

# Convenience Shop and ASM Spatial Distribution Analysis around KASHIWA Station

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## (1) Motivation

The distribution of CVS as one of indexes used to use in the study of life convenience. We can get the spatial data indirectly, such as from the map data that can not be updated in time. This project will use survey data by handy GPS integrated with map data and statistic data analysiing the life convenience around KASHIWA Station.

## (2) Methods

This project includes two phases. Firstly, Field Work: survey locations of CVS and ASM (Auto Selling Machine) and collect attriute data of them, such as The type, the number, age and sex of employee, size of parking area of the CVS, the number and type of auto selling machine, etc. Secondly Laboratory Work: deal with data and analysis the disitributation of CVS and ASM.

## (3) Data and Software

In the project, the survey data by handy GPS and attribute data by field work, socioeconomic data such as the number of people and family from GISPLAZA, and Digital Map of 2500. ArcGIS is the main software to analysis and map in this project.

## (4) Results

Spatial distribution Mapping of Convenience Shops and Auto Selling Machines are showed in Fig 1 and Fig 2. Convenience Shops are distributing along with the main road. There are uniform distributed in the northeast area and centralized around the exit of the station. But there are few in the south area, especially, there are no one in the southwest area. The distribution of ASM is similar with the distribution of CVS.

Population density and spatial distribution of CVS or ASM are showed in Fig 3. There is no apparent relationship between them, whereas with the distant increase, the distribution of them becomes sparse in gradually.

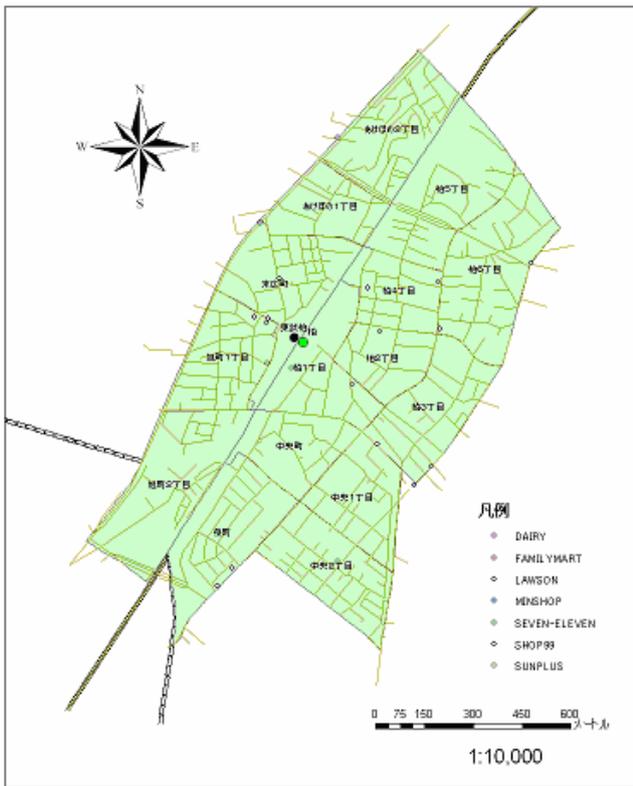


Fig 1 Spatial distribution of CVS

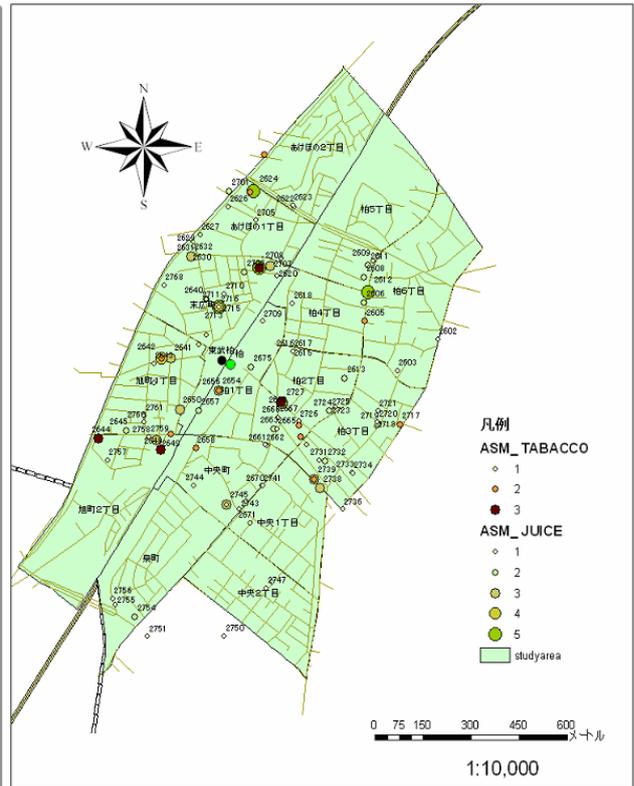


Fig 2 Spatial distribution of ASM

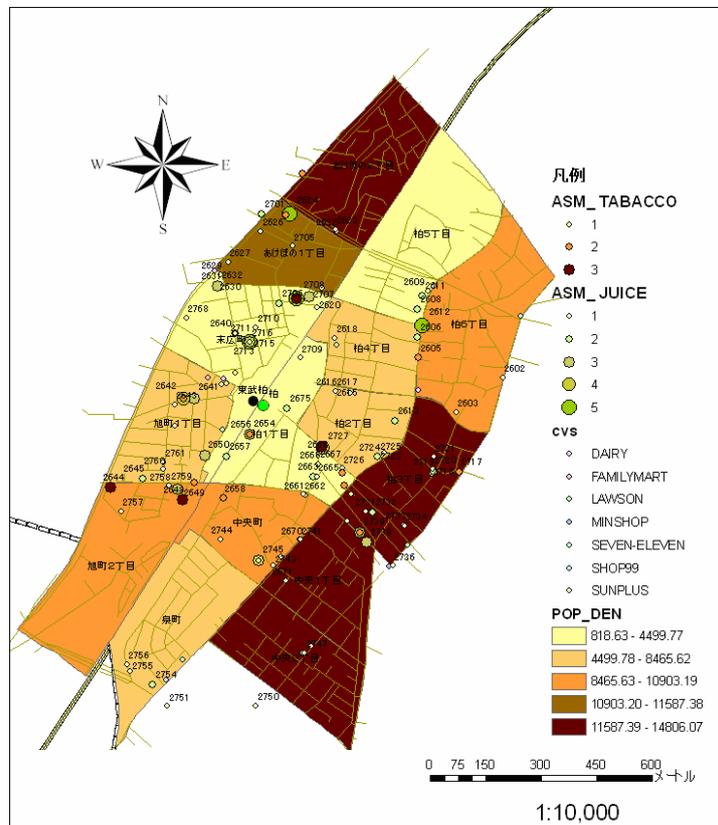


Fig 3 Spatial distribution of CVS, ASM and Population Density