

Measuring Levels Of Community Well-Being In Korean Local Authorities: Application Of Decision Tree Analysis

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Summary

The aim of this study was to ascertain the levels of well-being that local residents experience in different types of community in Korea. To this end, the study divided Korean communities into three types – metropolitan communities, small and medium-sized city communities, and rural communities – and attempted to analyse the factors affecting the happiness of residents in each type. For this purpose, decision tree analysis was applied. As a result of the analysis, the 69 metropolitan communities were all divided into five nodes, and it was found that the biggest factor influencing the happiness of residents in these communities was social capital. The 99 small and medium-sized city communities were all classified into nine nodes, and it was found that in these communities environmental capital had the greatest influence on residents' happiness. The 82 rural communities were all classified into eleven nodes, and here it was found that human capital had the greatest influence. Taken together, these findings indicate that each individual community needs to establish a policy reflecting the characteristics of the nodes to which it belongs.

Keywords: community well-being, decision tree analysis.

I Introduction

Today, living conditions in the local areas where people live their lives, and which they therefore value, are a complex matter to be handled. Recently, the concept of 'well-being' has become more important than the concept of 'happiness', which reflects purely subjective feelings. Such well-being cannot be attained at the individual level, but must be satisfied at the level of the local community in which people live (Seo et al., 2016; Moksnes and Espnes, 2013; McNutt et al., 1990; Naci and Joannidis, 2015). It does not accord with today's era of local autonomy to discuss the condition of well-being at the national level: this would be to broaden the scope of the concept too much.

For this reason, international organizations such as the OECD are focused on studying conditions for satisfying well-being at the regional level, and on developing these conditions as indexes with which to evaluate the extent to which the individual regions of major countries are improving such well-being conditions (Bailey et al., 2007; Deci and Ryan, 2006). What is important in this process is to determine whether community can become a site of well-being if certain conditions are met.

Here, we generally use the concept of 'community' to denote life lived at the local level. Even so, there is an issue as to what level of society the community really

represents and what its spatial extent is. Defining the concept of community spatially is not simple (Diaz-Morales et al., 2013; McMahon, 2004; Naci and Joannidis, 2015; Sastre, 1999). This is because ‘community’ means a spatial unit whose members share the same identity and also share common perceptions regarding specific problems. A single village unit can become a community, but a group of countries can also become a community. An example is the European Community, whose member countries can be seen to share similar views and identities regarding specific issues with the countries of other continents.

The spatial extent of a community, then, may vary according to circumstances. In this study, the spatial unit of the community is set at the level of the local authority. In addition, the study assumes that well-being, which is already being treated as an important topic in many countries and by many international organizations, will in the future come to be seen as the most important social issue at community level. Defining the concept of well-being, however, is not simple, since well-being is not simply a subjective matter, but is related to objective and multi-dimensional conditions. It cannot be said that well-being is improved simply by feeling mentally happy.

Community well-being in Korea can be defined spatially, in terms of the local authority closest to local residents: the basic self-governing body. In other words, the well-being conditions that ordinary citizens can feel in their daily lives can be defined as the conditions that this basic local authority must maintain. Therefore, in this study the community is defined in a metropolitan area as a borough, a basic self-governing body that is closest to local residents; as a city as a general urban self-governing body; and as a county as a basic rural self-governing body (Seo et al., 2016).

To date, numerous researchers (Seo et al., 2016; Anand, 2016; Diener and Suh, 2000; Easterlin, 1995; Magee et al., 2013; Lachmann et al., 2018; Guttman and Louis, 1982; Jankowski, 2012), both in Korea and abroad, have dealt with the topics of well-being and happiness. However, very few studies have been conducted on well-being at the community level. In particular, not many studies have provided concrete policy-related information on how community leaders can improve their community’s level of well-being (Ryff and Keyes, 1995; Wolfers, 2003; Michalos, 2008): there is a serious lack of empirical studies in this area (Ehrhardt et al., 2000; Etzioni, 2018). Against this background, this study measures the well-being levels of Korean communities, and attempts to make policy prescriptions for each different type of community with the aim of raising these levels. In order to achieve this, decision tree analysis will be used.

2 Research Design

2.1 Material

The data to be used in this study stem from the national survey conducted in December 2020 by the Graduate School of Public Administration at Seoul National University, Korea. These data were gathered by the Community Well-being Research Center of Seoul National University’s Graduate School of Public Administration (supported by the Ministry of Education) from 16,500 respondents nationwide. The data were obtained by questionnaire, the basis of which was that the conditions relating to community well-being consist of six types of capital that must be achieved for well-being to result: human capital, economic capital, social capital, environmental capital, infrastructure capital, and public administration capital (Seo et al., 2016). Each capital embodies between five and seven detailed conditions. A total score

for each capital was constructed by calculating the average value for all responses to the conditions included in each capital. The well-being levels of individual communities were calculated using the average value of all the responses of the local residents for each capital.

2.2 Analysis unit

The unit of analysis in this study is the community, namely, the local authority closest to residents. The local authorities in Korea number 226. However, in large municipalities there also exist so-called administrative boroughs. In this study, such administrative boroughs were also included as one community. Thus, the total number of communities included in the overall analysis was 250.

2.3 Analysis method

The analysis method used in this study is decision tree analysis. This is one of the methods for classifying an analysis target according to a certain standard, and shows a tree-like structure. In particular, it predicts the dependent variable (here, 'happiness') with a tree structure model made up of independent variables. Above all, this method classifies analysis subjects as members of small groups with similar behaviours, and divides subjects into layers according to certain criteria. Furthermore, when the number of explanatory variables is large, the size of the data is reduced by selecting a small number of useful variables from among them. In particular, identifying the effect of a specific combination of independent variables provides guidelines as to which variables should be considered in a parametric model.

