

# A Study of use and Impact of Market Segmentation Practices on Bank Performance: With Special Reference to Commercial Banks in Colombia

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## Abstract

The Banking and Financial Environment in Colombia has witnessed so many regulatory changes and competitive dynamics. This has made segmentation practices an imperative determinant in their service offering and development to its complex customers.

**Approach:** This study assessed the use and impact of market segmentation patterns and practices on the performance of selected banks in Colombia, post consolidation period of 2012 to date. The methods applied were both primary and secondary while the design was mainly exploratory, relating basic market segmentation variables like market share, geographical location and pricing to bank performance. Statistical test using Herfindal Hirschman Index (HHI) was designed to test for market concentration against bank's performance.

**Objective:** The idea behind this research was to assist managers, business students, and banking workers to understand the concept and impacts of marketing segmentation patterns and practices on banks performance.

**Results:** Findings from the study indicate that, segmentation practices have immensely impacted on the performance of the selected banks in Colombia. The study exposed that the banks have used segmentation practices to lower their overall operation unit cost, expand their market shares, retain their customers, better their communications, increase profitability and focus on their company. They are well positioned in capital strength and they are the best capitalized banks in Colombia, thanks to their segmentation strategy called data-informed strategy.

**Conclusion:** The study however concluded that there is a threshold point (37.2%) in which any further commitment of funds into market segmentation practice can lead to negative result.

**Recommendation:** It was recommended that less dominated banks can adopt acceptable corporate image, simple and flexible account opening formalities, just-in-time service delivery, employee-customer management, and effective and efficient use of referrals to win customer loyalty which tend to retain old customers and win new customers as well.

**Keywords:** Tier-1 capital ratio; Market segmentation; Commercial banks; Bank performance; Customer retention ability; Colombia

## Introduction

### Colombian banking industry and segmentation history

Developments in the financial and banking sector such as implementation of new technologies, constantly changing of customer needs, increase in the number of products offered and deregulation process have made segmentation practices very important in that sector. Banking and Financial sector in Colombia, South America, since the beginning of the 1990's has been characterised by its size, its oligopolistic and segmented structure, and has a history of segmenting market to meet their customer's satisfaction. Colombia, which is in the north-western corner of South America, is the 3<sup>rd</sup> most populous country after Mexico and Brazil in Latin America. It ranks as the 28<sup>th</sup> largest economy in the world according to 2015 Index of Economic Freedom with an overall percentage of 71.7 (+1.0) (The Heritage Foundation, 2015). The banking sector is the widest financial intermediary in Colombia's capital market. It is dominated by complicated financial conglomerates with different kinds of intermediaries.

The banking sector in Colombia like any other bank, have a history of segmenting their market on the basis of their service-offering such as saving patterns, level of income, demographic characteristics, professional calling, or risk preferences [1,2]. Banks whose market segmentation cut across all boundaries benefit from market share increment. In Colombia, banks such as Bancolombia have a wide market segmentation that cut across commercial banking, retail

banking, construction banking, small business banking, treasury, off-shore commercial banking, government and institution banking, brokerage, credit card, manufacturing, investment banking, and leasing among others [3]. The purpose is to reduce expenses and achieve the objective of rendering services to a 'niche' or a given market.

Segmentation practices and patterns began in Colombia in as early as 1931 when Caja Agraria was established as an entity with public capital to serve the agricultural industry in the country. Bartel supported that the early history of the marketing discipline was focused on the sales of agricultural products. This bank at that time was tasked to refinance the debts of the coffee growers in the country. Banco Central Hipotecario (BCH) was also created in 1932 to purchase bad loans from commercial banks and mortgage. In 1951, Banco Popular was founded to grant credits to commerce and small urban businesses. 1953 saw Banco Cafetero created with the aim of financing the coffee

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growers in the country. Banco Ganadero in 1955-56 was established as a state-owned institution targeting commercial cattle raisers in the country [4].

In the mid of 1980's, the financial system in Colombia were boosting of ninety-one (91) banks with an average of 46% GDP as assets equivalent. Out of the 91 banks, public-owned banks held 48% of the sector's assets with 20% GDP. Foreign Banks had 3% with 1% GDP; Domestic Private Banks had 20% with 9% GDP; Savings and Loans Corporations had 15% with an average GDP of 7% and others were 20% (9% GDP). The number of the bank institutions considerably grew up in the 1990's to 145 banks with total assets equivalent to 68% GDP [4-6]. However, the public-owned banks assets drastically fell to 13% as of 1995 due to the participation of other non-banking institutions whose assets rapidly grew from 20% between the 1986 to 1989 to 37% in 1990 [4]. This made the commercial banks to intensify their segmentation strategy to improve their performance. Asiedu supported that "segmentation strategy allows firms to understand customer value and identify the most profitable opportunities" [7].

In Colombia, banks such as BanColombia, S.A, Banco de Bogotá, S.A. and Davivienda, S.A. have adopted a segmentation strategy called data-informed strategy to develop their customer retention skills [4]. This data-informed strategy is used to reward and raise the moral of profitable customers who are loyal to the company. The data-informed segmentation allows firms to analyse how their customers think and make decisions about their products and services. This helps to customize products to suit the exact needs of consumers. Shaw et al. opined that commercial banks' capacity in terms of smooth payment system and resource allocation is important in every economy [2,8-10]. It is therefore necessary to adopt marketing segmentation practices as the main basis for allocating resources for marketing, service and delivery programs as well as product development [7]. This has brought the need for government in every country to draw regulatory models (frameworks) to control and guide their activities. The commercial banks domestic assets in Colombia as of 1999, was 50%. However, the bank's non-performing loans in Colombia as of 2014 were as low as 2.9% (The World Bank Groups, 2015).

