

Inclusive Wealth & Policy Making

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Inclusive Wealth & Inclusive Wealth Index

The Inclusive Wealth Report 2012 was released by the United Nations Conference on Sustainable Development (Rio+20), held in June 2012. This report proposed “Inclusive Wealth” as an expression of a country’s or region’s “wealth” and an “Inclusive Wealth Index” as a standard economic indicator to be used as a yardstick for evaluating sustainability. With sustainability having been a vague concept to date, this index has the advantage of being an easy way to determine whether national and regional policies have improved sustainability based on a rise or fall in the index, and significant expectations are being placed on the index as an indicator of the achievement of the Sustainable Development Goals (SDGs).

One of the distinctive features of Inclusive Wealth is, as the term suggests, the simultaneous incorporation of various types of wealth. In other words, in addition to sustainability, Inclusive Wealth can be seen as a common index that makes it possible to express the monetary value of wealth derived from sources like people and nature, in addition to money and goods. Another feature is that it indicates a country’s or region’s sustainability.

Relationship Between Inclusive Wealth & Sustainability

What, then, is the connection between the Inclusive Wealth Index and sustainability? The Inclusive Wealth Index was designed to express the theory of Inclusive Wealth, which can be explained by the relationship among Inclusive Wealth, well-being, wealth, and sustainability.

Inclusive Wealth is “the wealth held by society that will generate well-being for people living today and for future generations”, and the Inclusive Wealth Index represents its monetary value. In this case, “well-being” refers to the happiness that people enjoy. On the surface, this appears to be the same as “wealth” but the “wealth” we are referring to is not just for the current generation, but also includes the well-being that will be enjoyed by the current generation’s children, grandchildren, and future generations. In other words, the Inclusive Wealth Index can be said to include Future Design (FD).

This well-being has the features of the flow discussed by economists that occurs within a certain period. On the other hand, “wealth held by society” has the features of stock that can be derived from accumulated reserves at a certain point in time, and can be

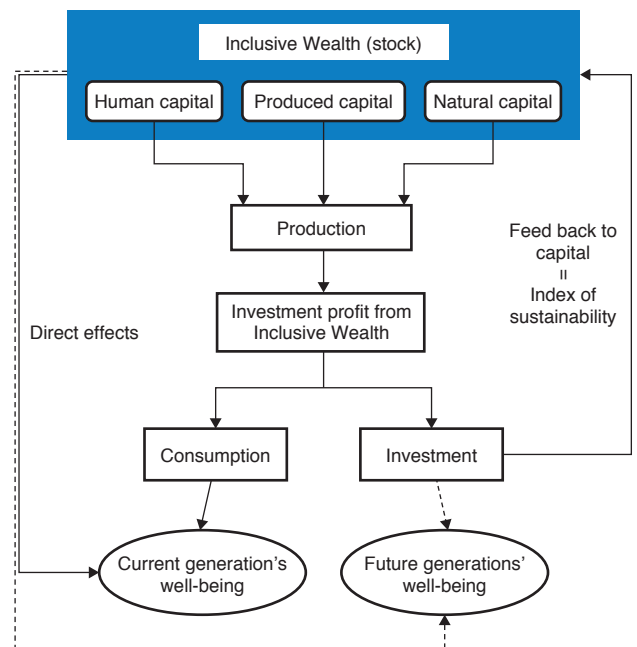
used to measure the total capital referred to as Inclusive Wealth. In other words, the stock of Inclusive Wealth generates the flow of well-being. *Chart 1* shows the theoretical framework of Inclusive Wealth.

First, Inclusive Wealth fuels a society’s production activities. Inclusive Wealth consists of produced capital, human capital, and natural capital (and adjustment factors), and by providing to production activities, the resulting output can be seen as a flow that is created. For example, produced capital is used at factories to produce consumer electronics, while roads and natural capital produce the lumber used to make furniture and houses, while human capital generates output including higher incomes through improved labor productivity. If these are seen as investments, the output corresponds to investment profit from Inclusive Wealth.

Next, the output created is channeled to consumption and investment (savings in the case of individuals). This consumption is what provides well-being to the current generation. At the same time,

CHART 1

Inclusive Wealth framework



Source: Shunsuke Managi, Shinya Ikeda, Hiroki Nakamura, “Inclusive Wealth – A New Economic Index for Regional Revitalization” (Iwanami Booklet No. 961), Iwanami Shoten, 2016

investment builds up the various types of Inclusive Wealth capital stock, and manufacturing and consumption by the next and future generations lead to the well-being of future generations. If output were to be excessively consumed by the current generation, the well-being of future generations would be diminished. Conversely, an excessive increase in investment depresses the current generation's well-being. In other words, a balance between consumption and investment is needed.