2.4 Analysis procedure

In this study, the average value of the 250 communities for the six capitals is derived, and the level of 'happiness' as a dependent

variable is also measured. The aim here is to measure which of the six capitals has an important effect on the dependent variable 'happiness'. To do this, we first calculate the basic statistics for the 250 communities regarding the six capitals. We then divide the 250 communities into three types: metropolitan borough, which is a community within a large city; city, which may be either small or medium-sized; and rural county, which is a rural community.

2.5 Analysis variable

In this study, human capital is denoted as HumanLoc, economic capital as EconoLoc, environmental capital as EnvLoc, social capital as SocialLoc, infrastructure capital as InfraLoc, and public administrative capital as PublicLoc. The dependent variable, 'happiness', is expressed as Happiness. The object here is to address the types and characteristics of the important capitals that affect 'happiness' at the community level using the decision tree analysis method.

3 Analysis Result

As mentioned above, in this study the 250 communities are divided into three types, metropolitan borough, city, and rural county, and the conditional combination of the capitals that affect happiness by each type is analysed.

3.1 Metropolitan boroughs

Communities in Korea's metropolitan areas are called metropolitan boroughs, and they total 69. The basic statistics for these communities are presented in Table 1. The lowest score for each capital is one point and the highest ten points. As Table 1 shows, as regards the average community scores of the 69 metropolitan areas, HumanLoc (human capital) was the highest, at 7.05, and SocialLoc (social capital) was the lowest at 6.29.

Table 1 Basic statistics for communities in metropolitan areas

	N	Min.	Max.	Mean	Std
HumanLoc	69	6.195	7.834	7.05181	.347243
EconoLoc	69	5.55	7.30	6.4973	.38771
EnvLoc	69	5.814	7.271	6.66096	.349613
SocialLoc	69	5.584	6.977	6.29742	.344589
InfraLoc	69	6.276	7.888	7.02825	.359697
PublicLoc	69	5.550	7.330	6.51956	.357036
Happiness	69	6.055	7.153	6.57012	.253067

Figure 1 presents a decision tree analysis result for communities in the 69 metropolitan areas. As can be seen, all 69 communities were classified according to five types.

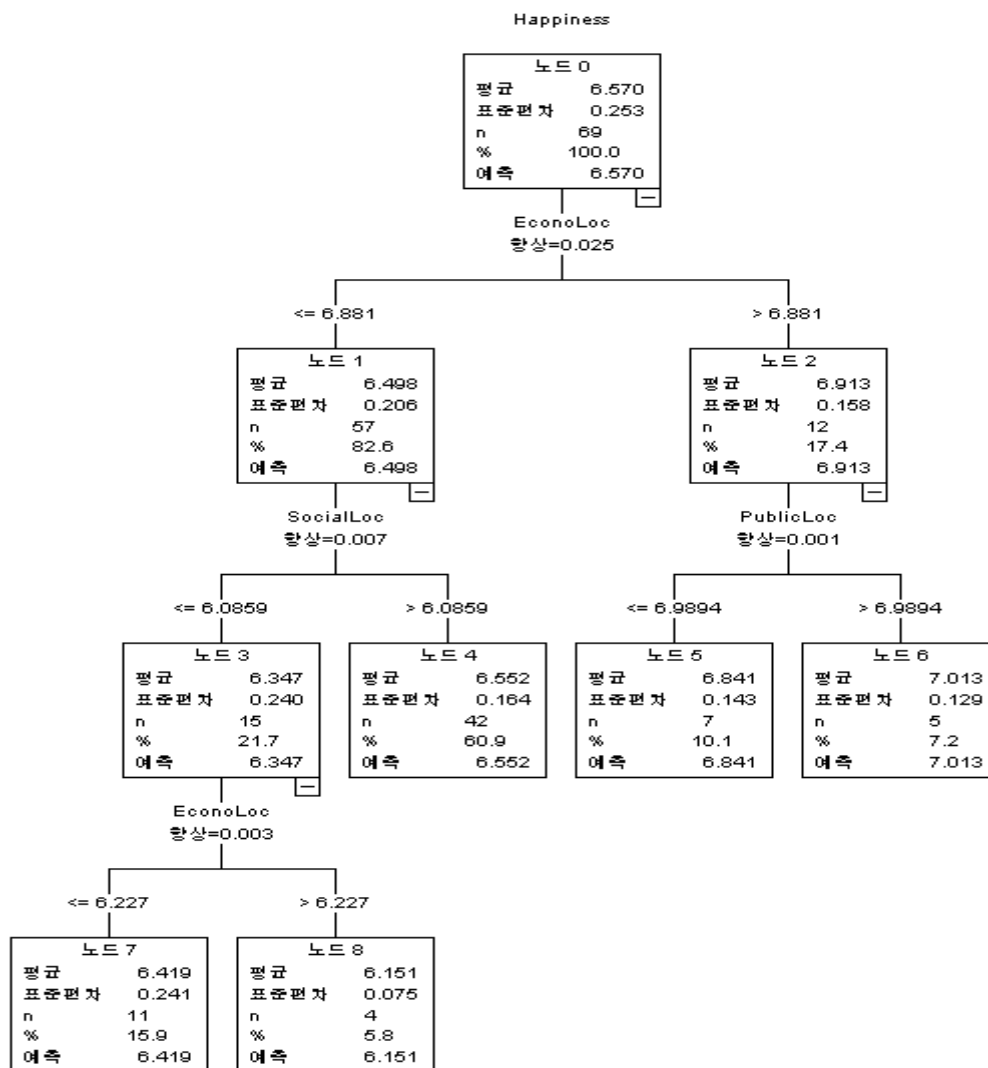


Figure 1 Analysis results for decision trees in the 69 metropolitan communities

The characteristics of the 69 communities classified thus into five are shown in Table 2. Node 6 includes all five communities, their average happiness being the highest at 7.01. Node 5 contains seven communities,

and their average value is 6.84. Node 8 includes all four communities, and their average happiness is 6.15, which is the lowest.