Although the deregulation of Colombian financial industry since 1990 (Leg 45/1990) sought to reduce market segmentation, the new system continues to induce market segmentation with the aim of preventing competition [4]. Colombian banking and financial industry is known for their large volume of liquidity and bank deposit in the past due to their inappropriate market drives and design. The industry has witnessed so many regulatory changes and competitive dynamics making segmentation practices an imperative determinant in their service offerings and development to its complex customers. However, in 2012, The Banker, Global Financial Intelligence in London reported that Bancolombia, Banco de Bogotá, Banco Davivienda, BBVA and Banco Occidente are the top most five banks within the Colombian banking sector. This has raised a concern to find out the market segmentation practices adopted by typical Colombian Commercial Banks, the benefits derived from market segmentation practices and the influences market segmentation practices have on customer loyalty through banks product and service offerings in Colombia.

## Purpose of Study

The purpose of this study is to examine;

- ✓ The uses and impacts of market segmentation practices on bank performance with special reference to selected commercial banks in Colombia.

- ✓ To find out the market segmentation practices adopted by typical Colombian Commercial Banks.

## Research objectives

The idea behind this research was to assist managers, business students, and banking workers to understand the concept and impacts of marketing segmentation patterns and practices on banks performance.

## Research questions

- ✓ What market segmentation practices adopted by a typical Colombian commercial banks? Is there any relationship between segmentation practices and bank service offerings?
- ✓ Is there a positive relationship between market segmentation practices and bank performance?
- ✓ What benefits do the selected commercial banks in Colombia derive from market segmentation practices?

## Significant of the Study

The paper will assist managers, business students, banking workers and general public in Colombia as well as other institutions interested in understand the concept of marketing segmentation, or segmentation practices and bank service offerings or its impacts on banks performance. Since the study seeks to address the benefits organisations derive from market segmentation, it wouldn't be surprised to see experienced and new researchers in the field of management making reference to it [11]. The study will also help students in their academic writings. Management and marketers in various financial institutions can adopt it as a yardstick to develop marketing strategies to achieve customer satisfaction to influence customer retention, loyalty and profitability.

## The concept of market segmentation

The concept of Market Segmentation was first introduced into marketing terminology in 1956 by an American Marketing Professor, Wendell, Smith and was proposed as an alternative technique for market development where there are few competitors with identical products. Smith tried to define market segmentation as a condition of growth when core markets are developed on a generalised basis to the point where additional promotional expenditures are yielding diminishing returns [12]. This means that effective matching of firm's resources to target market segments can deliver the greatest return on marketing investment (ROMI). Day [2] perceived that market segmentation is a part of the bigger marketing plan adopted by companies to divide their markets into distinct groups on the basis of wants, needs, taste or behaviour for their different products and services.

The concept has common variables for consumer markets and it works for every company. It involves with the division of a broad target market into smaller segments to make marketing simpler and easier to undertake. According to Asiedu "segmentation is a management tool that enables firms to subdivide their market based on the same behaviour of consumers into discrete consumer groups [7]. He continued the tool can help firms to identify the unmet customer and employee needs and attend to the". This really shows that market segmentation form an important foundation for successful activities and strategies of every organisation.

Figure 1 demonstrates the common variables of market segmentation for consumer market.

The purpose of segmentation patterns in every aspect of business is to leverage limited (scarce) resources to focus on prospects customers who are likely to patronage its product offerings. This practice has enabled many organisations including financial institutions, to understand the elements of the marketing mix, distribution, price, promotion and products. It has helped many companies to design their products and services to suit the whims and caprices of different customers in the consumer market. Adewoye and Salami argued that effective and efficient segmentation practices enable financial institutions to maximise return for a given marketing expenditure [13]. The financial service requirements and its characteristics for consumers vary with age and that these differences could be used when developing marketing segmentation for such service [14].

Since financial institutions and many other companies have finite resources, it is however impossible to produce all possible products and services for everyone, all of the time. Therefore, the best thing to do most of the time is to provide selected offerings for selected groups of people. That's why different banks offer different products and services based on their geographical location, demography, and psychographic. This process enables firms to focus on the specific needs of customers in the most effective and efficient manner.

Onaolapo et al. advocated that the needs for segmentation practices by many firms are often influenced by the needs to satisfy customer's requirements [15]. Some customers require their companies to improve their cash flows, service delivery, and product quality. Bean and Ennis eloquently responded that a firm with limited resources needs to pick the best opportunities to pursue [16]. The tool allows banks to achieve their goals and objectives in terms of efficiency, sustainability and growth. Through segmentation, banks can carefully listen to their customers and respond to their wants and needs. Asiedu argued that the overall outcome is that the tool allows firms to provide great customer experience by satisfying the needs of customers with the idea that results are not important, rather the natural outcome of a job well done [7].

Asiedu encapsulated this in his work entitled **“Developing Market as a Source of Competitive Advantage: The Role of Management Tools”** by arguing that the concept of market segmentation is normally related to product differentiation since a firm needs to adopt different variations in its offerings to satisfy those segments [7]. He argued that if a firm adopt different versions of its product offerings, it allows the company to appeal to different market segments. Contrary to that, Cardozo perceived that if a firm start by adopting new products variations, it simply means that, such firm is using a product differentiation [17]. But if that same firm begin with the customers' needs, then that firm is using market segmentation approach. No matter the reasons for market partitioning, segmentation practices can only be feasible if the targeted market is accessible, identifiable and respond to the various marketing mix differently as offered in that particular sector. Agbo et al. among others indicated some causality between customer brand loyalty and profitability of the business [17,18]. This paper therefore seeks to explore how the banking sector in Colombia uses this tool (market segmentation) to administer its product offerings in a dynamic or different service market.

