Quality of life and subjective well-being: A comparison of Korea and five western European countries (France, Germany, Italy, Sweden, the United Kingdom)

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Introduction

Happiness is a concept that is exceedingly difficult to define. Often the term is overlapped with life satisfaction or with scholarly terms like 'subjective well-being' or 'substantive feelings of well-being of the people'(Allardt, 1976, Diener, 1984, Pavot, 1991, Watson and Clark, 1991, Oswald, 1997).[1] In order to promote happiness, however, people in different countries, and from different cultures essentially strive for achieving five elements, i.e. *inter alia* decent material resources or standard of living; good social relationships with family and with friends; good personal and family health; a good job; and a favourable perception of one's social surroundings (Cantril, 1965, Campbell, 1981, Borooah, 2004, European Foundation for the Improvement of Living and Working Conditions, 2005).

The aim of the research related to this article is to give an impression of the characteristics, structure and determinants of happiness in Seoul and five European metropolitan cities. This task will be conducted by several approaches. First, in order to make the comparison of six metropolitan cities meaningful, an index 'Happiness Perception Index (HPI)' will be constructed. Second, the relationship between life condition and happiness will be explored. Third, the influence of socio-demographic variables on subjective happiness perception will be addressed. Fourth, indices such as GDP per capita, HDI, GEM used by UNDP as well as Quality of Life developed by the Economist will be compared to explain the performance of HPI in the six countries.

The Data

[1] For example, the Eurobarometer Survey Series has since 1973 measured life satisfaction biannually by wording "On the whole, are you very satisfied, fairly satisfied, not very satisfied, not at all satisfied, with the life you lead?"

The Global Metropolitan Forum of Seoul (GMFS) asked its 10,000 respondents selected in ten metropolitan cities how they rated their subjective perception of happiness.[2]

Table 1. Subjective perception on happiness measured by three categories in five European metropolitan cities and Seoul.

Happiness	*Seoul*	*London*	*Paris*	*Berlin*	*Milan*	*Stockholm*
Happy	57.1	82.8	77.1	72.7	74.3	87.9
Neither happy nor unhappy	33.2	8.7	16.9	20.7	15.6	6.6
Unhappy	9.7	8.5	6.0	6.6	10.1	5.5
N	986	964	979	987	1013	999

Note: 'Happy' contains both 'Very happy' and 'Somewhat happy' categories, while 'Unhappy' denotes both 'Not very happy' and 'Not happy at all' categories.

Three points emerge from Table 1 which are relevant to this article. First, the proportion of the happy group divides into a clear two-group category. Seoul can be compared to the rest of metropolitan cities in Europe. The proportion of the happy group category is lowest in Seoul by 57.1 percent, while the top position is occupied by Stockholm by 87.9 percent followed by London, Paris, Milan and Berlin. The difference between Seoul and Stockholm in the happy group category marks 30.8 percent points.

Second, vis á vis the unhappy group category, a similar pattern was detected. Seoul ranks second place by a small margin after Milan, among unhappy groups. Obviously, Stockholm shows the lowest proportion of the unhappy group magnitude by 5.5 followed by London (8.5), Berlin (6.6) and Paris (6.0).

Third, turning to the middle option 'Neither happy nor unhappy', the picture is remarkably similar. Seoul ranks at the top and Stockholm remains at the bottom followed by London, Paris, Milan and Berlin. However, it is not easy to interpret the magnitude of the middle category. It only affects the balance gap between happy and unhappy groups. In other words, the higher the proportion of the middle point, the more difficult it will be to measure the social atmosphere in the city measured. Although neither an optimistic nor a pessimistic sentiment dominates, there is a widespread despondency among the citizens in how they perceive their general living conditions.

[2] Ten cities of the GMFS include Beijing, Berlin, London, Milan, New York, Paris, Seoul, Tokyo, Toronto and Stockholm.

Based on the result of Subjective Perception on Happiness, an index measuring the overall degree of happiness in the six cities can be constructed. The so-called Happiness Perception Index (HPI) is a result of subtracting the unhappy groups from the happy groups. The middle option is excluded in the calculation. The HPI varies between –100 and +100. –100 refers to supremacy of the unhappy group among the respondents, while +100 supremacy of the happy group. This index would be useful when comparing multiple countries. The higher the index, the more contrasting the picture of the society in terms of the happy of the unhappy mood of the citizens will be. As mentioned above, however, the lower the index, the more complex and difficult it will be to interpret the people's quality of life. This is because there will be a high proportion of citizens balancing between the happy and the unhappy groups.