The tie-in to sustainability is that investment builds up new reserves. In a society in which the following year's Inclusive Wealth will be less than its current Inclusive Wealth, well-being will diminish with each passing year and will ultimately run out. We can clearly see that this is not a sustainable society. On the other hand, if Inclusive Wealth increases from year to year, the well-being that can be derived increases with each passing year. In other words, an Inclusive Wealth Index that increases with time can be seen as indicating sustainability, and the degree of sustainability can be determined by the rate of growth in the Inclusive Wealth Index.

Society's Sustainability from the Viewpoint of Inclusive Wealth

What, then, is a society's actual sustainability? To answer this, we will introduce some of the research findings on the relationship between wealth and sustainability from Kyushu University's Urban Institute. The institute has been measuring Inclusive Wealth Indexes in Japan at the national, prefectural, and municipal level.

Chart 2 shows adjusted Inclusive Wealth Index growth rates for 2010 through 2015 at the prefectural level using the latest data. As noted above, a positive growth rate means that sustainability is being achieved, while a negative growth rate means that sustainability is being lost, and this chart ranks the sustainability of all 47 of Japan's prefectures.

On the left, the ranking of overall adjusted Inclusive Wealth Indexes shows Shiga Prefecture at No. 1, followed by Hiroshima and Aichi at No. 2 and 3, with 22 prefectures, or close to half, with positive growth rates and negative growth rates for No. 23 and lower.

With regard to per capita growth rates, No. 1 Fukushima Prefecture's adjusted index is 6.9%, and both Hiroshima and Shiga are above 6.0%. Fukushima Prefecture's result can be attributed to the effect of reconstruction from the 2011 Great East Japan Earthquake combined with a population outflow caused by the nuclear power plant accident. In addition, there is a trend of local governments in prefectures with large concentrations of population in urban areas having a lower per capita index compared with their overall index, but almost two-thirds are in positive territory, which is more than on an overall or geographic size basis.

In addition, the bottom three prefectures are the same in both indexes, in almost all cases with growth rates lower than -10.0%, meaning that they lost a significant degree of sustainability over the

five years since 2010.

In this way, by measuring wealth and its sustainability incorporating a variety of elements like human and natural wealth in addition to goods, we can see a country's or region's strengths and weaknesses, and gain important information for determining what a society's policies for enrichment should be.

Using Inclusive Wealth in Policy Evaluation

Traditionally, GDP has been the primary economic index used to determine a society's wealth, with a different meaning from our use of the term "wealth". GDP captures the flow of goods and services over a year, but cannot measure the stock of sustainability. A society's economic situation changes over a relatively short time, and GDP can be used to understand a society's well-being at the present or a point in the past, but it is difficult to use GDP to understand the well-being of future generations. On the other hand, the Inclusive Wealth Index is able to measure a society's sustainability based on the wealth being allocated to future generations' production activities and consumption. When considering policies that will contribute to the well-being of society in the future as well as in the present, the Inclusive Wealth Index can be seen as a useful basis for judgment in addition to existing economic indicators.