### The process of market segmentation

The complexities involved in market segmentation process have made it an exacting activity. According to Griffith and Pol, the process involves greater customer variability, problems linked with the identification of the key differences between group of customers

and multiple product applications [19]. Several academic pundits and market researchers have proposed myriad criteria that need to be met during segmentation process. Alfansi and Sergeant [20], in their studies came up with 6 criteria that must be met after they reviewed the works of scholars such as Frank et al. [20-24]. Alfansi and Sergeat criteria were based on accessibility, actionability, stability, responsiveness, sustainability and identifiability [20].

Wedel and Kamakura provided the most pertinent segmentation approach for financial and banking service sector. According to them, marketing segmentation bases can be classified based on “general” (that's independent of product/services) or “product-specific” and to the extent of each been observable (Figure 2) [25].

Scholars such as Dickens and Chappel et al. argued that the observable variables such as position in the family, life cycle, culture, gender, geographical location and income are potential criteria for marketing segmentation [26-31]. However, in the context of financial and banking sector, a number of research studies had revealed that there are differences in terms of purchasing and demographics. Though many scholars view demographic variables as too small, Alfansi and Sergeant maintained that demographic variable is very important and popular in marketing segmentation due to the following reasons; (i) easy and possible to conjunct demographic variables with other variables (ii) can easily be obtained (Figure 3) [20,32].

In the banking sector, segmentation is mostly limited to categories of commercial (corporate), and retail consumers. Commercial (corporate) customers are normally distinguished based on the sector they are affected and involved or based on their geographical range of activities. Meidan and Harrison argued on their part that demographic criteria such as income, age, profession, or wealth are very important for personal retail banking and credit card segment [33,34]. To talk about product-specific criteria under observable classification, Khermouch et al. detected that user-variables such as user status, user rate, loyalty, and stage of adoption are crucial factors for marketing segmentation [35-38].

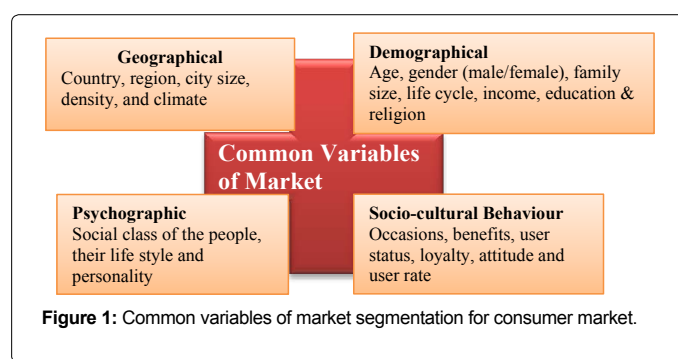


Figure 1: Common variables of market segmentation for consumer market.

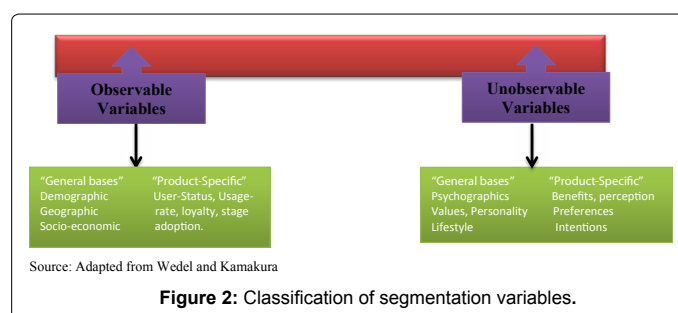
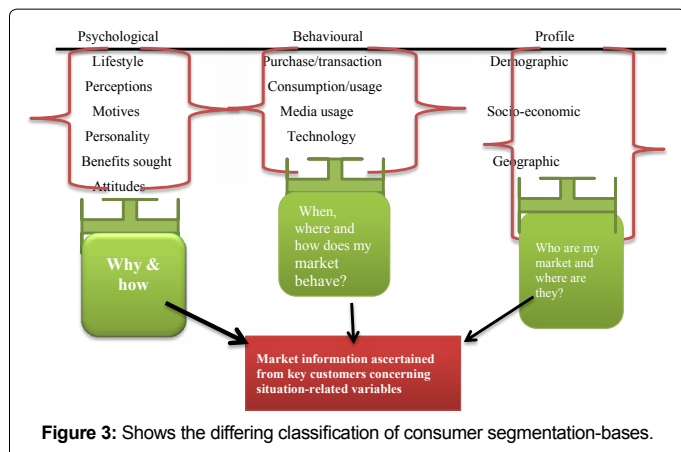


Figure 2: Classification of segmentation variables.



Contrary to the above assessments, Evans et al. developed that unobservable classification must be taken into consideration during segmentation process for banking and financial service sector [39-42]. These scholars argued that general variables under unobservable segmentation classification such as personal values, personality, lifestyle or psychographic bases should be considered when segmenting market for banking companies. Harrison presented psychographic segmentation variables by using individual’s perceived confidence and ability in dealing with financial issues, individual’s own perceived knowledge and understanding of financial services as well as the expressed level of involvement and interest in financial service [34]. Harrison concluded his study with areas of four (4) segments and they are; (i) capital accumulators, (ii) financially confused, (iii) cautious investors and (iv) apathetic minimalists. Segmentation practices have benefited and proved its usefulness to many sectors and organisations. In Colombia, it has allowed banks such as Bancolombia, Banco de Bogotá, Banco Occidente, BBVA and Banco de D vivienda to increase their tier-1 capital and market share (The Banker Database, 2012).