Table 2 Mean of metropolitan communities by node

Node	N	Per cent	Mean
6	5	7.2%	7.01292
5	7	10.1%	6.84131
4	42	60.9%	6.55180
7	11	15.9%	6.41879
8	4	5.8%	6.15060

If we analyse the capital variables that affect the happiness of metropolitan communities, it can be seen that SocialLoc, a social capital variable, has the greatest influence (Table 3).

When the importance of SocialLoc is taken as 100, EconoLoc (economic capital) is 95.9, showing the second-largest influence.

Table 3 Importance of independent variables in metropolitan communities

Independent variable	Weight	Normalized weight
SocialLoc	.031	100.0%
EconoLoc	.030	95.9%
InfraLoc	.021	68.4%
HumanLoc	.020	64.0%
PublicLoc	.017	55.8%
EnvLoc	.015	49.5%

Figure 2 shows the degree of influence of capital on the happiness of metropolitan communities.

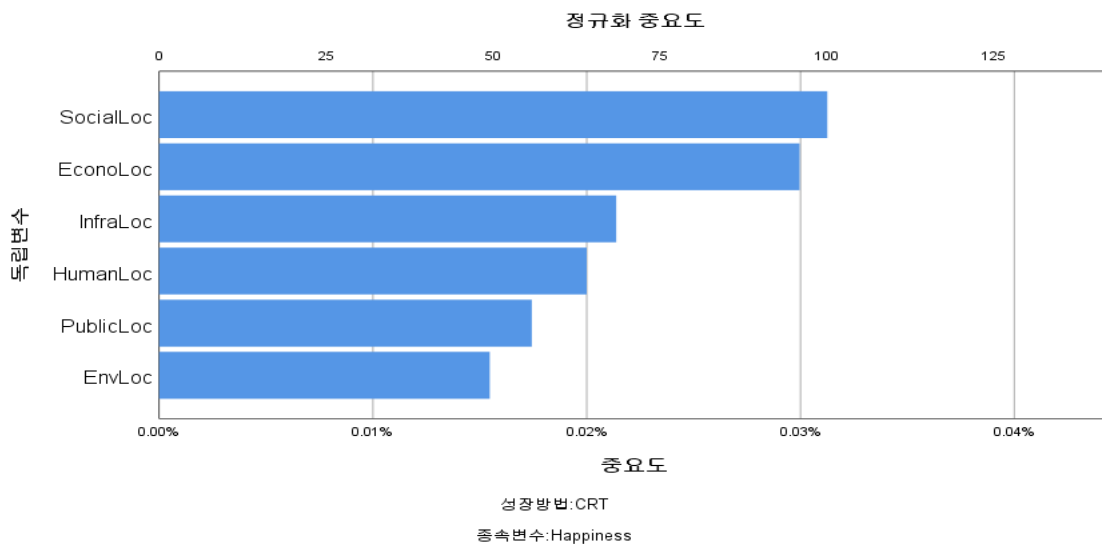


Figure 2 Normalization importance of capital variables affecting metropolitan communities

Table 4 shows the characteristics of metropolitan communities classified into five nodes.

Table 4 Special features of metropolitan communities by node

Node	Communities	Characteristics
4	서울광진구,서울동대문구,서울중랑구,서울성북구,서울도봉구,서울노원구,서울은평구,서울서대문구,서울마포구,서울강서구,서울구로구,서울영등포구,서울동작구,서울관악구,부산영도구,부산부산진구,부산동래구,부산남구,부산금정구,부산강서구,부산연제구,부산수영구,대구중구,대구동구,대구남구,대구북구,대구수성구,인천미추홀구,인천남동구,인천부평구,인천계양구,인천서구,광주동구,광주서구,광주남구,광주북구,광주광산구,대전중구,대전서구,대전대덕구,울산중구,울산남구	In this node, the value of EconoLoc, an economic capital variable, is less than 6.881, but the value of SocialLoc, a social capital variable, is lower than 6.881.
5	서울종로구,서울중구,서울용산구,서울양천구,서울송파구,부산해운대구,인천연수구	This node is a group of communities where the value of EconoLoc, an economic capital variable, is greater than 6.881, but the value of PublicLoc, a local administrative capital variable, is less than 6.9894.
6	서울성동구,서울서초구,서울강남구,서울강동구,대전유성구	This node is a group of communities where the value of EconoLoc, an economic capital variable, is greater than 6.881, but the value of PublicLoc, a local administrative capital variable, is greater than 6.9894.
7	부산중구,부산서구,부산동구,부산북구,부산사하구,부산사상구,대구서구,대구달서구,인천중구,인천동구,울산동구	In this node, the value of EconoLoc, an economic capital

		variable, is less than 6.881, and the value of SocialLoc, a social capital variable, is lower than 6.881.
8	서울강북구,서울금천구,대전동구,울산북구	In this node, the value of EconoLoc, an economic capital variable, is less than 6.881, and the value of SocialLoc, a social capital variable, is lower than 6.881. It is a group of communities that are smaller than 6.0859 and the value of EconoLoc, an economic capital variable, is greater than 6.227.

