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Perceptions on Community Development and Happiness: The Case of Tikapur, Napal*

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In this paper, we analyse factors affecting happiness, with special reference to people's concern for community development. Using a survey data collected from Nepal, we find ; 1) traditional variables like region, gender, age, education, family members, marital status were proved to be insignificant to explain happiness in Nepal. 2) health conditions (per capita income weakly) were found significant. 3) perceptions of community residents on some aspects regarding community development were found to be strongly correlated with the level of happiness. People's satisfactions with community income level tend to increase happiness, while those with community provision of local roads and electricity tend to be negatively correlated with happiness. The latter finding may be associated with 'relative deprivation' in terms of community care and benefits.

[Key Words: Happiness, Community Environment, Health, Local Roads, Electricity, Community Income]

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Ⅰ. Introduction

When a community is in poverty and underdevelopment, policymakers and development practitioners are mostly concerned about finding factors to induce more resources, both domestic and foreign, to the community in question. Tikapur in Nepal was no different. The region was selected by KOICA as a sample testbed for effective development practices as a Korean type of ODA in 2010. Tikapur is located far northwest to the capital city of Nepal, Katumandu. This region is characterized as a typical countryside in Nepal with poor electricity, bad social infrastructures, and unreliable local roads. After a successful implementation of an ODA project, mainly aimed at establishing a better medical care system in the community (KOICA initiated to build a community hospital), several important development assistance programs were followed. It is questionable, however, whether the residents in the community are feeling happier than before ; more specifically, who became happier or unhappier and by what factors are important questions to address.

This paper raises these questions and tries to answer them by analysing a survey data collected by IPAID at Yonsei University in 2013. This survey do not directly provide a detailed information on the level of their subjective well-being before and after. The survey questionaire, however, includes some important information on their level of satisfaction with multi-faceted social or community development indicators. Using this information, we may indirectly find who became happier and unhappier and by what factors.

Ⅱ. Literature

The famous Easterlin paradox (Easterlin, 1974) shows that income is not

important in explaining the level of happiness across countries meeting basic needs. For instance, US has achieved a notable progress in the level of income during 1946-1970, but the long term trend in the happiness level of the people remained stagnant. Several studies have tried to reevaluate this paradox. The happiness - income paradox is driven from the apparent contradiction between the cross sectional data, which generally show positive correlation between income and happiness, and the time series evidence which usually found the relationship stagnant. The paradox is resolved in two ways in the literature. The first approach is simply denying (or ignoring) the time series results. The second approach is to explain the time series findings with some behavioral concepts like loss aversion or adaptation/aspiration framework.

Despite some contradicting results, income is still a very important community policy target for increasing the happiness levels among community members. It is widely accepted, however, many community development projects are designed and implemented, with an objective of directly increasing the level of not just income, but various aspects of community development. Some desirable aspects of community are indeed found to be positively correlated with community members' subjective well-being. For instance, Veenhoven (1992), with a cross-sectional data covering 66 countries, shows that the livability of a community are positively correlated with a well being index of community members. O'Brien (2001) found walkability of a community increase people's feeling of happiness, by surveying 6,000 elementary students in Canada. Similarly, Zidansek (2007) identified the importance of sustainable development in community for a better community life, Leyden et al (2011) surveyed residents of 10 big cities across the world and found specific aspects of design and city environment have strong implications for the happiness of the people in the community, and White et al (2013), with a 18 years longitudinal survey data for 5000

households in UK, found an empirical evidence showing that people feel really happier living in greener sites. In the literature, however, it is not fully recognized that some aspects of community development are not unanimously increasing people's feeling of happiness ; while they are strongly correlated with the modernization process of the community in question, some traditional people may apparently show ambivalent attitudes. Improving conveniences in life do not always bring happiness. It is quite natural that they induce a drastic change in life style and relationship among community residents. In this regard, controlling other factors affecting happiness, it is a relevant question to ask which kinds of community development (subjectively evaluated) are more correlated with the level of happiness. More specifically, other things being equal, do residents who appear to be more satisfied with a certain aspect of community development tend to say they feel more (less) happier ? This is one of the major questions we ask in this paper.