To segment financial service markets, a firm must use market information ascertained from key customers concerning situation-related variables (criteria) and product. These are grouped as segmentation bases, and they include; **psychological criteria** (such as why does my market behaves the way it behaves?), **behavioural** (when, where and how does my market behave), **profile** (who are my market and where are they?). Kotler argued that a market segment consist of group of customers with similar features that are important in explaining their response to suppliers’ market stimuli [43]. This really shows that important considerations should be made when choosing the differing bases for market segmentation.

Doyle observed the differing classification of segmentation bases and argued that market segmentation deals with a homogenous group of customers who react differently to distributional communication, promotion, pricing and other marketing mixes variables. When these variables (criteria) are applied, the impact is that it affords the marketers at the bank to dichotomies portions of the market from one customer needs to another to achieve corporate profit target [44].

To sum up everything in this section, there are two main basic approaches to segmenting a firm’s market. They are break-down method and built-up method. Freytag and Clarke argued that the breakdown method is more recognised when segmenting consumer markets while built-up method is more recognised when giving general analysis based on identification of similarities. The built-up type is customer oriented as it seeks to put more emphasis on customer

needs. According to Wind, the goal of market segmentation practices is to solve the conflict between the intentions of banks or any other organisation to satisfy their customers need; been it individual or group [17]. He further argued that it can also be sued to allocate marketing resources economically in time of limited resources (Table 1).

### Market segmentation practices and bank service offerings

For successful bank service offerings, a segmentation practices plays a major role. It is a part of the bigger marketing plan that allows marketing managers to separate, identify and evaluate the layers of a market to design a marketing mix. Market Segmentation plan helps companies to focus on all the needs and wants of their customers. According to Asiedu, segmentation is seen as the bedrock of a firm’s success in developing market [11]. However, it varies depending on the type of business and the objectives in which it focuses. Segmentation of banking products and services in Colombia has followed the trend of consumer banking segment, commercial banking segment and credit card segment with emphasis on psychographic, geographic, socio-cultural behaviour and demographic. Abel argued that the technique of partitioning a market discloses strategic and profit opportunities for new competitors to challenge market leaders in the system.

Before designing the segmentation plan, the marketing manager needs to accumulate enough information about the product-users variables; considering the geographical location of the business, its demography, and psychographic so that they can target the right market segment with appropriate strategy. Through market segmentation, financial institutions like the banks can be able to know the purchasing habits, needs, lifestyle, age and interests of their consumers and take them into consideration when designing products and services. The practices enable the industry to increase transparency through regulating the disclosure of information; albeit at the lower level. The essence of this is to retain customers, promote customer loyalty and satisfaction. Market segmentation practices allow banks to concentrate on serving the many needs of a specific customer group. The diagram summarises the benefits banks derive from practising market segmentation (Figure 4).

Bank Service Offerings can be defined as the services rendered to customers to satisfy their needs. Some of these services could be products or services related to banking such as leasing, cash management, investment banking, brokerage, factoring, portfolio, risk management, and trust services. However, bank service offerings differ from one geographical location to the other. That is why market segmentation is considered as the most sensitive part of marketing strategy since the practice is useful to describe and locate target segments and influence a firm’s strategy. Banks’ ability to know and understand their customer’s level of needs and interest is important and beneficial in changing, and shaping the firm’s product (service) portfolio. Bancolombia for example offers a large range of services and products to customers across all segments through 952 branches with 3,333 ATM’s, mobile attention centres (718 Mobile Bank Units) and 1193 banking correspondents in Colombia. Bancolombia is the only commercial bank in Colombia with 65% geographical coverage in the whole country [3]. No wonder it is the largest banking company with widest market share in Colombia.

Also, knowledge about market segmentation can be helpful in terms of getting customers to support the firm’s product and service offerings such as lending operations and deposit to help increase the bank’s tier-1 capital. Tier-1Capital Ratio is designed to measure the financial strength (financial performance) of banks. Market segmentation

practices do not only help banks to reposition their brand or develop new products but also ensure better communication between the two parties, thus, the bank and its customers. Asiedu argued in his conceptual framework called “**The Six Management Tools for Market Development**” that segmentation practices allows firms to develop pricing strategies and marketing campaigns to extract value from both low and high-profit income [7]. Bain and Company argued that making loyalty pay to its full potential require banks to master the five elements of reinforcing their brand, segmenting and targeting customers, transforming customer experience, enhancing product proposition, and improving scale capabilities. These five elements can effectively be done when there is proper marketing segmentation (Figure 5).

Hofstede et al. argued that many relate market segmentation practices to bank-service offerings on the basis of variables such as risk preferences, saving patterns, demographic features and level of income [1]. In the financial and banking industry, incidences of rising overheads expenditure are seen to be linked or related with segmentation practices. Segmentation practices under the banking sector can only be successful when marketers are able to identify individual similarities and differences within segments that have important effect on buying patterns. In this case, marketers need to segment the business environment by identifying group of customers with common interest in terms of gender (male or female), age, status, business, and aged.

