

## **ABSTRACT**

Transportation is an important aspect in the daily life of human activities. It is thus important for transportation systems to be planned expertly to maintain safety and efficiency. Parking systems play an important role in planning an efficient urban transportation system. This is because every vehicle comes at a halt at some point, often in a parking zone. To create an efficient system, parking assessments are thus done to determine the adequacy of parking supply mainly in urban centers and recommend the right remedies. Kikuyu Town is one of the towns in Kenya growing at a high rate both economically and demographically. It is an educational, industrial, business and recreational hub. Being such a major town, a parking assessment study was done to determine the adequacy of parking supply in the town. The research work involved the study of elements of parking including a general parking evaluation background, types of parking facilities, parking policies and past parking study works. Various concepts of parking were researched on to understand the concept of parking supply and demand. Theories on parking standards and general parking problems from different perspectives were also analyzed and their possible solutions. The review also involved research on parking policies and parking management benefits. The assessment involved carrying out a field study on week days, that is, Tuesday, Thursday and Friday at six different locations within the town. The research methodology included carrying out a parking inventory study to know the existing conditions of the parking bays, carrying out a parking in and out survey method and license plate survey technique to know the parking characteristics. In addition, a parking questionnaire survey was administered to determine the vehicle parkers' characteristics. The most onerous factors used within the scope of the project objective which is to determine the adequacy of parking supply in Kikuyu Town included analyzing the maximum parking occupancy rate, the number of hours the parking occupancy rate exceeded 90% and the average parking occupancy rate. The results of the study showed that the maximum parking occupancy for all surveyed locations was over 100%. Generally, traffic engineers consider a parking occupancy rate of 90% as 'full'. The number of hours the parking occupancy rate exceeded 90% ranged between five to eight hours in all the surveyed location over the duration of the study. In addition, the average parking occupancy rate was over 75% in all surveyed parking locations over the duration of the study. Other findings on vehicle parkers showed that a prominent number of parkers were long term parkers which guided on what actions to be taken. The parking occupancy rate was used to determine the adequacy of the parking supply. The study is based on the findings and discussions of the data collected, some changes in order to offer a solution to the observed problem. They include the proposed construction of an off-street surface parking through Public Private Partnership with owners of vacant land considering proximity by analyzing the appropriate level of service walking distances, improvement of public transport system, implementation of accurate parking standards for new developments and enforcing them diligently, shared parking, introduction of parking guide system and regular maintenance of existing parking facilities to ensure efficient parking utilization. In conclusion, parking policy should be implemented as part of the overall city and transport planning in urban towns.