Note. In this study community names are shown in Korean, because the community name is not important whereas the analysis methodology is.

3.2 Small and medium-sized cities

In the case of the 99 small and medium-sized cities, the characteristics of capital variables

that affect the sense of well-being at the community level are shown in Table 5. In the case of these 99 small and medium-sized city communities the value of human capital, HumaLoc, is the highest, at 6.80532, and the value of social capital, SocialLoc, the lowest at 6.15256.

Table 5 Basic statistics for communities in small and medium-sized cities

	N	Min.	Max.	Mean	Std
HumanLoc	99	5.462	7.808	6.80532	.462085
EconoLoc	99	4.97	7.76	6.1744	.51723
EnvLoc	99	4.991	7.826	6.69519	.513906
SocialLoc	99	5.021	7.202	6.15256	.403314
InfraLoc	99	5.386	8.055	6.80029	.451632
PublicLoc	99	4.833	7.388	6.24370	.480903
Happiness	99	5.328	7.468	6.64748	.331376

Meanwhile, Figure 3 shows the decision tree analysis results for the 99 communities in small and medium-sized cities. It can be seen

that these communities are all classified into nine nodes.

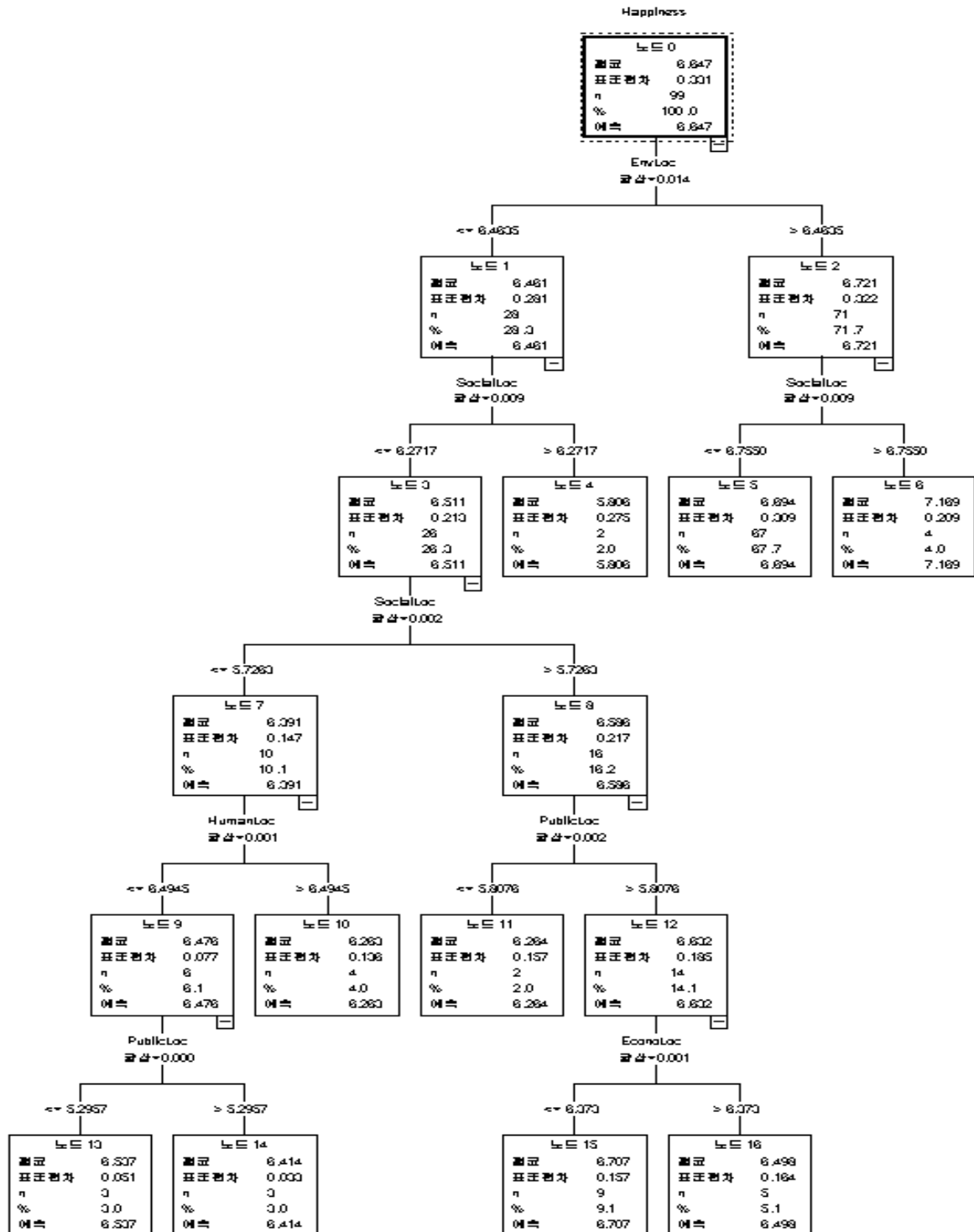


Figure 3 Analysis result for decision trees of the 99 small and medium-sized city communities

Regarding communities in small and medium-sized cities, as Table 6 shows, the average value of the happiness of the four communities included in node 6 was 7.168 –

the highest – and the average value of the happiness of the two communities in node 4 was the lowest, at 5.50 .

