



Spatial Store Location Optimization for FMCG Retailers: A GIS Based Approach to Location Allocation Analysis

SRTD-RTCG-MISA

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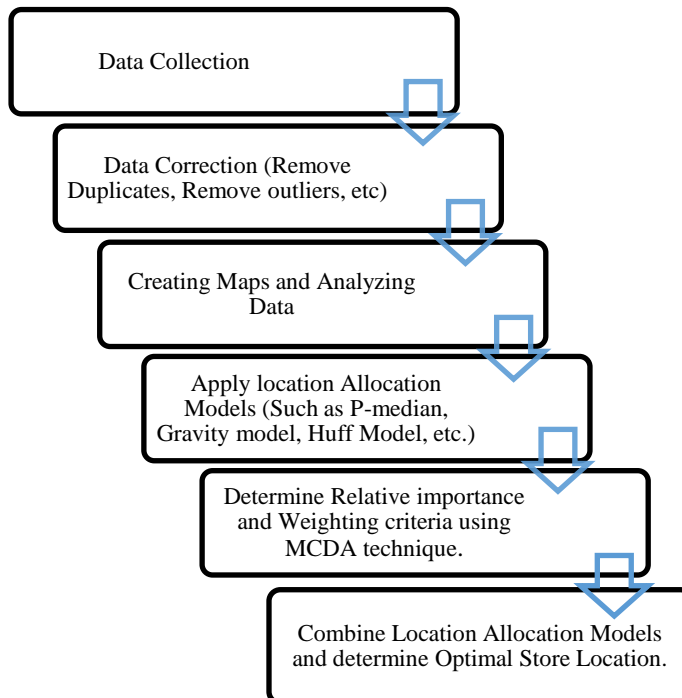


**01 Dec 2022 to
30 Apr 2023**

MAJOR OBJECTIVES:

- Literature Review for existing research on Location-allocation analysis in FMCG industry.
- Collecting and Analyzing relevant data based on Various Factors that affect store location.
- Data Correction of the collected data such as removing duplicates, checking spatial errors, Giving a similar scale, etc.
- Implementation and Comparison of various models on Location Allocation analysis.
- Drawing Conclusions using GIS and MCDA techniques to optimize Store Location for FMCG Retailers.

METHODOLOGY FLOW CHART:



RESULTS/MAJOR FINDINGS:

- The Combination of Gravity model and P-median model together to find an optimal store location is quite effective.
- The proposed approach took into account multiple criteria, including demographic characteristics, transportation accessibility, and existing competition, resulting in more accurate location allocation analysis.
- The analysis revealed that certain demographic and Geographic characteristics, such as population density and type of city area (slum or other), were more important than others in determining the optimal store locations.
- The results of the analysis also showed that transportation accessibility was a crucial factor, and the competition factor was found to be significant as well.
- The proposed approach was applied to Vadodara City and few optimal store locations for FMCG industry is identified.

CONCLUSION: This research can be useful to find optimal store locations in a city by giving criteria order to various factors according to need. Also there are some drawbacks as well such not having data at local level such as customer behaviour, etc to make the research data more precise.