Table 2. Happiness perception index (HPI) constructed by difference between 'Happy' and 'Unhappy' group proportions

Cities	*HPI*	
Stockholm	+82.4	71.8
London	+75.2	
Paris	+71.1	
Berlin	+66.1	
Milan	+64.2	
Seoul	+47.4	

The population of Stockholm is the happiest and the rest of European cities perform much better than Seoul populations in this domain. The gap in HPI performance between overall European cities and Seoul is 24.4. The gap gets more drastic when comparing between the highest performance of Stockholm and that of Seoul with a margin of 35. The least happy population of Milan still leads Seoul by16.8 points.

How perfectly does this data for European performance in view of happiness coincide with material obtained from other studies? Let us compare the data found in a previous empirical study conducted in Europe. The European Quality of Life Survey constructed in 2003 shows similar but somewhat different patterns in the popular view on quality of life and happiness.

Table 3. Happiness and life satisfaction in Europe (2003)

Cities	*Life satisfaction*	*Happiness*
Sweden	7.8	7.9
United Kingdom	7.3	7.8
Germany	7.2	7.6
Italy	7.2	7.5
France	6.9	7.3

Source: European Foundation for the Improvement of Living and Working Conditions, *First European Quality of Life Survey: Life Satisfaction, happiness and sense of belonging,* 2005, p.14-15.

Notes: Both measures of life satisfaction and happiness are the mean value on a scale 0-10. The question for 'Life satisfaction' is: 'All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale from one to 10, where one means very dissatisfied and 10 means very satisfied'; The question for 'Happiness' is: 'Taking all things together on a scale of one to 10, how happy would you say you are? Here, one means very unhappy and 10 means very happy'.

Two countries,Sweden and United Kingdom, remain outsidethe question since their. ranking position remains at the top in both domains. France, however, performs worst in the European Quality of Life Survey (EQLS). Germany and Italy maintain their rank after the United Kingdom. The question is why France is at the bottom position in this comparison taken from the EQLS 2003 but holds third place in the GMFS data. Two answers could be plausible: First, there is three-year interval between the surveys compared here. During this period, the quality of life for the French people in general may have increased. The second answer is closely related to the first one. While the EQLS 2003 data is based on nation-wide population, the GMFS data is only based on the Parisian. The life condition of the Parisian could be better than the rest of France. Taking this into consideration, we may compare the European cities with Seoul. The next concern is what makes the difference in happiness perception in six metropolitan cities. Let us start with how confidence in city administration impacts on the perception of happiness in metropolitan inhabitants.

Socio-demographic variables

In comparing Seoul and five European cities, two features remain clear with socio-demographic variables. In Korea, the role of income seems to be the most influential element

in making Seoul inhabitants happy. It also seems true that happiness perception is reinforced by higher education. The higher the education level and family income, the more likely it seems that the people will experience a higher level of happiness. It is evidence that material elements can make people happy. Another variable that influences happiness is age. There is an inverse relationship between age and happiness. The younger the person is, the happier he or she is. This finding contradicts the finding about materialistic happiness. People are getting older and more financially secure, but they lose youth and probably their health as well. The third variable that would have a certain impact on happiness perception seems to be holding a job. In other words, those who experience happiness coincide with those with high income and education.

Findings in the Korean data do not seem to correlate to findings from EU-5 cities. Except for a slight influence of income, there is a very weak to no relationship between happiness perception and other socio-demographic variables in Europe. Although income is not as influential as in Korea, it might be argued that those who earn higher family income would experience a more positive mood in their daily life. In both continents, however, marital status as well as religious belief have not had any significant influence on being happy. Thus, a tentative conclusion from this comparison is that Seoul inhabitants are more dependent on materialistic and age factors than the Euro-5 inhabitants. A subsequent aspect to explore is to what extent does social security and welfare, confidence in metropolitan administration and social activities and network compensate for a sense of exclusion, as one of the principal negative effects on of human wellbeing.