Table 6 Averages by node for small and medium-sized city communities

Node	N	Per cent	Mean
6	4	4.0%	7.16870
15	9	9.1%	6.70706
5	67	67.7%	6.69441
13	3	3.0%	6.53710
16	5	5.1%	6.49790
14	3	3.0%	6.41447
11	2	2.0%	6.26450
10	4	4.0%	6.26308
4	2	2.0%	5.80555

Table 7 shows the degree of influence of each independent variable on the dependent variable, happiness. In communities in small and medium-sized cities, the importance of

EnvLoc, an environmental capital, is the greatest, and that of HumanLoc, a human capital, the smallest.

Table 7 Importance of independent variables in small and medium- sized city communities

Independent variable	Weight	Normalized weight
EnvLoc	.028	100.0%
SocialLoc	.027	96.8%
PublicLoc	.020	73.1%
InfraLoc	.015	55.4%
EconoLoc	.013	48.6%
HumanLoc	.013	46.2%

Figure 4 shows the results of changing the influence of independent variables affecting happiness to normalized importance in the case of communities in small and medium-sized cities.

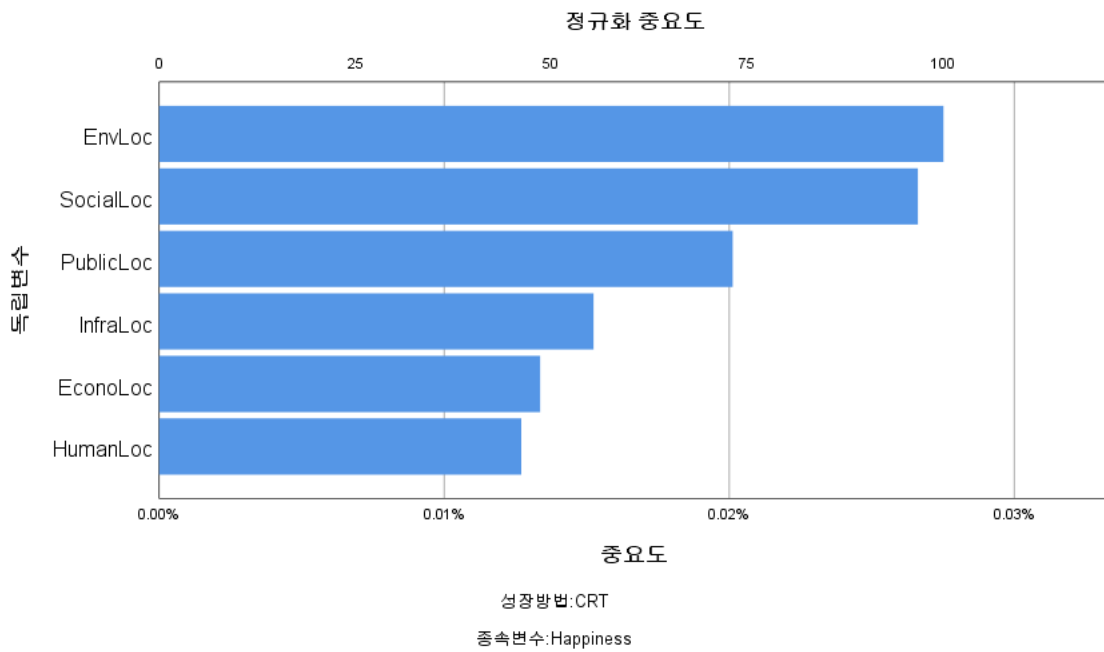


Figure 4 Importance of normalization of capital variables affecting small and medium-sized city communities

Table 8 shows the characteristics of the nodes to which the 99 small and medium-sized city communities belong.

Table 8 Characteristics of small and medium-sized city communities by node

Node	Communities	Characteristics
4	수원팔달구, 창원마산합포구	This node is a group of communities in which the value of EnvLoc, an environmental capital, is less than 6.4805, and the value of SocialLoc, a social capital, is greater than 6.2727.
5	수원장안구, 성남수정구, 경기의정부시, 안양만안구, 안양동안구, 경기부천시, 경기광명시, 안산상록구, 안산단원구, 고양덕양구, 고양일산동구, 고양일산서구, 경기구리시, 경기남양주시, 경기군포시, 경기의왕시, 경기하남시, 용인수지구, 경기파주시, 경기김포시, 경기화성시, 경기포천시, 경기여주시, 강원춘천시, 강원원주시, 강원강릉시, 강원동해시, 강원태백시, 강원속초시, 강원삼척시, 충북충주시, 충북	This node is a group of communities where the value of EnvLoc, an environmental capital, is greater than 6.4805, and

	제천시,충남공주시,충남아산시,충남논산시,충남계룡시,전주완산구,전주덕진구,전북정읍시,전북남원시,전북김제시,전남여수시,전남순천시,전남나주시,전남광양시,경북경주시,경북김천시,경북안동시,경북구미시,경북영주시,경북영천시,경북상주시,경북문경시,경북경산시,창원의창구,창원성산구,창원마산회원구,창원진해구,경남진주시,경남통영시,경남김해시,경남밀양시,경남거제시,경남양산시,제주제주시,제주서귀포시,세종시	the value of SocialLoc, a social capital, is lower than 6.7550.
6	수원영통구,성남분당구,경기과천시,용인기흥구	This node is a group of communities where the value of EnvLoc, an environmental capital, is greater than 6.4805, and the value of SocialLoc, a social capital, is greater than 6.7550.
10	수원권선구,청주서원구,천안동남구,전북익산시	This node is a community in which the environmental capital (EnvLoc) value is lower than 6.4805, the social capital (SocialLoc) value is lower than 6.2717, the social capital (SocialLoc) value is lower than 5.7260, and the human capital (HumanLoc) value is greater than 6.4945.
11	용인처인구,경기광주시	In this node, the value of EnvLoc, an environmental capital, is lower than 6.4805, the value of SocialLoc, social capital, is lower than 6.2717,

