

## **Analysis of the Fair Distribution of Urban Facilities in Kabul City by Population Modeling**

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**Abstract :** In this study, we investigated how much of the urban facilities are fairly distributing in the city of Kabul based on the factor of population. To find the answer to this question we simulated a fair model for the distribution of investigated facilities in the city which is proposed based on the consideration of two factors; the number of users for each facility and the average distance of reach of each facility. Then the model was evaluated to make sure about its efficiency. And finally, the two—the existing pattern and the simulation model—were compared to find the degree of bias in the existing pattern of distribution of facilities in the city. The result of the study clearly clarified that the facilities are not fairly distributed in Kabul city based on the factor of population. Our analysis also revealed that the education services and the parks are the most and the worst fair distributed facilities in this regard.

**Keywords :** Afghanistan, ArcGIS Software, Kabul City, fair distribution, urban facilities

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