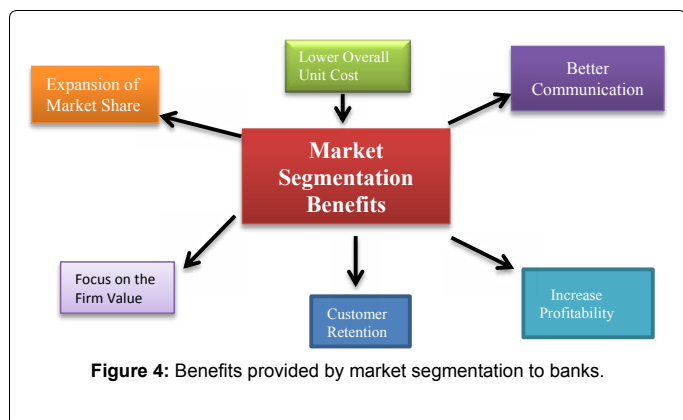


Figure 4: Benefits provided by market segmentation to banks.

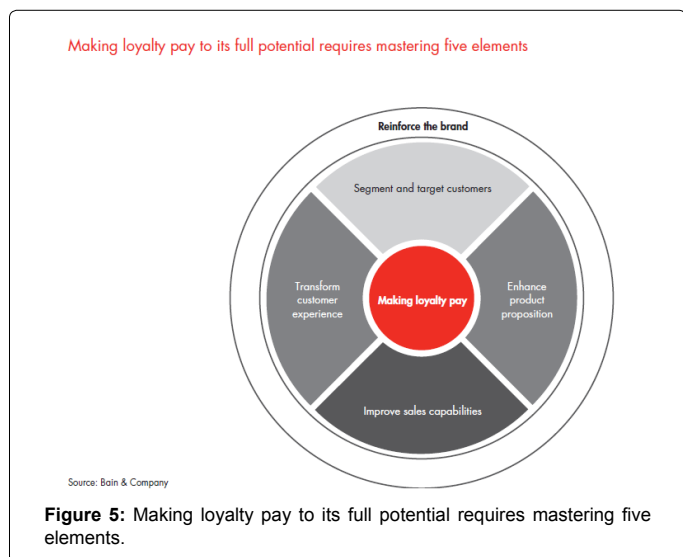


Figure 5: Making loyalty pay to its full potential requires mastering five elements.

After that, they will be able to know and understand their target market by identifying which group of customers their company aim for (that’s; is it males or females, students or businessmen, and what target age group) . This will give the firm the chance to position their products or brand by creating concept to appeal to their target market. There are many theoretical models abound for the design of a successful segmentation plan in bank product and service offering. Scholars such as Cardozo and Wind identified a three-stage design and Hofstede and Steenkamp as well as Petit and Brassington also designed a two-stage process based on the above characteristics [1,17,45]. Colombian banks mostly embark on segmentation with the aim of increasing market share, maximising profit, positioning products and finally enhancing turnover.

Petit and Brassington advocated that ideal market segmentation must go through at least two stages; namely; micro and macro segments stages. According them, while the micro-segments have substantial influence on the decision-making features, macro-segments have influence on buying situations [45]. From the print view of Ferrel and Pride market segmentation can be classified into consumer and industrial (Commercial) segments [46]. Though these theorists differ on certain points, there are basic tenets common to all and that is, to achieve the same objective based on location, size and usage rate adopted by Cardozo and Wind [17].

Most of the focuses of these theorists are meant to distinguish between specific individual customer needs, and the requirement for target market. Ovia and Cooper supported that organisational performance; customer retention and mass customization are likely to be improved whenever bank products and services are designed to satisfy customers’ expectation within a market segment [47,48]. This implies that every market segment has its own features and strengths. It is therefore important for various bank marketers to study each segment carefully to know if the type and quality of products and services being rendered are in line with customers’ expectation.

### Bank performance and customer retention causality

Bank performance based on Key Performance Indicators (KPI) is influenced by the profitability of the company, its percentage of the market share, return on investment (ROM), return on assets (ROA), and return on equity (ROE) as well as its customer retention ability. In the words of Salami and Adeoti [49], the quantity and quality indicators of a bank performance are regulated by the profitability of the business and the risk which gives alternatives for assessing and evaluating the achievement of objectives through maximization of owners’ wealth. After 2008-2009 global economic downturns, Colombia banks have shown a strong increase since 2011 by increasing their bank total asset (20.4%), loans (22.8%) in the same year [5,50]. The financial industry has grown in all segments with mortgage lending and consumer banking overtaking commercial lending. Banks have really benefited from effective market segmentation to increase their return on investment, tier-1 capital, return on assets and banking total asset.

Customer retention ability is defined as the ability of a bank to retain its customers based on the assessment of product or service quality. That’s bank performance determines how loyal its customers are and it is normally measured in percentage of long term customers. This is very important because satisfied retained customers tend to lower cost (cost less), make valuable reference to new potential customers to increase banks market share, and spend more. However, banks can only perform well and satisfy their customers when there is proper market segmentation. Banks’ ability to retain its customer’s shows how

satisfied their customers and brand loyalties are. Market segmentation can help banks to efficiently match their limited resources to target the market requirements and resource to reduce cost. It paves way to embrace consumer requirement that tends to increase customer satisfaction and retention. Banks can improve their customer retention through segmentation practices. Sylvia and Peter perceived that the ability of a bank to meet the needs of its customers (such as depositors and borrowers), stakeholders, shareholders, and employees show the performance level of the company [51]. In Colombia, the financial sector is quite profitable and credit quality is very strong due to the sound and healthy balance sheet from customers [5].