		the value of SocialLoc, social capital, is greater than 5.7260, and the value of PubLoc, local administrative capital, is lower than 5.7070.
13	청주상당구,충남보령시,경남사천시	In this node, the environmental capital (EnvLoc) value is lower than 6.4805, the social capital (SocialLoc) value is lower than 6.2717, the human capital (HumanLoc) value is lower than 6.4945, and the local administrative capital (PublicLoc) value is lower than 5.2957.
14	경기안성시,충남당진시,전북군산시	In this node, the environmental capital (EnvLoc) value is lower than 6.4805, the social capital (SocialLoc) value is lower than 6.2717, the human capital (HumanLoc) value is lower than 6.4945, and the local administrative capital (PublicLoc) value is greater than 5.2957.
15	성남중원구,경기동두천시,경기오산시,경기이천시,경기양주시,청주청원구,충남서산시,전남목포시,포항시북구	In this node, the environmental capital (EnvLoc) value is lower than 6.4805, the social

		capital (SocialLoc) value is lower than 6.2717, the social capital (SocialLoc) value is greater than 5.7260, and the local administrative capital (PubLoc) value is greater than 5.7070. It is a group of communities whose economic capital, EconoLoc, is lower than 6.370.
16	경기평택시,경기시흥시,청주흥덕구,천안서북구,포항시 남구	In this node, the environmental capital (EnvLoc) value is lower than 6.4805, the social capital (SocialLoc) value is lower than 6.2717, the social capital (SocialLoc) value is greater than 5.7260, and the local administrative capital (PubLoc) value is greater than 5.7070. It is a collection of communities whose economic capital, EconoLoc, value is greater than 6.370.

3.3 Rural counties

As regards the 82 rural communities, the characteristics of capital that affect the happiness of the community unit are shown

in Table 9. The value of EnvLoc, an environmental capital, is the highest at 6.89525, and that of EconoLoc, an economic capital, the lowest at 5.9619.

Table 9 Basic statistics for communities in rural areas

	N	Min.	Max.	Mean	Std
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HumanLoc	82	5.600	7.891	6.53355	.428668
EconoLoc	82	4.80	7.36	5.9619	.44206
EnvLoc	82	5.772	8.037	6.89525	.424452
SocialLoc	82	4.882	7.204	6.22646	.398370
InfraLoc	82	5.677	7.830	6.72519	.410898
PublicLoc	82	4.650	7.506	6.40631	.529524
Happiness	82	6.234	7.656	6.96694	.343727

Figure 5 shows the results of decision tree analysis for rural communities. It can be seen that the 82 rural communities are divided into eleven nodes.