Ⅲ. Model Specification

In a typical happiness research, a subjective well-being index (Yi) may be described as a function of the following explanatory variables, where Z represent control variables like gender, age, education, family numbers, household income, region, health condition, marriage status and so on, while X incorporates nontypical explanatory variables like volunteerism, relational goods, and community environment. In our survey, we include a question, "were you happy for the last week ?" and answers were recorded in 1-5 Likert scale (the smaller the number, the happier, i.e., 1: very happy, 5: very unhappy) This measures our dependent variable. For explanatory variables, we use region, gender, educational levels, income[1] (or savings), marital status, health

1) Average income level of a household (household income/the number of household

conditions[2], socializing levels[3], significance of family woes[4] and others.

In addition to these variables, we may include some variables which capture the importance of community environment on personal subjective well-being. In our survey, we asked subjective evaluation on many different aspects of community environment, and these measurements are included in explanatory variables. We estimated four different sets of models as follows.

a) Typical Model (Gender. Age, Region, Education, Income, Marital Status, Health Condition + Many others)
b) Only Community Satisfaction Variables
c) Typical Model + Community Satisfaction (every aspect included)
d) Typical Model + Important Community Satisfaction Variables

From these different models, we can find which variables capturing the satisfaction level of respondents regarding various aspects of community environment are important, and check whether the results are robust.

Ⅳ. Estimation Results

1. Typical Model

For an analysis, we included several different independent variables for an

members)

2) Variables like 1) whether they are smoking and/or drinking, 2) whether they regularly exercise, 3) subjective evaluation of current health status are used.

3) For instance, 1) whether they acquire seed from (lend to) neighbors, 2) whether they get training from (provide training to) neighbors, 3) how much do they spend for ceremonial gatherings, 4) how much do they donate.

4) We asked questions like 1) have any sick and/or disabled family members, 2) have any family member suffered from pain and/or anxiety

estimation, with basically very similar results. As in a typical happiness research, with standard variables included, we found the following estimation result.

<Table 1> Estimation result of a typical model

Variables	Coef.	T
Dum_Region	−0.137985	−1.37
Gender	−0.1525823	−1.57
Age	0.0007614	0.29
Family Number	−0.0121598	−0.67
School Grade	−0.0003754	−0.04
Income(per capita)	−2.67E−06	−1.49
Health Condition	0.1347946	3.21**
Marriage	−0.0434108	−0.26
Obs	188	
Adj R−squared	0.0567	

This regression result shows that variables are not significant except 'health conditions'[5]. We tried to include many other variables to capture social relations like 'donation rate', 'drinking', 'collaboration with neighbors', but all of these variables turned out to be statistically insignificant.

2. Effects of Community environment on happiness

While traditional variables were not proved to be statistically significant except health conditions in Nepal, we found people's satisfaction with some community environment variables significantly related with their level of happiness as follows.

5) As health condition is defined to be more healthy as the scale is lower, the positive correlation means that healthier people feel more happy.

<Table 2> Effects of Community Environment on Happiness

Variables	Coef.	T	Variables	Coef.	t
Agricultural productivity	−0.07381	−1.35	Basic clinical service	−0.02915	−0.37
Organic manure	−0.04057	−0.68	Antenatal care	0.123779	1.37
Crop rotation	0.022138	0.36	Emergency	0.059355	0.64
Soil conservation practices	−0.03032	−0.59	obstetrical care		
Irrigation (water management)	0.059031	1.14	Primary education	0.154348	1.6
Crop storage	−0.05273	−1.09	Local roads	0.1508	2.16**
Nutrition (Food)	0.046153	0.87	Local business	−0.04996	−0.82
Sanitation (private lavatory)	−0.11009	−1.45	Job creation	0.097644	1.91
			Community Income	−0.18204	−3.12**
Sanitation (public lavatory)	−0.06757	−1.16	Electricity	0.145317	2.53**
			Mobile phone	−0.13233	−2.13**
Drinking water	0.001147	0.02	Radio	−0.07517	−1.19
Personal hygiene	0.046321	0.49	Television	0.114119	2.03**
Epidemic control	−0.07271	−1.27			
Obs			151		
Adj R−squared			0.2428		

Among Community Satisfaction variables, aspects regarding local roads, community income, electricity, mobile phones, and TV are found to be statistically significant. The regression results show that as people are more satisfied with their community's income level and mobile phone service, they tend to say they are more happy, while they inclined to say they are less happy as they are more satisfied with the community services in terms of local roads, electricity, and TV. To find whether this regression result is robust, we need to control typical explanatory variables for happiness.