Colombian banking sector since the beginning of the 1990's have shown great consciousness towards the link between consumer retention and performance [4]. Banks such as Bancolombia, Banco de Bogotá, and BBVA among others have involved in cross selling, product bundling, and integrated computer system and loyalty programmes to attract more customers. Adewuyi propounded that customer loyalty to a bank service and product offering can be developed through employee and customer relation, quick delivery services, closeness to customer business outfits, corporate image built overtime, accessibility and referral, as well as relaxed account opening formalities [52].

Some scholars also link customer retention and bank performance to the company's value maximization in the stock market [7,15,48]. The approach is based on the interrelationship that exist between operational efficiencies changes, the prices of the company's stock in the market, exchange or change rate and the general economic situation. In Colombia, banks such as Bancolombia, Banco de Bogotá, Davivienda, BBVA and Banco de Occidente are more valuable in the stock market.

Although market behaviour towards stock price in theory, shows the performance level and how valuable the company is at the stock market, salient criteria needed for the calculation for banks in Colombia might not be available. And it is based on this assumption that made the researcher to use Profitability Ratio and Tier-1 Capital Ratio as alternative indicators for market value and financial performance. According to Onaolapo et al. [15], a sound financial (banking) system is built upon adequate and profitable capitalized banks. They continued that the use of ratios on performance evaluation covers the size of turnover, dividend or earnings per share, and return on capital profit margin. This signifies that the profit after tax, net interest margin and interest on income in the banking sector determines return on capital employed.

In an attempt to find out the impact of market segmentation patterns on banks successes in Colombia, key profitability ratios such as Tier-1 Capital ratio, Return on Equity (ROE), Net Interest margin and Net Operating Margin were applied. These were used as parameters to find out the impact of market segmentation patterns on the operational performance of the selected banks in Colombia.

## Research Methodology and Design

Asiedu opined that "research aims decides what needs to be accomplished with the conduct of study" and Bhattacharya continued that keeping in mind the aims to be achieved [11,53]. The researcher explores which approach suits best the attainment of purpose. In an attempt to find out the impact of market segmentation patterns on banks performance in Colombia, key profitability ratios such as Tier-1 Capital, Return on Equity (ROE), Return on Assets (ROA), Net Interest margin and Net Operating Margin were applied. These were used as parameters to showcase the impact of market segmentation patterns

on the operational and financial performance of the selected banks in Colombia. The variables for bank performance and segmentation targets like market share, profit and turnover, operating expenses, return on capital were all sourced from the 2014 annual reports of the five selected banks in Colombia. However, Tier-1 Capital Ratio was sourced from 2012 Bankers database. The study also linked basic criteria of market partitioning patterns with selected commercial banks' performance on customer loyalty, retention and profitability indices.

Out of the 21 commercial banks explored in Colombia, five (5) of them constituting 23.8% were selected for the study. The criteria for the selection of those five (5) banks were based on 2012 Tier 1 Capital Ratio and 2014 market share. Tier-1 Capital Ratio is used to measure the financial strengths or financial performance of banks based on regulator's view point. It is one of the most crucial indicators of financial performance in banking. Tier 1 Capital Ratio is a bank's core equity. The information regarding bank financial performance and segmentation targets such as Tier 1 Capital (\$m), Assets (\$m), Pre-Tax Profits (\$m), Return on Capital (%), and Return on Assets (%), were taken from the 12/2012 Bankers database (Source: thebankersdatabase.com) of the selected commercial banks.

To test, analyse and measure the impacts of market segmentation practices on the selected banks performance in Colombia, Herfindahl Hirschman Index was adopted to calculate market concentration of the banking sector through the use of deposit size of the various selected banks from their 2014 Annual Report. The calculated figures were correlated with performance criteria through the use of spearman's rho test. Spearman's Correlation is non-parametric coefficient which is used to measure the strength of matched (association) of two variables. This test was done to draw the correlation between segmentation adoption and banks performance in Colombia. The analysis explains the strength of co-occurrence (linkage) between bivariate in a form of -1 or +1. In this study, a positive correlation coefficient shows a positive relationship between market segmentation and bank performance.

However, a negative coefficient indicates a negative relationship between market segmentation and bank performance. For example if  $X_1$  represent business development (or market share) as calculated using HHI and  $Y_1$  represent the profitability rate among the selected commercial banks: with 'Z' representing a bivariate random sampled size. Therefore;  $z(X_1, Y_1) \rightarrow (X_2, Y_2), \dots, (X_2, Y_2)$  can be determined. According to Hofstede et al. and Onaolapo et al. the calculation through this token hence ranks Herfindahl Hirschman Index (HHI) for  $t=1, 2, 3, 4, \dots$  and period with Net Operating Margin (NOM), Return on Equity (RoE), and Net Interest Margin (NIM) for the various operational duration (period) of the selected commercial banks.

This can demonstrated mathematically as

$$\rho = \sum_{i=1}^n \left( \frac{[R(Y_i) - \frac{z+1}{2}] - \frac{z-1}{2}[R(X_i) - \frac{z-1}{2}]}{z(z^2-1)^{1/2}} \right) \quad (1)$$

Where;

P stands for = Spearman's correlation co-efficient

$R(Y_1)$  = Rank of variable  $Y_1$

$R(X_1)$  = Rank of variable  $X_1$  and

Z = Sample size.

Therefore, the equation was given as shown here below;

$$p = 1 - \sum \left( \frac{R(Y_i) - R(X_i)}{z(z^2 - 1)} \right)^2 \text{ in a computed form...} \quad (2)$$

To make sure the information provided was reliable, valid and authentic, primary sources which focus on survey research strategy was conducted [7]. The customers of the selected banks constituted the target population for the study. The questionnaires were designed to solicit for customers opinions on the effects of segmentation practices on the selected banks' customer retention strategy. The data from the respondents were used to evaluate the successes of the selected banks. The criteria were used to surrogate customer defection ratio by management and bank consumer retention ability. The researcher used these questions to find out how this practice influences customer loyalty and retention in the banking and financial industry. The questions were both closed and opened ended and were designed to elicit customers views on branch loyalty, targeting and organisational product.