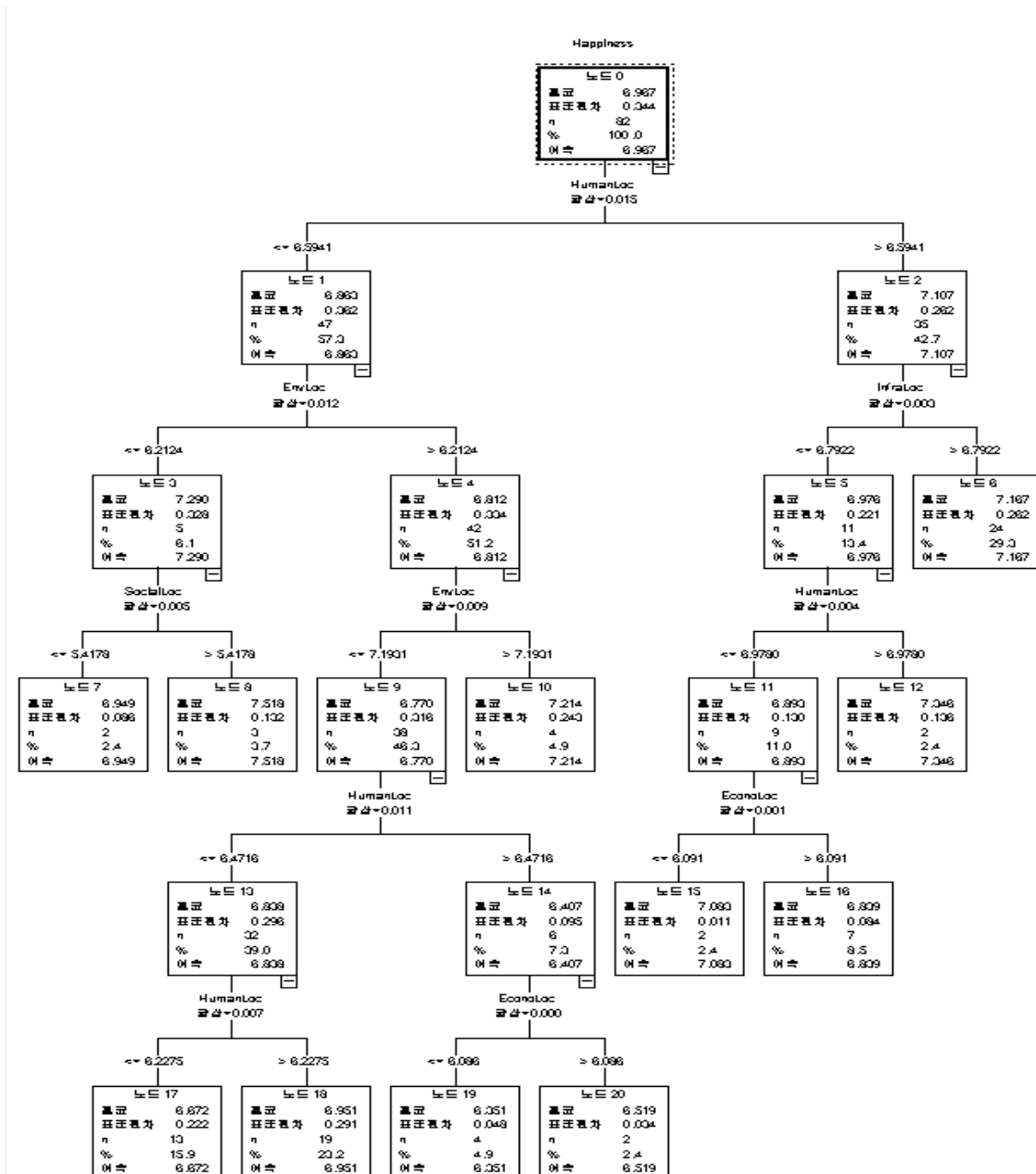


Figure 5 Result of decision tree analysis for the 82 rural communities

As Table 10 shows, node 8 includes three communities, and their average happiness level is the highest at 7.517. By contrast,

node 19 includes four communities, and their average happiness level is 6.35135, which is the lowest.

Table 10 Averages for rural communities by node

Node	N	Per cent	Mean
8	3	3.7%	7.51770
12	2	2.4%	7.34645
10	4	4.9%	7.21433
6	24	29.3%	7.16674
15	2	2.4%	7.08335
18	19	23.2%	6.95074
7	2	2.4%	6.94865
16	7	8.5%	6.83904
17	13	15.9%	6.67232
20	2	2.4%	6.51865
19	4	4.9%	6.35135

Meanwhile, Table 11 shows the importance of independent variables affecting the happiness of rural communities. The capital that affects the happiness of rural

communities the most is human capital (HumanLoc), and the capital that has the lowest influence is local administrative capital (PublicLoc).

Table 11 Importance of independent variables in rural communities

Independent variable	Weight	Normalized weight
HumanLoc	.040	100.0%
EnvLoc	.035	87.6%
EconoLoc	.025	63.0%
InfraLoc	.021	51.2%
SocialLoc	.019	47.7%
PublicLoc	.010	24.7%

Figure 6 shows the normalized importance of capitals affecting rural communities.

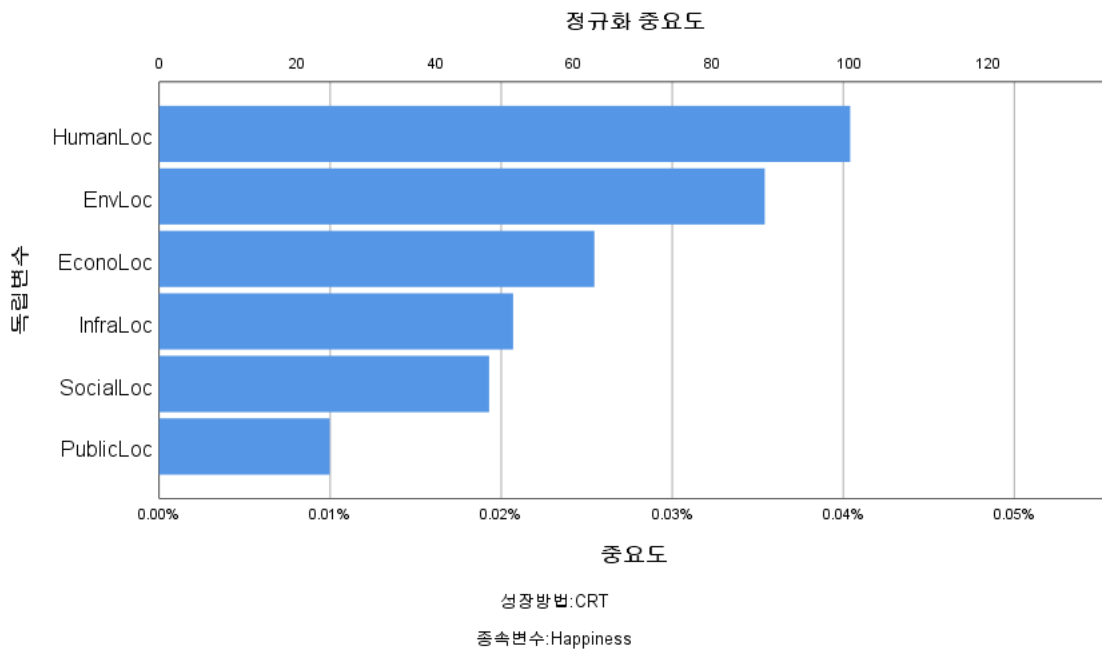


Figure 6 Importance of normalization of capital variables affecting rural communities

Table 12 shows the characteristics of the nodes to which the 82 rural communities belong.