Table 4. Correlation: Happiness and socio-demographic variables

Korea

		Happy-unhappy	Age in two groups	Education in two categories	Income	Married and others	Belivers vs. atheists
Happy-unhappy	Pearson Correlation	1	,200**	-,148**	-,367**	,014	,087*
	Sig. (2-tailed)		,000	,000	,000	,720	,027
	N	659	659	636	633	657	647
Age in two groups	Pearson Correlation	,200**	1	-,363**	-,202**	,443**	-,184**
	Sig. (2-tailed)	,000		,000	,000	,000	,000
	N	659	1000	972	960	996	984
Education in two categories	Pearson Correlation	-,148**	-,363**	1	,292**	-,011	,112**
	Sig. (2-tailed)	,000	,000		,000	,742	,001
	N	636	972	972	938	969	958
Income	Pearson Correlation	-,367**	-,202**	,292**	1	-,006	-,015
	Sig. (2-tailed)	,000	,000	,000		,847	,647
	N	633	960	938	960	959	956
Married and others	Pearson Correlation	,014	,443**	-,011	-,006	1	-,066*
	Sig. (2-tailed)	,720	,000	,742	,847		,039
	N	657	996	969	959	996	983
Belivers vs. atheists	Pearson Correlation	,087*	-,184**	,112**	-,015	-,066*	1
	Sig. (2-tailed)	,027	,000	,001	,647	,039	
	N	647	984	958	956	983	984

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Euro-5

		Happy-unhappy	Age in two groups	Education in two categories	Income	Married and others	Belivers vs. atheists
Happy-unhappy	Pearson Correlation	1	,029	-,026	-,147**	-,091**	-,063**
	Sig. (2-tailed)		,057	,088	,000	,000	,000
	N	4265	4265	4223	4096	4222	4104
Age in two groups	Pearson Correlation	,029	1	-,135**	-,007	,212**	-,128**
	Sig. (2-tailed)	,057		,000	,610	,000	,000
	N	4265	5014	4945	4808	4960	4805
Education in two categories	Pearson Correlation	-,026	-,135**	1	,235**	-,048**	,119**
	Sig. (2-tailed)	,088	,000		,000	,001	,000
	N	4223	4945	4945	4768	4910	4758
Income	Pearson Correlation	-,147**	-,007	,235**	1	,168**	,064**
	Sig. (2-tailed)	,000	,610	,000		,000	,000
	N	4096	4808	4768	4808	4788	4661
Married and others	Pearson Correlation	-,091**	,212**	-,048**	,168**	1	-,114**
	Sig. (2-tailed)	,000	,000	,001	,000		,000
	N	4222	4960	4910	4788	4960	4777
Belivers vs. atheists	Pearson Correlation	-,063**	-,128**	,119**	,064**	-,114**	1
	Sig. (2-tailed)	,000	,000	,000	,000	,000	
	N	4104	4805	4758	4661	4777	4805

**. Correlation is significant at the 0.01 level (2-tailed).

Views on one's environs in city life

Our data reveal that those who have positive attitudes about their environs see things more positively and find more pleasure in their daily life. Those with more employment opportunities in both Seoul and five European cities experience more happiness than those

who do not. It seems, then, to be true that employment and economic opportunity are crucial to personal satisfaction and quality of life. When it comes to the perception of living costs in the city, there is a contrasting pattern found between Seoul and Euro-5 inhabitants. In Seoul, people who deny the fact that the living cost is high or who accept the level of living cost, are more positive to their life style and feel happier than those who do not. This is most likely because they have visited cities with higher prices and found that Seoul offers a relatively high quality of services in comparison to the level of prices.

Table 5. Relationship between satisfaction in city life and happiness

Variables		Plenty of job opportunities			High price of living			Easy access to culture /leisure			City presentation to visitors			Satisfied with quality of education		
		Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree
Seoul	Happy	66.7	53.8	46.2	56.2	61.1	69.7	65.2	56.2	42.2	66.4	64.7	50.5	61.7	59.2	55.2
	Neither happy nor unhappy	28.0	42.0	34.9	33.4	34.7	27.3	28.4	38.4	38.2	26.5	29,8	37.7	28.3	35.8	34.8
	Unhappy	5.3	6.0	18.9	10.3	4.2	3.0	6.4	5.5	19.6	7.1	5.5	11.8	10.0	5.0	10.1
		N = 913, Eta .223			N = 969, Eta .073			N= 958, Eta .222			N = 932, Eta .156			N = 927, Eta .059		
EU-5	Happy	83.6	76.6	67.3	79.3	79.3	71.4	80.9	69.4	68.8	80.8	67.5	65.1	80.8	79.0	72.8
	Neither happy nor unhappy	11.1	16.7	18.4	13.4	15.8	17.6	13.0	19.9	14.2	13.0	20.5	16.2	12.5	15.6	15.3
	Unhappy	5.3	6.7	14.2	7.3	4.9	11.0	6.1	10.7	17.0	6.2	12.0	18.7	6.7	5.4	11.9
		N = 4695, Eta .165			N = 4906, Eta .047			N = 4862, Eta .118			N = 4899, Eta .128			N = 4548, Eta .088		