## Findings and Discussion

This part of the study contains the findings obtained through analysis from Tier-1 Capital Ratio as of December, 2012 and Herfindal Hirschman Index as well as response rate from customers based on questionnaires to test customer retention and loyalty. It presents a detailed discussion from the results obtained while making reference back to the literature review earlier in this article.

Table 2 shows the results obtained using Tier-1 Capital Ratio and it indicates the top five banks performance in the financial industry as of 2012 in Colombia. The tier-1 capital ratio deals with tier-1 capital (\$m), Assets (\$m), pre-tax profits, return on capital (%), and return on assets (%). This ratio was used to find out if their business segment such as credit card banking, consumer banking, and commercial banking are accepted and supported by customers. No bank can increase its tier-

1 capital without first getting customers to support and patronise its products and winning of customer loyalty rely on proper segmentation practices. The idea is to investigate on how marketing segmentation practices influence the financial performance of banks. This is because effective marketing segmentation allows banks to tailor their products and services such as lending operations and deposit to meet customer needs. Looking at the Table 2 on tier-1 capital ratio, thanks to Bankers Database, 2012, it could be seen that the return on capital on all the five (5) banks in Colombia were more than the minimum requirement of 6% as stated by Basel III (Table 2).

The stats according to tier-1 capital show that the largest bank in Colombia as of 2012 was Bancolombia. The second largest bank according to tier 1 capital is Banco de Bogotá, follow by Banco Davivienda, BBVA and Banco de Occidente. These banks are the best capitalized banks in Colombia as per their return on capital. They have higher capital than any other bank in Colombia. This results shows that these banks have advantage because it has a lower regulatory capital requirement due to their business segment. This reveals that these banks have been strong in their consumer banking segment, credit card segment and commercial banking segment. These banks based on their tier-1 capital have advanced on the five elements of winning customer loyalty and have begun to translate such loyalty to better their tier-1 capital and economic.

Also the researcher used Herfindal Hirschman Index to calculate the market share of these banks in 2014. The idea was to find out if these banks have greatly benefited from the use of market segmentation practices in terms of market share. It could be seen from the table that all the five (5) banks scored an index greater than half of the market share in Colombia. This simply shows that these five (5) commercial banks have total dominance in the banking and financial sector in Colombia, thanks to their effective and efficient segmentation patterns. The index

Base-type	Segmentation Criteria	Explanation
Psychological	Psychographic (lifestyle)	Banks can analyse consumers' interest, opinion and activities to understand their pattern of behaviour and lifestyle which affects their decision making processes and purchasing behaviour.
	Benefit Sought	Been able to understand customers purchasing motivation, it can be easy to have insight into the benefits they want from their used products.
Behavioural	Transaction/purchase	Information about customers' transactions and purchases provides very rich data for identifying profitable customer segment. This data can provide scope of analysis on who buys what, when and how (how much they spend and, how often), and what transaction channel did they use to purchase?
	Media usage	Information on what media channels are utilized, when, where, by whom and for how long. This provides useful data to find out the potentials of certain market segments.
	Product usage	Usually segments are obtained from analysing markets using their usage of product offering, product category and brand. This may be in the form of time of usage, frequency of usage, and situation of usage.
Profile	Lifestyle	Analysis on lifestyle is based on the principle that, customers need different products and services at different stages of their lives. For example; young couples, workers, retired.
	Demographic	The key criteria in this area are sex, age, profession (occupation), and religion, level of education, social class and income features. Many of these influences buyers ability to buy a certain product or service.
	Geodemographic	In the banking service context, this approach is very important. This is because it is presumed that there is a relationship between location and the type of house that people live in, and their buying behaviour.
	Geographic	The banking service during segmentation should also know and understand that the needs of potential customers in one geographical area are always different from those in another area. This stems from their custom, tradition and climate difference.

Table 1: Segmenting variables for consumer markets.

Rank	Bank	Tier-1 Capital \$M	Assets \$M	Pre-tax Profits	Return on Capital (%)	Return on Assets (%)
1	BanColombia	5120	55,272	1224.43	23.91	2.22
2	Banco de Bogotá	4657	45,444	1507.68	32.37	3.32
3	Banco Davivienda	2453	26,599	512.89	20.9	1.93
4	BBVA Colombia	1124	17,240	345.78	30.76	2.01
5	Banco de Occidente	1088	13,327	200.18	18.39	1.50

Source: thebankerdatabase.com Note: all data as of 12/12

Table 2: Top five banks in Colombia in 2012 based on tier-1 capital ratio.

score state that when a score is less than 100%, it means there is weak position. However, if the indexes are more than 100%, it shows strong result in the segmentation patterns and practices adopted by the banks or the monopoly of the market. When we also look market shares in total deposit as of 2014, it could be seen that five (5) banks in Colombia have excellent results in their segmentation patterns and practices. The results show that the marketplace of the banking and financial sector in Colombia is highly concentrated and the banks are characterised by its size, its oligopolistic and segmented structures (Table 3).

