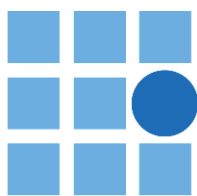


# Location Strategy to Improve Effectiveness of a Branch Network



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## Executive Summary

This report draws attention to the need to recalibrate bank branch networks as the role of branches is changing from being a major transactional channel to a point of interaction. We analyzed existing branch locations of 8 national banks: Citibank, Chase Bank, Bank of America, US Bank, Wells Fargo, TD Bank, Capital One and Fifth Third Bank in major cities such as Chicago, New York, Dallas, Los Angeles, San Francisco, and Boston.

To evaluate branch location strategy of banks, we collected data on market shares of these banks in respective cities. Branch-wise location information in each of these cities was also obtained from the Federal Deposit Insurance Corporation (FDIC)'s Summary of Deposits (SOD) database. We collected data on demographic variables such as neighborhood information, number of households, and mean income per household for all the cities.

Using the market share data and p-median model we suggested the number of branches and branch locations that a bank should have in a particular city. Then we compared our proposed network with the existing branch network. Findings suggest that some of the banks need drastic changes in their branch locations, for example Citibank in San Francisco has scope to increase the number of branches by 30%. While TD Bank is over represented in New York and can reduce its branches by 33%. These changes will help these banks to improve profitability in the long-run.



## Introduction

Selection of branch location is of strategic importance for a bank. A good branch location ensures more profitable customers and increases the possibility of potential sales. Banks take location decisions infrequently as they are expensive and difficult to reverse. Today, banks have to rethink their branch location strategy as transactions depend on digital channels and branch generated revenue is declining. In the next section, we discuss the changing role of bank branches.

While developing a location strategy, banks should not treat branches as independent units. They should optimize the overall branch network to maximize business. This optimization problem can be formulated as a p-median model to get desired locations.

## Evolving Role of Bank Branches

Migration of transaction activities to online and mobile channels leaves branches with a primary role of strengthening relationship between customers and bank. Branches have moved from being a transaction channel to a physical point of interaction which can have high impact on sales. This evolving role of branches calls for recalibration of existing branch networks.

## Need to Recalibrate Branch Networks

Branch location selection is one of the strategically important decision making process which requires banks to consider the purpose of a branch. A well-planned branch network helps banks gain a large market share while keeping costs low. Developing a branch network aligned with changing consumer requirements can help banks position themselves for the future. Number of branches in a region is directly tied to growth of a bank.

### **Is a Denser Network Always Better?**

Having a dense branch network helps banks gain market share; it also allows them to charge more for their services. But a dense network adds to costs. Having too many branches is not a good idea as branch generated revenue becomes challenging. Also over-representation in a particular area may lead to cannibalization of a branch's revenue by another nearby branch. Closely located facilities can be consolidated to a single more profitable office.

**Each additional branch raises revenue at other branches in the network.**

### **People Like to See Bank Branches**

Customers may not want to visit branches, but they want them to be available; customers prefer banks with branches nearby. Presence of a branch acts as a contingency device as, when having trouble, people prefer physicality and want to talk to someone. Sparse branch networks are only appropriate for smaller banks with limited resources.

### **Every Branch is Connected: The Network Effect**

Branches are not independent miniature banks; they should be treated as interrelated outlets through which customers engage and develop relationship with the bank. Market will be well served by taking a holistic approach to bank location strategy. Individual branches are important but focus should be on the network of facilities as a whole. In all markets, bigger banks capture a disproportionate market share as a bank becomes more valuable with increasing number of offices. For example, a twenty branch network will gain more than twice as many customers as a ten branch network.

### **How to Measure Branch Value**

Banks use various measures to keep track of branch performance. Traditional measures include number of account openings, value of transactions and revenue earned per employee etc. These metrics are used from a long time when branches were the primary channel used for financial transaction. Today, customers use multiple channels for routine transactions. As the role of branch changes, these metrics cannot be transaction oriented anymore.

Branches now exist to strengthen customer relationship, increase sales and retain customers. Some of the relevant measures to be considered while branch location analysis can be: customer density in neighborhood, five year household growth rate, proportion of unstable households, future households, expected deposits, business demand, number of competitors in the submarket, and the bank's current market position.

### **The Real Reach of a Branch**

The spread of a branch's submarket is inversely proportional to the surrounding population density. Thus, submarkets in dense urban region are smaller in area. Urban submarkets will draw customers from a 1 – 1.5 mile range; while rural submarkets may attract customers up to a 5 mile range.