However, this pattern does not seem to be true in the Euro-5 cities. The three remaining variables – Easy access to culture/leisure (v2-1), City presentation to visitors (v2-2), and Satisfied with quality of education (v2-3) again show a striking coincidence of positive views on surrounding environs and metropolitan facilities and services. The measure of *Eta* shows that a positive view on job opportunities ranks at the top in experiencing happiness in both cultures to be followed by Easy access to cultural places and leisure in Seoul (*Eta = .223)* and City presentation to visitors in Euro-5 cities (*Eta = .128).* Views on the cost of living as well as on education do not have any significant influence on happiness on either continent. To

make a tentative conclusion, happiness is largely affected by a positive way of life and activities.

Welfare and social security

How then do welfare and social security networks affect people's perception of happiness? The table below reveals some modest features. First, we find that the same pattern that we found in the previous section. Those who believe there are a number of opportunities for welfare services or at least see positive signs from the local government about creating a welfare system have more positive feelings about their life. Except for two variables measuring traffic safety and safety on the street at night, the rest of welfare and social security variables seem to be relevant to deciding a person's happinesess or unhappiness. Obviously, people who can seek assistance in times of crisis would feel more secure in their life situations. Childcare and health care are also welfare services, which can enhance both quality of life and life satisfaction. In the Euro-5 cities, child- and healthcare are both closely related to increasing feeling of happiness, while the city's institutional help in case of crisis was a reliable factor that enhanced their happiness.

Table 6. Accessibility to welfare service and social security and its impact on happiness

Variables		Turning to city institutions for help			Good child care			Good place for socially disadvantaged			Satisfied with city health care			Feel safe walking around at night			Feel safe from various accidents		
		Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree
Seoul	Happy	62.9	64.8	52.3	73.6	57.3	53.8	72.9	63.6	52.4	71.3	60.5	54.0	57.7	55.7	57.6	64.0	61.6	54.9
	Neither happy nor unhappy	29.2	30.2	35.8	18.9	34.9	35.4	20.0	27.2	36.9	18.8	34.8	34.1	31.2	38.0	32.1	27.2	33.9	33.2
	Unhappy	7.9	5.0	11.9	7.5	7.8	10.9	7.1	9.3	10.7	9.9	4.7	11.9	11.2	6.3	10.3	8.8	4.5	11.9
		N = 899, Eta .123			N = 843, Eta .114			N = 894, Eta .112			N = 926, Eta .113			N = 976, Eta .015			N = 968, Eta .097		
EU-5	Happy	80.4	80.4	69.7	84.9	80.6	70.4	82.0	79.2	73.7	82.4	77.9	69.0	82.0	81.8	75.3	82.6	77.4	74.1
	Neither happy nor unhappy	13.5	13.6	16.7	11.2	12.8	17.6	11.1	15.6	16.2	11.7	16.0	17.8	12.0	14.2	14.9	11.2	15.7	16.2
	Unhappy	6.1	6.0	13.6	4.0	6.7	12.0	6.9	5.3	10.1	5.9	6.1	13.2	5.9	4.0	9.8	6.1	6.9	9.7
		N = 4390, Eta .123			N = 4798, Eta .165			N = 4687, Eta .084			N = 4857, Eta .134			N = 4865, Eta .094			N = 4778, Eta .088		

We need to closely examine one more factor. It is a well known fact that welfare services and the social security network is higher and more widespread in Western Europe than in Korea. Welfare services tend to be used more by families in difficult social and financial situations then by financially and socially secure families. In order to measure how perceived happiness is affected by the degree of welfare controlled by family income level table 7 was calculated. The same *Eta* measure will be used for probing the impact of welfare services and happiness after controlling for income level. As expected, welfare and social security network is not useful for Seoul inhabitants except for those who have poor family economy as seen in the variable 'healthcare system'. It shows clear evidence that the level of welfare and social security services is much lower in Korea. Neither families with low nor high income trust the welfare institutions or, more exactly, since there are neither welfare services nor social security networks built for people in need of social help in Korea, people do not have access to a welfare system.

