(6th Japan-EU Symposium on ICT Research and Innovation)

Viewpoints for value creation in the data driven era

6 October, 2016

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Big Data and IoT are the source of innovation

➢ Big Data technologies enable data collection associated with social phenomena such as regional economic activities, mass movement of the people, mass feeling of the people and etc.

➢ IoT enables real time and continuous data collection from various things (including human being) and events.

➢ Those newly available data set is now promoting what is called "data driven innovation".

➢ Now it is important to have insights and to find ideas in the following points;

- data set we can collect

- potential values derived from data set

The daily price index

➢ Based on daily POS data information on the prices and quantities of individual products sold at approximately 300 supermarkets throughout Japan, it is possible to estimate the daily price index much faster than government announcement. The Daily Price Index (Originally from the University of Tokyo, now from Nikkei and Nowcast) is released two days after.
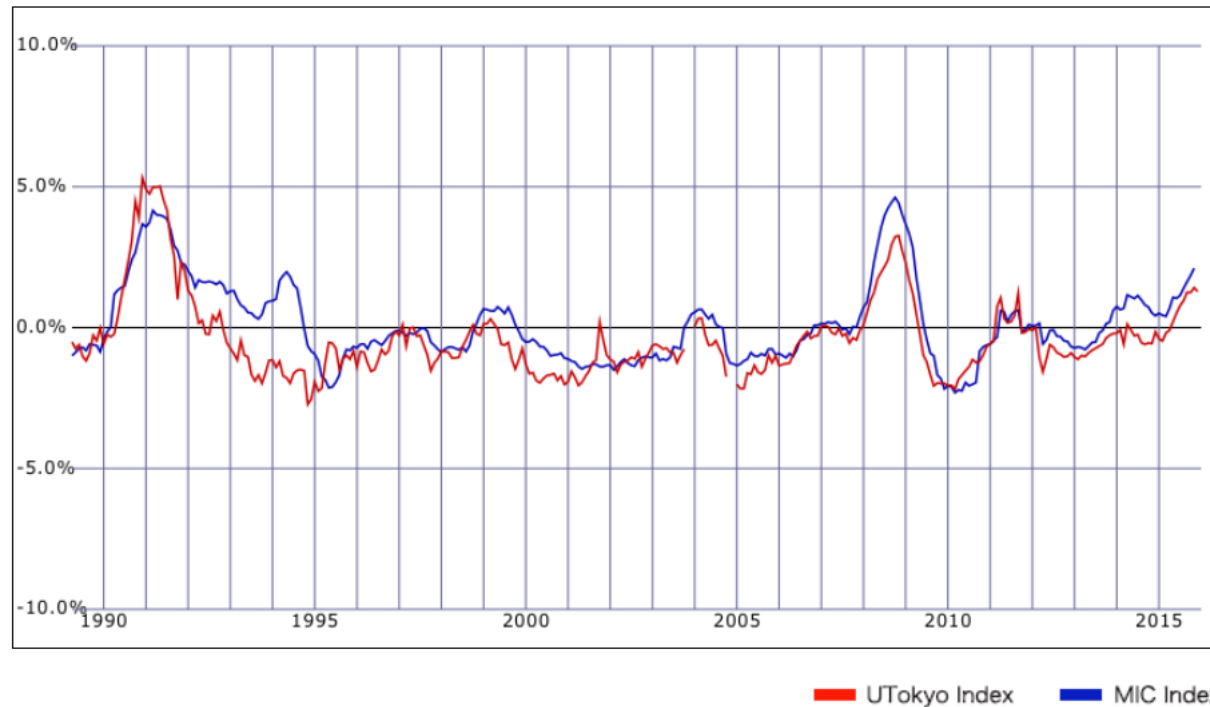
Figure Changes in Monthly Price Index (Nationwide in Japan) UTokyo vs MIC
(Source: UTokyo daily price project Home Page)
http://www.cmdlab.co.jp/price_u-tokyo/media_e

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Human activities and satisfaction sensing in the organization

➢ Following data in the organization are collected with the use of nameplate type sensor to grasp mass level of human activities and satisfaction in the organization;
  - communication among persons using infrared sensor
  - body movement of persons using accelerometer
  - location of persons (identification of location by infrared beacons)

Nameplate type sensor
(Source: Hitachi, 2016)

➢ The big data from sensors is used to increase productivity and performance of the organization in the following manners;

  - to find a correlation between measures to change work-style and satisfaction of employees (JAL × Hitachi)
  - to extract events or working conditions which are correlated with productivity and performance improvements
    (The Bank of Tokyo-Mitsubishi UFJ × Hitachi)

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Leasing EV based Tricycle to low income people

> ➤ Global Mobility Service（GMS）started EV based Tricycle leasing to low income people in Philippines from October 2015.

> ➤ They are using operational logs of the Tricycle to secure the collection of leasing fees. The logs are the substitute for the credit for the people who are rejected in the loan examination. GMS prepares a mechanism to stop engine of the Tricycle and to retrieve it based on the location information as a safeguard.

> ➤ EV based Tricycle is expected to ease air pollution in the metropolitan area of Philippines.

Tricycle in Philippines (Source: GMS, 2016)

Remote control device developed by GMS. The device can be post-installed and have a function to control speed, engine ON/OFF and etc.
(Source: GMS, 2016)

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Insight for innovation

➢ Various data can be collected in the city;
  ex) traffic flows, energy flows, environment
      conditions, events associated with safety,
      information flows,…

➢ Those data can be a source of innovation. We can
  use them for a more precise control of the city, for
  the resource savings, and to find ideas to create
  values.

➢ To promote data driven innovation, open data
  policy, formation of collective intelligence, and
  preparation of creative environment will be
  required.