3. Extension of a typical model including community environment variables.

For a baseline regression, with a typical model in mind, we estimated a model with all the community environment variables included. The result is as follows.

<Table 3> Regression result including all community environment variables in the typical model

Variables	Coef.	T	Variables	Coef.	t
Dum_Region	0.076152	0.58	Sanitation (public lavatory)	−0.08939	−1.38
Gender	−0.01492	−0.14			
Age	0.003172	1.07	Drinking water	0.034888	0.63
Family Number	−0.00933	−0.44	Personal hygiene	0.084674	0.86
School Grade	−0.0005	−0.05	Epidemic control	−0.0782	−1.33
Income(per capita)	−2.98E−06	−1.41	Basic clinical service	−0.05851	−0.71
Health Condition	0.088729	1.94*	Antenatal care	0.156949	1.68
Marriage	−0.28925	−1.51	Emergency obstetrical care	0.048222	0.51
Agricultural productivity	−0.09235	−1.57	Primary education	0.118001	1.17
Organic manure	−0.06558	−1.06	Local roads	0.191817	2.52**
Crop rotation	0.033335	0.53	Local business	−0.02701	−0.43
Soil conservation practices	−0.00084	−0.02	Job creation	0.078418	1.49
Irrigation (water management)	0.033231	0.62	Community Income	−0.1697	−2.79**
			Electricity	0.128137	2.11**
Crop storage	−0.05227	−1.05	Mobile phone	−0.09662	−1.52
Nutrition (Food)	0.058459	1.06	Radio	−0.06303	−0.99
Sanitation (private lavatory)	−0.10656	−1.37	Television	0.077542	1.31
Obs			150		
Adj R−squared			0.2557		

With standard socio−economic variables included, community aspects

regarding local roads, community income, and electricity are found to be statistically significant, in addition to health conditions in a typical model. This means people's feelings toward these variables are strongly correlated with their feelings of happiness.

Now, to check the robustness of this result, we tried the following regression only adding some significant community environment variables to a typical model. From the previous analysis, we include community environment aspects in local roads, community income, and electricity.

<Table 4> Regression result including only significant community environment variables in the typical model

Variables	Coef.	t
Dum_Region	−0.1208	−1.2
Gender	−0.13416	−1.41
Age	0.001604	0.63
Family Number	−0.00617	−0.35
School Grade	0.00154	0.16
Income(per capita)	−3.16E−06	−1.84*
Health Condition	0.113581	2.8**
Marriage	−0.19578	−1.12
Local roads	0.158119	3**
Community Income	−0.15204	−3.78**
Electricity	0.090181	2.06**
Obs	178	
Adj R−squared	0.1327	

The result looks quite robust. Using control variables and most significant community satisfaction variables, we found health conditions, income (per capita), aspects regarding local roads, community income, and electricity are significant.

How can we interpret these results ? The regression shows that those who

say they are relatively more (less) satisfied with the level of community income tend to say they feel more (less) happy. This implies the positive image of community in terms of average income makes people happy and proud. But those who say they are relatively more (less) satisfied with the community provision of local roads and electricity tend to say they feel less (more) happy, other important variables controlled. This seems to be an interesting observation, since it implies people feel less favorably to some aspects of community development. Local roads and electricity represent a typical industrialization and modernization process in a community ; if community residents say they are more satisfied with the community provision in these aspects, they feel their community more industrialized and socially developed than before. Then, why do these people tend to say that they feel less happy ? This question cannot be easily answered with our limited information on this community, but strongly suggests the possibility of relative deprivation and/or an importance of the effects of more frequent interpersonal comparisons among community members[6].