In contrast, welfare services and social security networks are crucial to the perception of happiness for socially and financially unsecure people in the Euro-5 cities. In other words, since well functioning welfare systems and social security measures are provided by central and/or local authorities for less well-off families, people experiencing difficult times still

maintain a decent quality of life. Thus, it may be argued that high quality welfare services and social security are necessary conditions for enhancing quality of life and happiness for people in general.

Table 7. Accessibility to welfare service and social security and its impact on happiness controlled by family income level

Korea

	Relying on city institutions for help	Good childcare	Good place for socially disadvantaged	Satisfied with city health care
Eta low income by happy-unhappy as dependent	.099	.058	.028	.284
Eta high income by happy-unhappy as dependent	.052	.066	.044	.094

Euro-5

	Relying on city institutions for of help	Good childcare	Good place for socially disadvantaged	Satisfied with city health care
Eta low income by happy-unhappy as dependent	.195	.198	.145	.192
Eta high income by happy-unhappy as dependent	.036	.070	.094	.075

Environment and cultural and leisure activities

Since environmental problems such as non-potable tap water and air pollution in Seoul are considered a common problem by all citizens, the variables do not make any difference in perceiving their happiness. Low *Eta* implies an irrelevancy in explanation for happiness with environmental problems in Seoul. In Euro-5, however, potable tap water makes people more satisfied with their daily life. Air pollution also seems to be a common problem in Euro-five cities. However, it does not make a significant impact on the perception of happiness. Public transportation seems to be a good tool for measuring the quality of daily life. Those who

consider the convenience of the public transportation to be important, experience a higher level of satisfaction and happiness in their daily life.

Table 8. Environmental conditions, convenience and access to cultural and leisure activities

Variables		Feel safe drinking tap water			Serious air pollution			Convenient to use public transportation			Many places for sitting and relax			Easy access to shopping mall near residents		
		Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree
Seoul	Happy	56.0	60.8	56.7	56.9	62.1	53.7	60.1	52.0	47.4	65.6	60.6	52.8	63.1	56.7	43.5
	Neither happy nor unhappy	30.3	32.0	33.6	32.8	31.0	37.3	31.1	40.0	36.8	27.4	32.9	34.7	29.7	35.3	39.1
	Unhappy	13.8	7.2	9.6	10.2	6.9	9.0	8.8	8.0	15.8	7.0	6.5	12.5	7.2	7.9	17.4
		N = 965, Eta .048			N = 975, Eta .042			N = 964, Eta .092			N = 955, Eta .117			N = 958, Eta .176		
EU-5	Happy	82.2	73.3	68.1	79.5	78.9	75.5	81.6	72.8	68.9	81.7	76.2	71.8	80.6	59.5	68.4
	Neither happy nor unhappy	12.2	17.2	18.1	13.4	14.5	15.3	12.3	18.6	17.1	12.3	18.5	15.1	13.0	26.3	14.8
	Unhappy	5.7	9.6	13.9	7.1	6.6	9.2	6.1	8.6	14.0	5.9	5.3	13.1	6.4	14.1	16.8
		N = 4853, Eta .145			N = 4900, Eta .033			N = 4895, Eta .120			N = 4880, Eta .112			N = 4937, Eta .129		

Leisure and shopping also seem to be significant factors to enhancing quality of life and creating an atmosphere that generates happiness in city dwellers. In both Seoul and the other five European cities, lifestyles are deeply influenced by rich options for cultural activities, leisure time on park benches, walking and jogging in green areas, and easy access to shopping places after intense and stressful days atwork. Those who place a higher value on easy access to places for leisure and relaxation, as well as shopping venues, feel more satisfaction in their city life and happiness in general. Thus, a wider range ofcultural and leisure activities together with theenhancement of environmental conditions would make the city more attractive and convenient for its inhabitants, which in turn will promote a higher quality of life, and more happiness.

Attitude to city administration and social capital

In comparing Korean and European citizens in metropolitan cities, those who have positive attitudes about easy access to city information via Internet also demonstrate positive feelings about their own lives. However, there does not seem to be a causal relationship between attitudes to information accessibility and happiness variables. The Euro-5 data shows that people with higher confidence in what city government does are more likely to have more positive view about his or her life. A similar pattern was also detected in the Korean data.