Table 12 Characteristics of rural communities by node

Node	Communities	Characteristics
6	부산기장군, 대구달성군, 경기연천군, 강원횡성군, 강원양구군, 강원인제군, 강원고성군, 강원양양군, 충북영동군, 충북증평군, 전북완주군, 전북장수군, 전북고창군, 전북부안군, 전남구례군, 전남화순군, 전남장흥군, 전남해남군, 전남장성군, 전남신안군, 경북의성군, 경북청도군, 경남고성군, 경남거창군	This node is a collection of communities where the value of HumanLoc, a human capital, is greater than 6.5941, and the value of InfraLoc, an infrastructure capital, is greater than 6.7922
7	충남서천군, 경북울릉군	This node is a group of communities in which the value of HumanLoc, human capital, is lower than 6.5941, the value of EnvLoc, environmental capital, is lower than 6.2124, and the value of SocialLoc, social capital, is lower than 5.4170.
8	인천옹진군, 충남태안군, 전북순창군	This node is a group of communities in which the value of HumanLoc, human capital, is lower than

		6.5941, the value of EnvLoc, environmental capital, is lower than 6.2124, and the value of SocialLoc, social capital, is greater than 5.4170.
10	경기양평군,충남청양군,전남함평군,경남남해군	This node is a group of communities in which the value of HumanLoc, human capital, is lower than 6.5941, the value of EnvLoc, environmental capital, is greater than 6.2124, and the value of EnvLoc, environmental capital, is greater than 7.1901.
12	인천강화군,전북진안군	In this node, the human capital (HumanLoc) value is greater than 6.5941, the infrastructure capital (InfraLoc) value is lower than 6.7922, and the human capital (HumanLoc) value is greater than 6.9730.
15	전북무주군,경북울진군	In this node, the human capital (HumanLoc) value is greater than 6.5941, the infrastructure capital (InfraLoc) value is lower than 6.7922, the human capital (HumanLoc) value is lower than 6.9730, and the economic capital (EconoLoc) value is lower than 6.091.
16	강원화천군,충남홍성군,전남담양군,전남곡성군,전남강진군,경북성주군,경남함양군	In this node, the human capital (HumanLoc) value is greater than 6.5941, the infrastructure capital (InfraLoc) value is lower than 6.7922, the human capital (HumanLoc) value is lower than 6.9730, and the economic capital

		(EconoLoc) value is greater than 6.091.
17	강원홍천군,충북보은군,충북진천군,충북음성군,충북단양군,충남부여군,경북청송군,경북영양군,경북영덕군,경북봉화군,경남의령군,경남산청군,경남합천군	In this node, the human capital (HumanLoc) value is lower than 6.5941, the environmental capital (EnvLoc) value is greater than 6.2124, the environmental capital (EnvLoc) value is lower than 7.1901, and the human capital (HumanLoc) value is 6.4716. It is a community aggregate with a low human capital (HumanLoc) value lower than 6.2275.
18	경기가평군,강원영월군,강원철원군,충남금산군,충남예산군,전북임실군,전남고흥군,전남보성군,전남영암군,전남무안군,전남영광군,전남완도군,전남진도군,경북군위군,경북고령군,경북예천군,경남함안군,경남창녕군,경남하동군	In this node, the human capital (HumanLoc) value is lower than 6.5941, the environmental capital (EnvLoc) value is greater than 6.2124, the environmental capital (EnvLoc) value is lower than 7.1901, and the human capital (HumanLoc) value is 6.4716. It is a community aggregate with a low human capital (HumanLoc) value greater than 6.2275.
19	강원평창군,충북옥천군,충북괴산군,경북칠곡군	In this node, the human capital (HumanLoc) value is lower than 6.5941, the environmental capital (EnvLoc) value is greater than 6.2124, the environmental capital (EnvLoc) value is lower than 7.1901, and the human capital (HumanLoc) value is 6.4716. It is a collection of communities with economic capital (EconoLoc) values lower than 6.086.

20	울산울주군,강원정선군	In this node, the human capital (HumanLoc) value is lower than 6.5941, the environmental capital (EnvLoc) value is greater than 6.2124, the environmental capital (EnvLoc) value is lower than 7.1901, and the human capital (HumanLoc) value is 6.4716. It is a collection of communities with low economic capital (EconoLoc) values greater than 6.086.
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4 Conclusion

This study is based on the fact that few studies have been conducted on community well-being at the level of basic local government in Korea. The study attempted to measure the well-being level of the community unit closest to residents, and to analyse which among the various capital factors that constitute community well-being affect the sense of well-being of the community. The capitals constituting community well-being were assumed to number six: human capital, economic capital, environmental capital, social capital, infrastructure capital and local administrative capital. Korean communities occupy different levels in terms of these capitals. In addition, the characteristics of communities are also different, depending on whether they are urban or rural communities. In light of this, Korean communities were first analysed by dividing them into three types: metropolitan communities belonging to large cities, small and medium-sized city communities, and rural communities. In the case of metropolitan communities, we asked, what are the capital factors that affect the sense of happiness of the community? To determine this, decision tree analysis was applied. The

same method was applied to small and medium-sized urban communities and rural communities.

As a result of the analysis, the following points were derived. First, all 69 metropolitan communities were classified as belonging to five types, and social capital was analysed as the most important factor. This suggests that policy efforts to raise the level of social capital are necessary for promoting the happiness of residents of large cities. Second, the 99 small and medium-sized city communities were classified as belonging to nine types, and here it was found that environmental capital had the greatest influence on small and medium-sized city communities. Third, all 82 rural communities were classified into eleven nodes. This showed that it was human capital, above all, that had the greatest influence on the happiness of residents in rural communities.

Most importantly, every community needs to understand the characteristics of the type to which it belongs. If developmental policies are pursued in consideration of these points, all communities will be able to become well-being communities. This study

differs from other studies in that it provides these specific policy pointers. Further, follow-up studies in these areas are expected in the future.

Acknowledgements:

This research was supported by Chungbuk National University Korea National University Development Project (2021)

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