

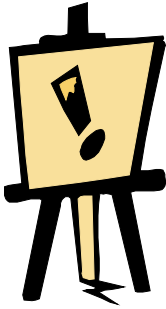


Practitioner's Guide:

Functional Analysis

Functional Analysis

Brief Description



Demographic analysis methods help to provide planners with an insight into certain development tendencies related to the settlement pattern. The method only provides a limited insight into these since it does not indicate how functions are related to each other between the settlements and the agglomeration economies. Agglomeration economies are important in development. The range of services being offered and the economic opportunities that exist are all essential elements required to stimulate economic growth and development.

Access to market outlets, access to labour and other essential services helps to reduce the costs of production and increases income and eventually welfare. Easy access to roads has proved to be an important ingredient in developing rural areas in a country since reduced transportation costs and actual access to markets determines the variety, the quality and the prices of goods and services as a minimum aggregated buying power is needed to create sufficient demand for the supply of certain goods and services.

Functional analysis method is an approach through which planners can gain a deeper insight into issues such as:

- ▶ Classification of settlements patterns according to functions.
- ▶ Level of adequateness of functions in particular settlements.
- ▶ Levels of deficiency of functions or settlements where improvements in functions can be undertaken.
- ▶ Settlements that offer the potential of being upgraded to higher order settlements.
- ▶ Settlements fulfilling threshold values required to support basic services and facilities.

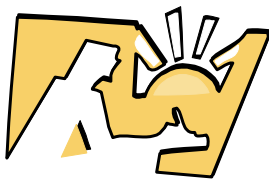
Functional Analysis

Proposed Main Users

District planners, Provincial planners,
Sectoral planners



Purpose of the Method



There are various methods for grading or ranking centres and the simplest is by plotting the score obtained by each settlement in a histogram, starting with the highest score and ending with the lowest and then analysing the peaks and troughs. It is important to notice that with regard to regional data organisation the functional matrix can be used as an inventory for the economic, social and technical infrastructure and the agricultural analyses. It is a simple and useful tool as most of the required data is usually available to the planners. The information can best be used as a locational inventory for investors looking for a location for their new plants or investment plans. It is an information sheet for ministries and national agencies to formulate priorities and to link policies with specific locations.

The matrix also serves the purpose of coordination of different agencies in charge of different activities and functions. Data collecting efforts can be shared between them and it is possible to study potentials or deficiencies in relation to functional interdependency between them.

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Advantages



- ▶ As an appropriate tool to conceptualize this general framework, the functional analysis provides planners with answers to the following questions:
- ▶ Ideal for classifying the settlement pattern according to functions, for example in rural centres, intermediate and regional centres according to agglomeration economies
- ▶ Assists in determining whether settlements in the region are equipped with adequate functions which may only need limited investments to maintain their current advantages.
- ▶ Determines settlements that are functionally deficient or those that could even serve a larger hinterland than is currently the case.
- ▶ Depicts which settlements offer the best potential to be upgraded in order to promote future economic development.
- ▶ Highlights settlements that are below the standard level of service and should therefore be designated as remote centres.
- ▶ Is useful for assessing settlements that fulfil the threshold values needed to support services and facilities.

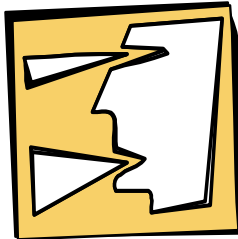
Limitations



- ▶ The settlement pattern assumes that the area being planned is on a "plain". In other words, varying geographical conditions such as mountains and hills are not necessarily reflected in the functional analysis.
- ▶ The analysis merely concentrates on accessibility of functions to the general public and the tool has to be used in conjunction with other related methods and tools (e.g. spatial diagram).
- ▶ The assumption is that all functions receive the same weight limits the functional analysis. The different importance of the functions are not reflected

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Principles & General Procedures



Basic Steps:

The initial step in the settlement functional analysis is to prepare a map which shows the spatial distribution of all regional urban places and their population size. Thus the following steps are necessary:

Step 1:

List all urban places in descending order according to their population size. Start with the largest urban place and end with the smallest.

Step 2:

List all important functions and activities considered in the head of the matrix. These are to be arranged into sub-categories such as educational, health, economic activities and administrative functions. In order to measure quantities, identify indicators or proxy indicators.

Step 3:

Draw a series of vertical and horizontal lines which form the grid of the matrix and indicate for each grid the quantities of the respective functions or activities.

Step 4:

Count the number of quantities for each function column by column and indicate the findings under the total functions.

Step 5:

Calculate the percentage column by column to measure the scores given to each quantity unit.

Step 6:

Count the percentages row-by-row in order to obtain the total functional index which indicates the level of service. The classification of the settlement pattern into high, middle or low ordered centres is done according to the index.

The assumption that all functions receive the same weight limits the functional analysis. The different importance of the functions are not reflected. In general it might be possible to introduce specific additional weighting factors for each sub-category. This is advisable in the event that specific analytical questions such as evaluation of urban centres with respect to promotion of small scale industries is being thought about.

Functional Analysis

References and Sources Used



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