Table 9. Attitudes about city administration and social capital

Variables		Easy to get information via internet			City taking care of citizens' concern			Transparent city administration			Good relationship with friends and neighbors			Many volunteer opportunities		
		Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree	Agree	Neither agree nor disagree	Disagree
Seoul	Happy	65.5	53.8	45.0	63.4	59.5	51.1	55.9	63.5	54.3	64.9	57.4	55.1	65.1	58.9	50.8
	Neither happy nor unhappy	28.0	38.0	37.8	27.6	33.6	36.1	32.3	29.3	35.2	25.1	38.7	33.5	24.5	34.6	38.6
	Unhappy	6.5	8.2	17.1	9.0	6.9	12.5	11.8	7.2	10.4	9.9	3.9	11.5	10.4	6.5	10.6
		N = 794, Eta .169			N = 713, Eta .106			N = 698, Eta .087			N = 962, Eta .079			N = 815, Eta .100		
EU-5	Happy	81.8	75.2	70.9	83.7	80.5	71.2	79.8	80.9	76.6	83.2	79.0	67.9	79.6	79.8	72.4
	Neither happy nor unhappy	12.5	14.0	16.5	10.6	14.0	17.4	12.9	13.8	14.8	11.3	16.3	17.9	13.7	13.9	10.7
	Unhappy	5.7	10.8	12.7	5.7	5.5	11.4	7.3	5.3	8.6	5.5	4.7	14.2	6.7	6.2	16.9
		N = 4169, Eta .083			N = 4530, Eta .127			N = 4547, Eta .054			N = 4873, Eta .163			NB = 4606, Eta .069		

Communal activities consisting of personal networking and social capital seem to be meaningful in enhancing quality of life (Putnam, 1993, Layard, 2003). Those who have a more active social life with friends, neighbors and/or associates are more tolerant of other cultural and social origins and circumstances. Such open mindedness and a wider range of tolerance often generate more positive relations with others. The European data reveal that those who have good relations with friends and neighbors remain happier than those who don't. The Korean data also lean in that direction, but the magnitude of the relationship is not that significant by *Eta* measures (.079). Instead, in Seoul, a more positive view about volunteering seems to be closely related to experiencing happiness.

Health and its impact on happiness

Health has been argued to be the most crucial factor in explaining the state of personal wellbeing (Borooah, 2004, p.18). According to Borooah, the most important source of happiness is good health determined either through self-assessment or, more objectively, in terms of an absence of any health problems.

Table 10. Correlation: Happiness, being proud of the city and health condition

Korea

		Healthy-unhealthy	Proud-unproud	Happy-unhappy
Healthy-unhealthy	Pearson Correlation	1	,224**	,416**
	Sig. (2-tailed)		,000	,000
	N	720	380	511
Proud-unproud	Pearson Correlation	,224**	1	,504**
	Sig. (2-tailed)	,000		,000
	N	380	503	389
Happy-unhappy	Pearson Correlation	,416**	,504**	1
	Sig. (2-tailed)	,000	,000	
	N	511	389	659

**. Correlation is significant at the 0.01 level (2-tailed).

Euro-5

		Healthy-unhealthy	Proud-unproud	Happy-unhappy
Healthy-unhealthy	Pearson Correlation	1	,196**	,354**
	Sig. (2-tailed)		,000	,000
	N	3935	3086	3435
Proud-unproud	Pearson Correlation	,196**	1	,325**
	Sig. (2-tailed)	,000		,000
	N	3086	3878	3430
Happy-unhappy	Pearson Correlation	,354**	,325**	1
	Sig. (2-tailed)	,000	,000	
	N	3435	3430	4265

**. Correlation is significant at the 0.01 level (2-tailed).

The Korean and European metropolitan data reveal that the assumption taken from Borooah remains evident. The correlation coefficient marks .416 for Seoul and .354 for the Euro-5 cities. Thus it can be strongly argued that happiness hinges very much on one's health. There seems to exist a symmetric relationship between two variables. That is, good health is a principal condition for a happy life, while a happy life may alsocontribute to good mental and physical health.

