
SUMMARY



Development and Utilization of Multiple Deprivation Index for Place-based Living Facilities Policy

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Under the national policy vision of realizing an innovative and inclusive state in which all citizens can live with a guaranteed human life, the government is pursuing various policies to improve living conditions. As part of this, the Living SOC policy should be carried out by comprehensively reviewing the demand and supply of facilities and other local conditions of residents living in the region. However, it is difficult to collect or use data that can be used as a basis for understanding the demand and supply conditions of regional living SOC.

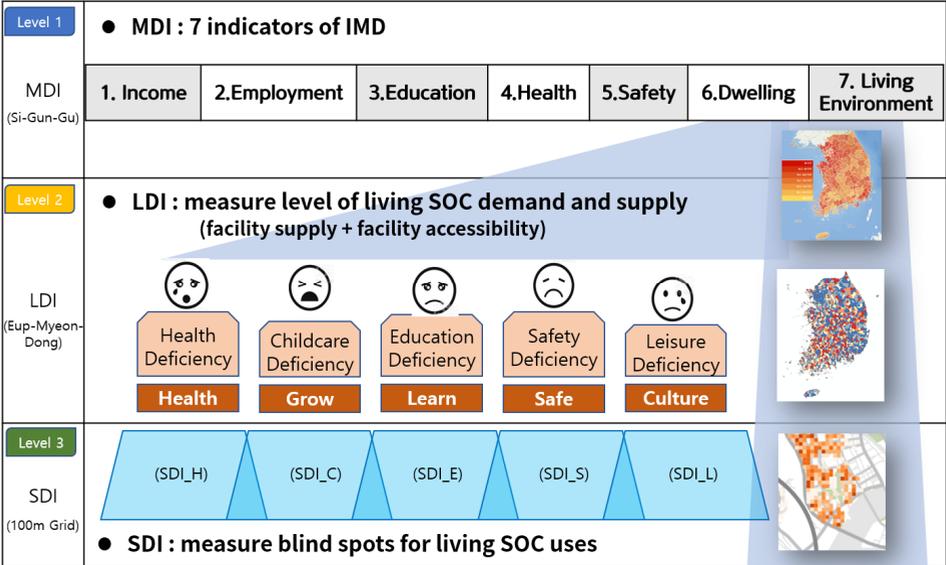
The purpose of this study is to develop the “Korean Indices of Multiple Deprivation(KIMD),” which can be used in the policy decision-making process to discover community-based living SOC projects or review the priority of supporting projects, and explore ways to use them. As a pilot with available data, the KIMD developed in this study was designed in three levels in terms of spatial resolution and utilization, and three types of indices (MDI, LDI, SDI).

The MDI is an index that measures the multiple deprivations of the 7 major sectors related to life, and it can compare which region is relatively deficient at

the national level. The LDI is an index that measures the level of supply and demand for facilities targeting the living environment among the areas measuring multiple deficiencies. It was measured using the distance to the facility and the size of the service population. The SDI is an index that defines an area with a shortage of supply compared to the demand for living SOC within a region or a far-off distance as a blind spot and diagnoses the size and spatial extent of the blind spot within the region.

The following figure presents the detailed composition of the indices to help understand the development process of the KIMD.

Figure | 3 Level-Design of KIMD



Note. Icons from <https://www.istockphoto.com/kr/>

The living SOC deprivation index targets essential facilities necessary for the process of birth, growing, learning, working, and living safely according to the

life cycle and activity characteristics of the people. It targets facility groups in five areas: health and health service facilities, childcare and education facilities, safety and emergency facilities, cultural and leisure facilities, etc.

To measure the areas of deficiency for each of the five facility groups, and to diagnose living SOC conditions in a complex manner, the index could be calculated by synthesizing the sectors. The living SOC deprivation index(LDI) was developed in units of administrative boundaries in eup, myeon, dong, considering that policies are implemented in units of administrative districts of metropolitan and local governments. The spatial deprivation index(SDI) for each facility was developed to identify the deviation between the population distribution and the facility's location based on the grid of 100m.

As a result of carrying out this study, several policy proposals were suggested for the practical use of the multiple deprivation index.

1. Realization of the multiple deprivation index as a data-based policy communication index and improvement of the utilization system: This study has a limitation in that the indicators were selected and analyzed on a pilot basis to derive the necessity of developing the multiple deprivation index. In the future, it is necessary to secure reliable data and develop and verify in-depth indices so that the multiple deprivation index can be put into practical use in community-based living SOC policies. For this, stable budgetary support and institutional conditions should be prepared so that they can be used as the basis for the selection of government-supporting projects.
2. Training and consulting on how to use the multiple deprivation index to support the discovery of community-led living SOC projects: Education and consulting on basic concepts, functions, and usage should be supported so that local government officials can use the multiple deprivation index in

the process of diagnosing local conditions and discovering projects which increase the satisfaction of residents.

3. Organize cross-ministerial cooperative governance to establish the multiple deprivation index production system and monitoring: Each area that makes up the multiple deprivation index has a different legal system and jurisdiction in the central department. To produce a multidimensional and comprehensive deprivation index and to activate use such as occasional monitoring, it is necessary to organize and promote a task force or governance that all ministries can cooperate with.
4. Promote industry-academia-linked R&D for the development of multiple deprivation index and prepare a platform to expand the base of utilization: It should be established and operated a platform that allows frequent updates of basic indicators so that the multiple deprivation index can be used universally in practice, develops a scientific methodology that proactively responds to future demand changes, and provides feedback on the opening and utilization of transparent and reliable indicators.