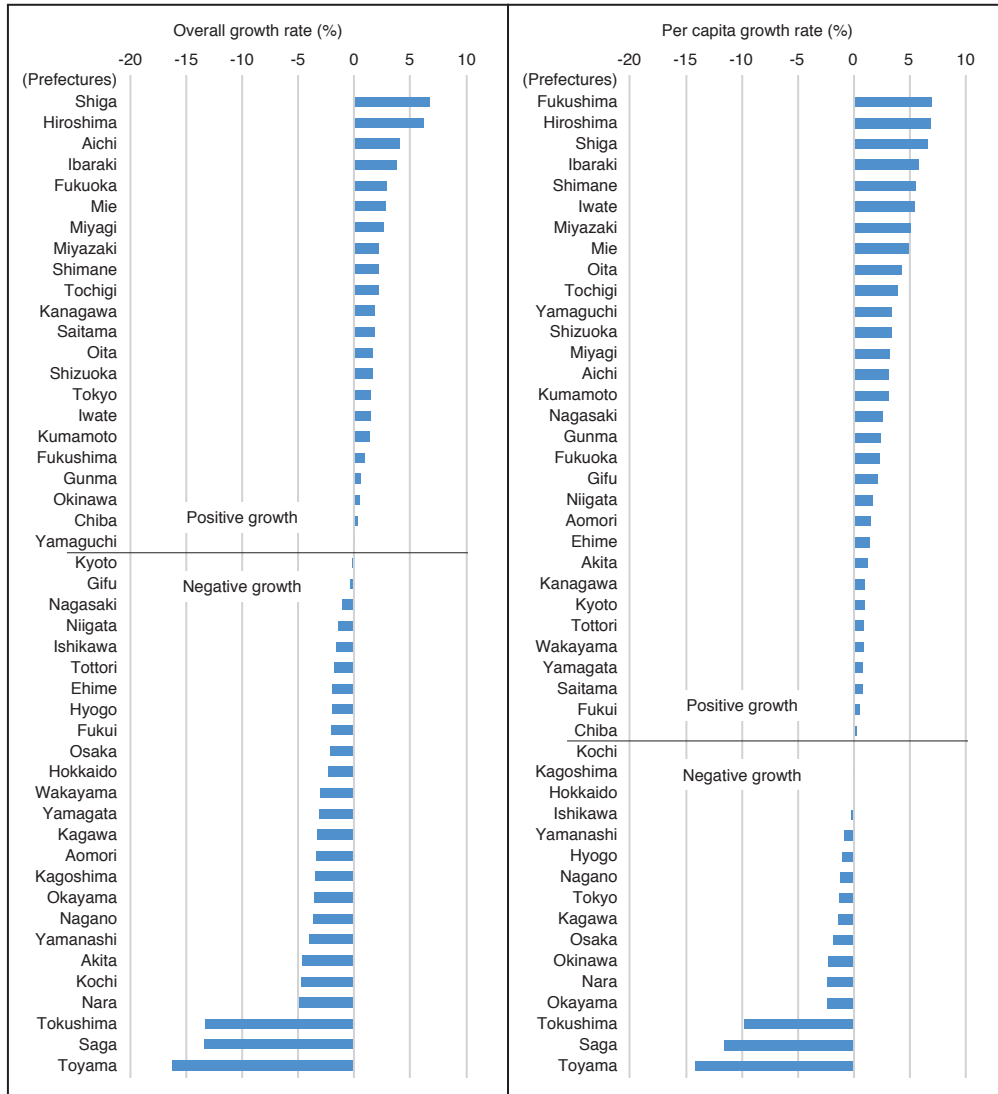
Numerous local governments, including Minamata in Kumamoto Prefecture, Fukui Prefecture, Hisayama and Miyawaka in Fukuoka Prefecture, and Hofu in Yamaguchi Prefecture, as well as private sector companies, have made cooperative agreements and carried out joint research with Kyushu University's Urban Institute, and are measuring local wealth using the Inclusive Wealth Index with the aim of utilizing this in policy and project evaluation and decision-making. In Hisayama in particular, a decision to use the Inclusive Wealth Index in town planning was announced in November 2017, and a survey was sent to all households. The city also announced in December 2017 that it had concluded a cooperative agreement with the institute to use the Inclusive Wealth Index in formulating the budget proposal for the following fiscal year. This was the first time the results of the Inclusive Wealth Index had been used in actual policy making in Japan.

The survey aimed to examine how the town's residents evaluate government services, local nature, traditions and other resources, and social capital like people and their ties to the local region. In particular, the survey used a contingent valuation method to determine the monetary value of social capital by asking residents how much they would be willing to pay for various social capital. This is within the theoretical framework of Inclusive Wealth and the Inclusive Wealth Index, and corresponds to a shadow price.

The survey was distributed to all of Hisayama's roughly 3,000 households, and 1,544 responses were received. The survey had three parts: (1) Individual attributes including location and number of

CHART 2

Inclusive Wealth Index growth rates by prefecture (2010-2015)



Note: Overall amounts and per capita amounts are adjusted Inclusive Wealth Indexes with adjustment factors subtracted from the Inclusive Wealth Index.
 Source: Urban Institute, Kyushu University

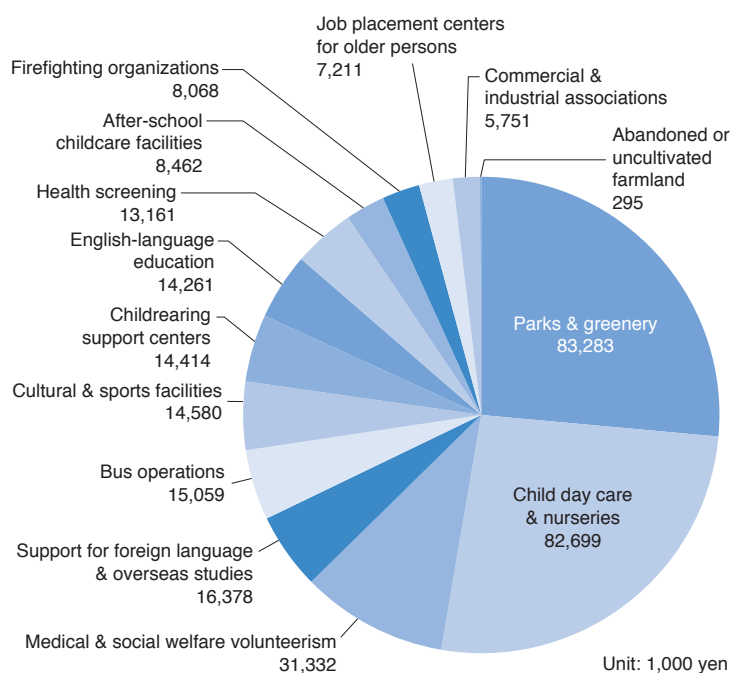
years of residence, age, occupation, family structure, individual and household income, and whether the household had engaged in volunteer activities during the past year; (2) The importance and how much they would be willing to pay for each of five government functions (promoting health, creating an environment and building facilities for childrearing, promoting education, sports and cultural activities, creating urban environments and environments for daily living, and promoting industry); and (3) Others.