Determinants to happiness in Korea and five European metropolitan cities

What makes people feel happy in general? Or what are the main sources of happiness? Answers to these questions can be found in Table 11. The first indice is the ranking score developed from our GMFS data. Five other indices consist of GDP per capita, HDI, EPI and GEM of the UNDP and Quality of Life Index of the Economist. All those indices contain information about overall quality of life based on diverse measures of economic and social conditions of life. GDP is an index of economic prosperity, while HDI an index of life condition including life expectancy, educational attainment and amount of real income. EPI and GEM contain information about environmental health and ecosystem vitality gauged with sixteen indicators (see Notes below). GEM gives us information about gender equality in the society in question. Finally, the Economist's Quality of Life Index provides us with the most comprehensive information based on 11 indicators which include material wellbeing, health, political stability and security, family life, community life, climate and geography, job security, political freedom and gender equality.[3]

Several features are found. First, material wellbeing is the most crucial in deciding the experience of happiness. As shown in Table 11, HPI and GDP per capital overlap perfectly. Sweden ranks at the top, while Korea is at the bottom. In the HDI index, income factor was included in calculating ranking. Attaining (minimal) materialistic resources seems to be the most influential factor leading to a happy life. Second, a certain level of equality among social groups should be achieved. Although having a attained certain level of economic resources, people will still feel unhappy if there is abig gap between social groups. Relative deprivation often measured by the Gini-index may lead to feeling of frustration for those who are excluded from privileged social groups.

Third, public services and infrastructure including, welfare and social services, environmental health and clean air and water are also regarded as crucial conditions for enhancing the level of happiness. First the two aforementioned elements above mentioned will lose their meaningful values if they are exposed to environmental catastrophe such as nuclear accidents, acid rains, sand storms or polluted water and air. Welfare and social services for unprivileged social groups are also essential for improving people's capacity for happiness.

[3] One drawback of the Economist Quality of Life index seems to be how the different indicators are given values for calculating ranking. Deciding value factors is most crucial when comparing multiple nations.

Table 11. Happiness Perception Index in relation to diverse indices of Quality of Life

Cities	Ranking ordered by HPI of GMFS survey	GDP per capita (ordered by GDP per capita)	HDI ranking (ordered by HDI[1])	EPI (0-100) score (ordered by EPI[2])	GEM[3]	Economist Quality of Life Index (1-10)[4]	Average score of six indices
Sweden	1	39,694 (1)	5 (1)	87,8 (1)	3 (1)	7.937 (1)	1
United Kingdom	2	37,023 (2)	18 (4)	85,6 (2)	18 (3)	6.917 (5)	3
France	3	33,918 (3)	16 (2)	82,5 (3)	-	7.084 (3)	2.8
Germany	4	33,854 (4)	21 (5)	79,4 (5)	9 (2)	7.048 (4)	4.8
Italy	5	30,200 (5)	17 (3)	79,8 (4)	37 (4)	7.810 (2)	3.8
Korea	6	16,308 (6)	25 (6)	75,2 (6)	59 (5)	6.877 (6)	6

Source: GMFS 2006 Survey; International Monetary Fund, *World Economic Outlook Database*, September 2006; United Nations, *Human Development Report, 2006*; Yale Center for Environmental Law, *Pilot 2006 Environmental Performance Index*, 2006; UNDP, *Gender Empowerment Measure*, 2006; The Economist, *Quality of Life Index. The World in 2005*, 2006.

Notes: 1. HDI (Human Development Index); Criteria for calculating rankings of HDI include life expectancy, educational attainment, and adjusted real income.

2. EPI (Environmental Performance Index); Environmental health and ecosystem vitality are gauged using sixteen indicators tracked in six well-established policy categories: Environmental Health, Air Quality, Water Resources, Productive Natural Resources, Biodiversity and Habitat, and Sustainable Energy.

3. GEM (Gender Empowerment Measure); Index was constructed by seats in parliament held by women, Female legislators, senior officials, and managers, and Ratio of estimated female earned income.

4. Determinants of Quality of Life Index: material wellbeing, health, political stability and security, family life, community life, climate and geography, job security, political freedom and gender equality.

Fourth, as included in the Economist Quality of Life index, political performance is also an influential factor in deciding quality of life. Political instability caused by conflicts between parties, conflicts between the executive head and the legislative branch, and corrupt politicians will make people tired of politics and daily life. All of these issues are more or less daily phenomena in Korea today. Losing competent and skillful politicians held in esteem by the people also causes people to experience high levels of stress. Thus, political performance and the political environment also seem tohave a significant impacton peoples' happiness.

Fifth, personal health conditions seem also to be acrucial factor in promoting happiness and quality of life. Th is is the most influential factor in subjective feelings and emotions. Although all the conditions for happiness are fulfilled, none of them matters if bad health strikes.