More so, in an attempt to test the relationship between bank performance and segmentation adoptions, Spearman's correlation coefficient was used. The result from the test showed a significant relationship that exists between the market share of the selected banks and their total (overall) expenses. The relationship according to the test was 0.581 which implies that banks with large market shares tend to lower their overall operation unit cost and increase profitability. This finding was done based on each bank's market position within the sampled banks. It consisted of both less-dominant and dominant companies in the sector.

The functional models such as quadratic, exponential equations and linear logarithm also proved that there is high contribution of 30.85% in the market share variation and this shows that the total (net) market expenses grow through different marketing segmentation practices among commercial banks in Colombia. It was reported that the five selected banks can still increase their market share until they get to their peak of 37.2%. However, any further increases above this point of 37.2% net (overall) expenses shows diminishing effect which in return diminishes the market share. The findings resulted that when market segmentation expenses is as high as 37.2% of total operating expenses, then benefits derivable can reach its extreme point where additional commitment of fund will reach a direction which can lead to negative result.

S/No.	Participants (Banks)	Deposit in 2014 (Annual Report)	Market Shares (In Total Deposit-A1%)	Square of Market Share (A1 <sup>2</sup> %)
1.	BanColombia, S.A	56231	30.05	903
2.	Banco de Bogotá, S.A	41512	22.18	491.95
3.	Banco de Davivienda, S.A	33773	18.05	325.80
4.	BBVA, S.A	32303	17.26	297.91
5.	Banco de Occidente, S.A	23323	12.46	155.25
	TOTAL	187142	100	HHI=2173.91

Source: Banks 2014 annual reports

**Table 3:** Total unconsolidated deposit and market share among sampled banks in Colombia.

Banks	Customer's with Active Accounts (Beginning of Period)	Sampled Customer with Active Accounts of Period	Degree of Customer Retention and Loyalty (%)
BanColombia, S.A	50	47	94%
Banco de Bogotá, S.A	50	40	80%
Banco de Davivienda, S.A	50	37	74%
BBVA, S.A	50	35	70%
Banco de Occidente, S.A	50	25	50%

Source: Response rate based on questionnaires to test customer retention and loyalty to bank branch/service 2015.

**Table 4:** Customer retention and loyalty ability based on selected banks.

To determine the impacts of market segmentation patterns and practices on customer retention and loyalty strategy on banks, the researcher employed a quantitative analysis by investigating the research question through questionnaires to test the five banks customer retention strategy. The table below shows the opinion of the respondents, and degree of customer retention ability for the sampled banks in Colombia.

From Table 4, it could be seen that, out of the 50 customers with active account as of the beginning of the period, 47 of them representing 94% have remained loyal to BanColombia. This shows that Bancolombia's business segment such as credit card, consumer banking and commercial banking segment have helped them to build an interactive relationship based on humanistic experience and trust. This shows that Market segmentation practices do not only help banks to reposition their brand or develop new products but also ensure better communication between the two parties, thus, the bank and its customers. Thus, segmentation allows banks to carefully listen to their customers and respond to their wants and needs. BanColombia's degree of customer retention and loyalty shows their ability to provide great customer experience by satisfying the needs of their customers. 40 (80%) for Banco de Bogotá, 37 (74%) for Banco de Davivienda, 35 (70%) for BBVA and 25 (50%) for Banco de Occidente show a massive impact of market segmentation patterns and practices among the banking and financial industry in Colombia.

To amass everything, the findings indicate that market segmentation practices have benefited these five banks, more than any other bank in Colombia in terms of financial performance and market share. Segmentation practices have led these banks to a more precise definition of the financial market in Colombia in terms of customer needs. The tool has improved the understanding of the management towards their customers. These five banks have used market segmentation practices to exploit and identity a niche market which most of the banks have ignored as not being large enough for them to make profit. This has helped the banks to acquire large market share in the financial and banking industry in Colombia. What the study figured out was that these five banks with large market tend to lower their overall operation cost and increase profitability. Market segmentation has benefited these banks to demonstrate high level of customer retention and loyalty.

## Conclusion

This article has assessed the use and impacts of marketing segmentation practices on bank performance in Colombia. The study researched into the type of market segmentation practices adopted by typical Colombian banks, the impacts of market segmentation practices on bank performance on the selected banks in Colombia and the extent to which segmentation practices have influenced customer loyalty through banks product and service offerings.

The study revealed that market segmentation has benefited some section of the banking and financial industry in Colombia than others. That is, it has enabled the selected banks to dominate the market share and customer patronage. It was discovered that Segmentation of banking products and services in Colombia has followed the normal trend of business segment such as credit card segment, consumer banking segment and commercial banking segment with emphasis on psychographic, geographic, socio-cultural behaviour and demographic. Segmentation has allowed the banks to build an interactive relationship based on humanistic experience and trust.



Findings disclosed that the selected banks such as Bancolombia, Banco de Bogotá, Banco de Davivienda, BBVA, and Banco Occidente are well positioned in capital strength and they are the best capitalized banks in Colombia due to their business segments in terms of credit card, consumer banking segment and commercial banking segment. The study exposed that the banks have used segmentation practices to lower their overall operation unit cost, expand their market shares, retain their customers, better their communications, increase profitability and focus on their company. It was however revealed that Bancolombia is the largest bank with tier-1 capital of \$5120 Million in Colombia.

## Recommendations

Based on the above findings, it is recommended that carefully analysis of the operating environment should be made to ensure effective and efficient segmenting of bank's customer pool to help design its service and product offering. Dominated and less dominated banks can adopt acceptable corporate image, just-in-time service delivery, employee-customer relation, effective and efficient use of referrals and simple account opening formalities to win customer loyalty and satisfaction, which in return, helps to retain old customers and win customers as well.

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