The amount of social capital of Hisayama calculated using these responses regarding how much people would be willing to pay is shown in *Chart 3*. As per the theoretical framework of Inclusive Wealth, whereby the amount of various capital in the Inclusive Wealth

Index is derived by multiplying the shadow price by the amount of capital, the amount of each type of social capital was calculated by the triple product of the average amount each individual would be willing to pay, the number of households and the volume of capital existing in the town. As *Chart 3* shows, the largest portion was parks and greenery, with the existing 12 parks and green areas having a value of approximately ¥83.3 million. This corresponds to roughly one-fourth of the town's social capital. Child day care and nurseries accounted for roughly the same percentage, with the town's total current facilities for 120 children having a value of approximately ¥82.7 million. The next largest portion was medical and social welfare volunteerism, and these three items together accounted for roughly

CHART 3

Amounts of Hisayama's social capital



Source: Report on Hisayama's Inclusive Wealth survey

TABLE

Results of cost-effectiveness analysis

Project	Social capital amount (yen)	Budget (1,000 yen)	Social capital amount/ Budget
Building & maintaining parks & greenery	83,282,928	1,900	43.8
Support for foreign language & overseas studies	16,378,289	1,500	10.9
Policies for abandoned or uncultivated farmland	294,961	39	7.6
Medical & social welfare volunteerism	31,332,258	7,659	4.1
Childrearing support centers	14,413,524	8,070	1.8
Subsidies to commercial & industrial associations	5,751,139	4,100	1.4
After-school childcare facilities	8,462,092	11,067	0.8
English-language education	14,261,386	20,000	0.7
Job placement centers for older persons	7,211,296	10,530	0.7
Child day care & nurseries	82,698,589	134,390	0.6
Health screening	13,161,276	62,649	0.2
Cultural & sports facilities	14,580,091	77,582	0.2
Bus operations	15,058,960	89,423	0.2
Firefighting organizations	8,067,769	54,312	0.1

Source: Report on Hisayama's Inclusive Wealth survey

60% of Hisayama's social capital.

Next, a cost-benefit analysis was conducted by dividing the fiscal 2017 budget amount for each project (corresponding to a cost-benefit ratio) to grasp the effect of each project related to the amount of various types of social capital. The results are shown in the [Table](#). Building and maintaining parks and greenery stands out above the rest at 43.8, and is followed by support for foreign language and overseas studies, policies for abandoned or uncultivated farmland, and medical and social welfare volunteerism. Six of the total 14 projects, or roughly half, had a cost-benefit ratio of 1 or higher, meaning that their amount of social capital was greater than the amount in the budget.

By continuing to measure its Inclusive Wealth, the growth rates will clearly show whether these public projects have contributed to the town's sustainability, and this information will be useful for future policy making.

Conclusion

This article has discussed the possibilities for the use of Inclusive Wealth and the Inclusive Wealth Index for policy evaluation from the perspective of FD. There are naturally limits to assigning a monetary value to the various types of wealth possessed by a society; there is still room for debate as to how to quantify the people and their ties to the local region and the qualitative effects of local traditions and natural features included in social capital, and how to account for changes in the values of future generations with regard to the wealth that is left to them by the current generation, and technological advances. In addition, the effects of government policies and related projects on the various types of capital that make up Inclusive Wealth, and how different types of capital will interact with each other, are not clear and we would like to address these in the future.

Nevertheless, as we have noted, from the standpoint of comprehensiveness and suitability regarding the various wealth possessed by a society and sustainability, Inclusive Wealth and the Inclusive Wealth Index can be considered useful tools for evaluating government policies and public projects. We hope that the expanded and more in-depth use of Inclusive Wealth in policy making will lead to social progress that incorporates FD. **JS**

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