modern portfolio theory. According to this theory, firms reduce income volatility and maximize return by diversifying their sources of income. Essentially, interest income and non-interest income are uncorrelated because interest income is generated from intermediation whereas non-interest income originates from nonlending activities. Though interest income is more stable and significantly higher, non-interest income compensate banks for deteriorating interest income thus smoothening earnings. The importance of income diversification to organizational outcomes is well grounded in portfolio theory and extant literate despite conflicting results which can be attributed to contextual issues. Studies show that income diversification has an influence on internal capital market efficiency (Shih et al., 2018), competitive advantage (Montgomery & Wernerfelt, 1988), shareholder value (Bernardo & Chowdhry, 2002), managerial entrenchment (Cheng & Keung, 2018), economies of scale (Beccalli et al., 2015), resource utilization (Alhassan & Tetteh, 2017), cross-subsidization (Lepetit et al., 2008), lower bank spread (Mujeri & Younus, 2009), market power (Ovi et al., 2014) and improved financial performance (Sanya & Wolfe, 2011).

Customers are among the most important stakeholders of firms because they buy goods and services thus influencing their revenue (Roos et al., 2012). Hence, a firm’s ability to generate adequate income depends on the strength and quality of its relationship with customers. Bontis and Fitz-enz (2002) posited that customer capital is the major driver of corporate performance. According to Khalique et al., (2011), customer capital symbolizes relationships that a firm creates with its customers. Similarly, Bontis et al., (2001) views customer capital is an organization’s knowledge embedded in marketing channels and customer relationship that are created in the course of business. The various tenets of customer capital include customer loyalty, customer satisfaction and market share, brand equity, customer retention, customer acquisition and strategic alliance (Shih et al., 2010; Seetharaman et al., 2004). Theoretically, customer capital is viewed as a driver of firm performance however extant literature shows mixed results.
2.3 Hypothesis Development

Studies claim that diversified firm are more profitable relative to focused firms owing to synergies and economies of shared production, marketing, R&D and management (Sahni & Juhari, 2019; Piscitello, 2000). Similarly, Chandler (1962) states that, “…a successful firm is one that expands its operations geographically, then integrates vertically and finally diversifies its product offering”. Thus, market leaders not diversify in their current markets, but also develop innovative products and services for new markets. However, all markets are not accessible to all kind of firms due to incompatibilities between market requirements and firms’ resources profile (Penrose, 1959; Chatterjee & Wernerfelt, 1991). In view of this, it’s logical to argue that banks desire to exploit their current market capabilities strongly influence the decision to diversify. Consistent with resource based view, this study conjectures that bank tend to diversify into industries or businesses that are related to the core activities that is, intermediation. The study hypothesis that;

\[ H_0: \text{Customer capital has no significant effect on income diversification} \]

\[ H_a: \text{Customer capital has a significant effect on income diversification} \]

3. Research Methodology

3.1 Data and Sample

Data was mainly secondary and quantitative and it was used extracted from published financial reports and Central Bank of Kenya supervisory reports for the period 2008-2017. The population consisted of the 42 commercial banks in Kenya however, after data collection only 31 banks qualified for further analysis hence the dataset reduced to 310 year end observations. The period 2008-2017 was chosen for two reasons. First, due to advancements in regulatory regime and financial reporting data was available and consistent. Two, the Kenyan banking sector witnessed remarkable transformation with the entry of microfinance institution and introduction of mobile money technologies among other.

3.2 Measurement of Variables

Income diversification was the endogenous variable in the study. The standard measure of this variable is the Herfindahl-Hirschman Index (Jouida, 2018; Stiroh & Rumble, 2006). HHI is computed as follows;
HHI = [(NII/NOI)^2 + (NONII/NOI)^2]

Income Diversification (INDIV) = [1 – HHI]

Where;

NII: Amount of net interest income
NONII: Amount of non-interest income
NOI: Net operating income

Previous studies used different proxies to measure customer capital which include market share, market growth, number of customers, customer loyalty and average customer size (Hung & Chang, 2006; Wang & Chang, 2005; Liebowitz & Suen, 2000; Chiu & Chen, 2017). This study measured customer capital as bank market share. Regulators measures bank’s market share as is a composite of net assets, deposits, total shareholders’ funds, number of loan accounts and number of deposit accounts. Thus, market share is a most comprehensive measure of banks’ customer capital. Firm age has an impact on financial performance. This variable was measured as the number of years since incorporation of the firm (Lei & Chen, 2019). Keeping with previous researchers, this study measured firm size as the natural logarithm of total bank assets (Pucheta-Martínez et al., 2019; Chiorazzo et al., 2008). Large banks have more resources and opportunities for income diversification compared to smaller ones hence the study controlled for bank size which was measured as logarithm of total assets. Lending Strategy denoted as ratio of total loans to total assets (Edirisuriya et al., 2015; Gurbuz et al., 2013; Buch et al., 2019).