The GMFS data make it evident that the health variable is the most influential factor in experiencing happiness in both Seoul and Euro-5 cities. In Seoul, the income variable as a measure of living standards also remains as strong a factor as that in the Euro-5 cities. In Stockholm, health is also the major determinant for the peoples' state of happiness,followed by living standard. But the impact of living standard in Stockholm does not seem to be that influential (-0.159). In Korea, two variables, potable tap water, and cultural and leisure activities, also influencethe level of happiness to a certain extent. In the five European cities, however, there was only one variable relevant for explaining the level of happiness. Explanatory power measured by adjusted R Square also marks only a low 0.149 level, which is lower than the Korean 0.259 and Swedish 0.225. To sum up, the health variable is the most powerful determinant for explaining the level of happiness in all the cities compared. In Seoul, however, the standard of living measured by family income is also another determinant affecting peoples' happiness.

Table 12. Determinants of happiness in Korea and five European metropolitan cities

Korea (adjusted R^2 = .259)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,870	,107		8,121	,000
	Income	-,097	,021	-,202	-4,695	,000
	age	,026	,013	,089	2,029	,043
	Health in two groups	,334	,048	,311	7,016	,000
	Easy access to culture and leisure activities	,057	,018	,139	3,206	,001
	Satisfied with health care	,013	,019	,029	,694	,488
	Potable tap water	-,057	,020	-,121	-2,914	,004
	Good relations with friends and neighbors	,018	,017	,046	1,085	,278

a. Dependent Variable: Happy-unhappy

Sweden (adjusted R^2 =.225)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,551	,061		8,977	,000
	Income	-,051	,011	-,159	-4,850	,000
	age	-,006	,006	-,031	-,940	,348
	Health in two groups	,484	,040	,401	12,175	,000
	Easy access to culture and leisure activities	,042	,020	,070	2,146	,032
	Satisfied with health care	-,001	,009	-,002	-,068	,946
	Potable tap water	,046	,028	,054	1,663	,097
	Good relations with friends and neighbors	,023	,010	,079	2,437	,015

a. Dependent Variable: Happy-unhappy

Euro-5 (adjusted R^2 =.149)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,624	,028		22,115	,000
	Income	-,023	,006	-,062	-3,718	,000
	age	-,002	,003	-,008	-,455	,649
	Health in two groups	,341	,018	,320	18,912	,000
	Easy access to culture and leisure activities	,032	,007	,073	4,356	,000
	Satisfied with health care	,013	,005	,041	2,478	,013
	Potable tap water	,025	,006	,074	4,423	,000
	Good relations with friends and neighbors	,024	,005	,075	4,500	,000

a. Dependent Variable: Happy-unhappy

Conclusion

The Happiness Perception Index was constructed to measure differences in perception of happiness in people in six cities – Seoul and five European metropolitan cities –. The calculated index revealed that Seoul was ranked at the bottom (HPI=47.4), while Stockholm was ranked at top (HPI=82.4). The gap between Seoul and Stockholm in the HPI measure remained almost double. London, Paris, Berlin and Milan followed in that order, after Stockholm. The aim of the paper was to find some determinants for the difference in the perception of happiness in the six cities. Several features found remained meaningful.

First, socio-demographic variables such as income and age are very useful for explaining the perception of happiness in Korea, while the income variable alone was useful in the Euro-5 cities.

Second, experiencing happiness is largely affected by a positive way of life and activities.

Third, welfare services and social security networks are crucial for those in financially and socially difficult situations. Thus, it can be argued that high quality welfare and social security services are necessary conditions for enhancing the quality of life and happiness for the general population, and in particular for people in difficult situations.

Fourth, a wider range of choices in cultural and leisure activities together with the enhancement of environmental conditions would make the city more attractive and convenient for the inhabitants, which in turn may promote their happiness and quality of life .

Fifth, communal activities consisting of personal networking and social capital seem to be meaningful in enhancing his or her life conditions. Those who are more active in social life with friends, neighbors and/or associates are more tolerant of people with different cultural and social origins and circumstances. The European data reveal that those who have good relations with friends and neighbors remain happier than those who don't. The Korean data shows that a more positive view on volunteering in Seoul seems to be closely related to feeling of happiness.

Sixth, the Korean and European metropolitan data reveal that experiencing happiness hinges very much on one's state of health condition.

Seventh, the HPI overlaps quite well with other internationally used indices indicating overall quality of life, equality and environmental performances. Nevertheless, the most powerful determinant for happiness index in all six cities is health condition, while living condition measured by family income in Korea remains somewhat influential in explaning happiness. This does not seem to be true in the European cities.

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