6) This observation is consistent with the positive coefficient of their satisfaction with respect to TV in < table 3>, even if it is found to be statistically not significant. In this sense, electricity may seem to be a more important variable than TV, in spreading the feeling of relative deprivation among community members. As people get an easy access to electricity, they tend to be more exposed to a mal-distribution of the benefits of electricity in terms of house appliances and electronic equipments, and hence may become less happy. Of course, this is just a conjectural interpretation and demands more rigorous analysis in the future. An interesting contrast in this estimation result is the case of mobile phones. If community members are more satisfied with the community service in terms of mobile phones, they tend to say more happy, unlike the case of electricity and TV. One interpretation is that mobile phones are more for the networking people, and this effect is more beneficial than its side effect like more sensitive interpersonal comparisons.

Ⅴ. Conclusion

Using the survey questionaire distributed in the Tikapur area in Nepal, we investigated major factors which may affect the level of individual happiness in the region. Several interesting results are obtained. First, traditional variables like region, gender, age, education, family members, marital status were proved to be insignificant to explain happiness in Nepal, while health conditions are important. Per capita income did not always produce a statistically significant result, but generally showed positive effect on the subjective well-being of community members. Interestingly, however, the residents' individual satisfaction with various aspects of community development are so strongly correlated with the level of individual happiness that without these variables, the whole regression results become almost meaningless. Initial regression results with respect to all of these variables show that the level of individual satisfaction with community development in terms of local roads, electricity, community income, mobile phones, and TV proved to be important, among others. In particular, people's satisfaction with local roads, electricity, and TV are negatively correlated with the level of individual happiness, while the effects of community income and mobile phones are positively strong. When we extend the regression model to include other traditional variables used in happiness research, the results are slightly different. While effects of local roads, electricity, and community income on happiness remain statistically significant with unchanged directions, those of TV and mobile phones become statistically insignificant. These findings are robust even with only these variables included as explanatory variables in addition to traditional variables used in happiness research. In short, people's satisfactions with community income level tend to increase happiness, while those with community provision of local roads and electricity tend to be negatively correlated with happiness. One

interpretation is that people in Nepal are feeling happier with positive community externalities, while they become unhappier if they are more exposed to social comparisons. The latter finding may be associated with 'relative deprivation' in terms of community care and benefits.

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공동체 발전에 대한 인식과 행복: 네팔 티까풀 지역을 중심으로

유정식
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이 논문은 공동체의 발전과 관련한 사람들의 인식을 중심으로 공동체 주민들의 행복에 미치는 영향요인들을 분석한다. 네팔의 티까풀 지역에서 수집한 설문조사 자료를 사용하여 분석한 결과 다음과 같은 사실을 발견하였다. 첫째, 행복에 영향을 미친다고 간주된 전통적 변수들 중 지역, 성, 나이, 교육수준, 가족 구성, 결혼여부 등은 네팔에서 행복수준을 설명하는데 통계적으로 유의하지 않은 것으로 나타나고 있다. 둘째, 건강상태(약하게 인당 소득 수준도 포함)는 통계적으로 유의하였다. 셋째, 공동체 발전 상태를 드러내는 특정한 변수들에 대한 주민들의 인식정도는 행복수준과 상당히 강한 상관관계를 보이고 있다. 즉, 다른 조건이 동일할 때, 주민들이 공동체 전체의 평균 소득이 증가하였다고 인식할수록 행복수준은 높은 것으로 답하고 있으나 지역 도로와 전기공급에 대한 만족도가 클수록 행복수준은 낮다고 대답하는 경향이 나타나고 있다. 후자의 경우 공동체 배려와 편익이 불공평하게 배분되고 있다는 '상대적 박탈감'이 한 원인일 것으로 추정된다는 점에서 차후 이와 관련한 더 세밀한 연구가 필요하다고 판단된다.

[주제어] 행복, 공동체 환경, 건강, 지역 도로, 전기, 공동체 소득

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