3.3 Data Analysis

Data was analyzed through inferential and descriptive statistics as shown in Table I, Table II and Table III. The data was summarized through descriptive statistics essentially; mean, standard deviation, minimum and maximum values. The nature and extent of relationships between the variables was measured through pairwise correlation. Statistically, correlation values, r, lie between +1 and -1 and ‘r’ between 0.5 and +1 is considered strong and positive. The research hypothesis was tested through multiple regression analysis.
4. Results and Discussion

Table I: Summary Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
<th>Obs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Diversification</td>
<td>0.401298</td>
<td>0.425412</td>
<td>0.512131</td>
<td>0.001361</td>
<td>0.091564</td>
<td>310</td>
</tr>
<tr>
<td>Customer Capital</td>
<td>3.089454</td>
<td>0.705</td>
<td>20.62</td>
<td>0.002</td>
<td>4.603822</td>
<td>310</td>
</tr>
<tr>
<td>Lending Strategy</td>
<td>0.57373</td>
<td>0.588134</td>
<td>0.863747</td>
<td>0.018694</td>
<td>0.121667</td>
<td>310</td>
</tr>
<tr>
<td>Firm Age</td>
<td>34.81935</td>
<td>23</td>
<td>121</td>
<td>1</td>
<td>29.22061</td>
<td>310</td>
</tr>
<tr>
<td>Firm Size</td>
<td>76637984</td>
<td>32101211</td>
<td>556000000</td>
<td>228900</td>
<td>96249230</td>
<td>310</td>
</tr>
</tbody>
</table>

Source: Author, 2019

Table II: Results for pairwise correlation analysis

<table>
<thead>
<tr>
<th></th>
<th>INDIV</th>
<th>CC</th>
<th>FA</th>
<th>FS</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Diversification (INDIV)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Capital (CC)</td>
<td>.456**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Age (FA)</td>
<td>.177**</td>
<td>.503**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size (FS)</td>
<td>.210**</td>
<td>.808**</td>
<td>.542**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lending Strategy (LS)</td>
<td>-0.104</td>
<td>-.118*</td>
<td>-0.056</td>
<td>-0.032</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Source: Author, 2019

Table III: Results of regression analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.515717</td>
<td>0.749625</td>
<td>4.689969</td>
<td>0.0000</td>
</tr>
<tr>
<td>Customer Capital</td>
<td>0.670820</td>
<td>0.069836</td>
<td>9.065657</td>
<td>0.0000</td>
</tr>
<tr>
<td>Firm Age</td>
<td>0.026186</td>
<td>0.103166</td>
<td>0.253827</td>
<td>0.7998</td>
</tr>
<tr>
<td>Firm Size</td>
<td>-0.529880</td>
<td>0.105683</td>
<td>-0.513850</td>
<td>0.0000</td>
</tr>
<tr>
<td>Lending Strategy</td>
<td>-0.229118</td>
<td>0.281319</td>
<td>-0.814443</td>
<td>0.4160</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.267244</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.257634</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.554948</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>27.80914</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Observations</td>
<td>310</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author, 2019

A summary of descriptive statistics is illustrated in Table I. Table II shows the output of pairwise correlation analysis while the results of regression analysis are displayed in Table III. Prior to regression analysis the
data was log transformed followed by panel data diagnostic tests namely unit root, heteroskedasticity and autocorrelation. The data was found suitable for further analysis. Results of Hausman test favoured random effect regression. From Table I, the average industry income diversification for the period 2008-2017 was 0.4 while the mean customer capital was 3.089%. Additionally, the table shows that average bank age is 34 years; the mean bank size is Ksh 76.6 billion while the average lending strategy was 0.5737. The results of the pairwise correlation are shown in Table II. The table illustrate that the customer capital and income diversification is positive and significant ($r=0.456$, $\rho<0.01$). The correlation between firm age and income diversification and significant ($r=0.177$, $\rho<0.01$); same case to firm size and income diversification ($r=0.210$, $\rho<0.01$) as well as firm size and firm age ($r=0.542$, $\rho<0.01$). In addition, the correlation coefficients of the three control variables and customer capital was positive and significant for firm size ($r=0.808$, $\rho<0.01$) and firm age ($r=0.503$, $\rho<0.01$) while that of lending strategy was negative ($r=0.118$) and insignificant at 1% and 5%. Table II further revealed that the relationship between bank lending strategy and income diversification was negative and insignificant at 1% and 5% ($r=0.104$)

The main objective of the study was to establish the relationship between customer capital and income diversification. The findings in Table III shows that customer capital had a positive and significant effect on income diversification ($\beta=0.671$, $\rho<0.05$). Additionally the study controlled for firm size, firm age and lending strategy. Firm age had a positive though statistically insignificant effect ($\beta=0.025$, $\rho>0.05$), firm size had a negative effect ($\beta=-0.529$, $\rho<0.05$) while lending strategy also had a negative effect on income diversification ($\beta=-0.229$, $\rho>0.05$). Overall, the regression model predicted 24.95% variability in income diversification. These results suggest that the relationship created between a bank and its customer in the course of lending influence the success of nonlending activities.

Corporate image and brand reputation are likely to affect future product offerings. As reported by DeYoung and Rice (2004), banks keen on relationship banking are more likely to venture into nontraditional activities. Besides, Gourio and Rudanko (2014) argue that it is cheaper to offer new products and services to existing customer due to the already established customer loyalty and distribution systems. Moreover, with the outburst of integrative financial technologies banks are now capable of offering banking and non-banking services simultaneously, thus leading to higher switching cost. Therefore, banks should consider venturing into nontraditional activities so as to harness the amassed customer capital and ultimately improve financial performance.
5. Conclusion

Considering the different forms of intangible resources, this study focused on customer capital and its effect on income diversification. These findings provide evidence that market knowledge resources support diversification thus validating the propositions of resource-based view theory that firm resources are created competitive advantage (Wernerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993). The importance of customer capital cannot be more emphasized in a highly competitive market and firms are progressively realizing the role of customer relationship management. The success of bank diversification into non-lending activities hinges on the value of a firm’s customer capital in particularly to service organization where competition is pegged on service quality and customer satisfaction.

6. References


Bontis, N. (2001). Managing organizational knowledge by diagnosing intellectual capital: framing and advancing the state of the field. In World Congress on intellectual capital readings (pp. 13-56).