### **Framework to Optimize Branch Location**

Location selection has strategic importance for many businesses. An increase in the potential sale becomes possible with a good location. It is a very important decision as it is costly and difficult to reverse. This study analyses existing branch locations of some of the national banks, in cities such as Chicago, New York, Dallas, and Los Angeles. However the same basic model with little modifications can be used for retail industry.

The market shares of the banks and branch-wise information in each of these cities was obtained from the FDIC's Summary of Deposits (SOD). The demographic information of all the cities was collected.

#### **P-Median Model**

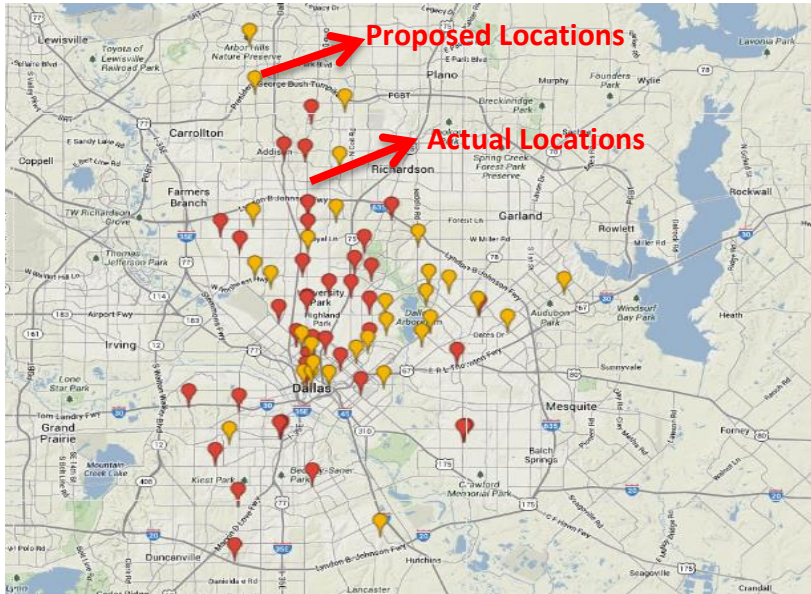
Using p-median problem, we find the location of 'p' facilities to serve demand in a market area so that the disutility to the customers caused by travelling is minimized. The p-median problem does not consider the cost of opening a facility and there is always an upper bound on the number of facilities that can be opened. The p-median model also assumes that there are no capacity constraints. But this limitation was overcome by dividing the area into smaller blocks. Further the input to the model was weighted using average income per household in order to optimize the profits of the bank.

#### ***Bank of America in Dallas***

Bank of America has 40 branches in Dallas with high percentage of branches concentrated in the downtown and North-East Dallas. High income areas of North Dallas are well covered while there are very few branches in the East. Our location model shows that Bank of America should close 9 of their branches, mostly the ones in South. We propose 31 branches, calculated based on Bank of America's market share.

We divided Dallas into 67 smaller areas and collected demographic data for all the subunits. Distances matrix was generated with distances between each of the neighborhoods. These distances were weighted with the average income per household in these areas. Finally neighborhoods with average income lower than \$50,000 were removed. 20 branches were allocated through p-median model in richer areas. Left over branches were distributed to low income areas based on total income rankings. This differentiation was done in order to get the desired spread across the city.

### Gap analysis for Bank of America in Dallas



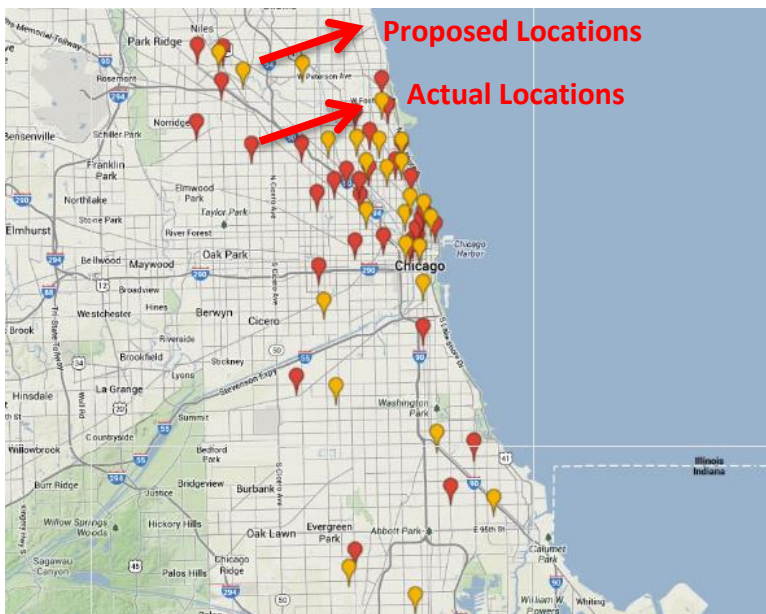
We suggest removing some branches from Southern Dallas. Bank of America has 8 branches in south, while we allocate only 2 branches in South. Also relocation is required in the East Dallas where there is a potential market.

## Summary of Important Findings

### Fifth-Third Bank: Chicago

Fifth Third bank has more branches than required in Chicago region. Presently it has 37 branches. We suggest Fifth-Third Bank to close 12 branches as it is over represented.

### Gap Analysis: Fifth-Third Bank in Chicago

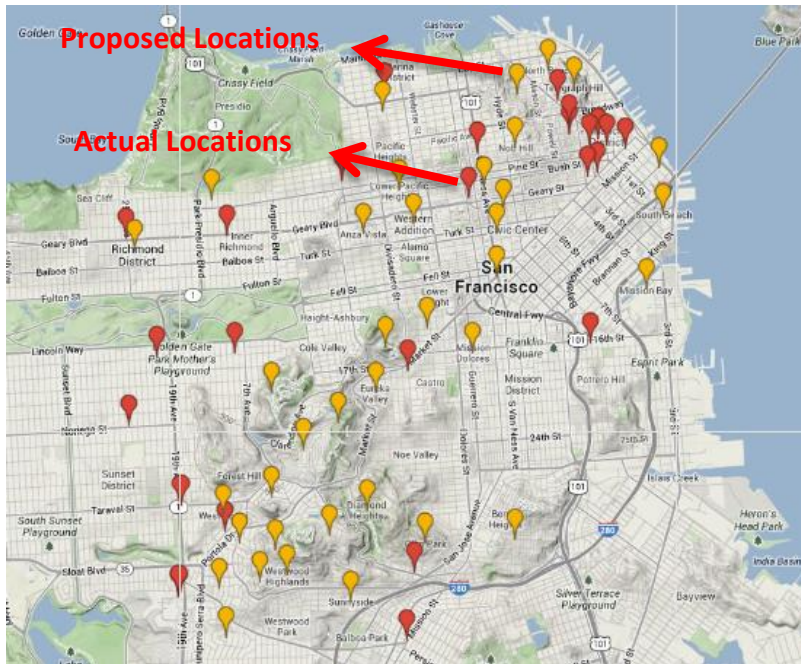


For South Chicago our proposed branch locations match with the actual locations of Fifth-third Bank. It can reduce number of branches in North and West regions.

### Citibank: San Francisco

Citibank has not covered the market specially the South-Western region. There is scope to increase number of branches by more than 30 Percent. Presently it has 27 branches in San Francisco while looking at the market share it can expand up to 37 branches.

### Gap Analysis: Citibank in San Francisco



Citibank has very few branches in South San Francisco. It is completely ignoring the high market potential of the Southern part of the city. We suggest Citibank to plan branch outlets in high income regions of South. This will lead to expansion of customer base.

### Conclusion

Branches will move from being a transactional channel to physical point of interaction which can have huge impact on sales. Banks must identify this change and must set meaningful criteria in determining their location strategy.

In this study we determined appropriate branch location for 8 national banks: Citibank, Chase Bank, Bank of America, US Bank, Wells Fargo, TD Bank, Capital One and Fifth Third Bank in major cities such as Chicago, New York, Dallas, and Los Angeles, San Francisco, and Boston. Findings suggest that banks need to focus on their location strategy to keep their branch network profitable in the long run. Most of the banks are misrepresented; some have potential for increasing customer base with more branches while for others large number of branches is leading to revenue cannibalization. Also in some cases relocation of the network will lead to an efficient branch network.



## Perceptive Analytics

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We provide analytics solutions for optimizing location decisions. The following are samples of some of the other analysis we do: Customer Profiling, Mapping Customer Location, Competitive Analysis, Demographic Analysis, Market Potential Analysis and Analysis of a site on the overall network. We adopt the right strategy and create marketing edge so you can create winning products, enhance sales and convert traffic into customers.

To know more you can reach us at [cs@perceptive-analytics.com](mailto:cs@perceptive-analytics.com).



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