

File name: DF_Unsorted.csv

Variable name	Description
Time	From January 2001 to December 2016.
City_code	Integer data from 1 to 6. New Taipei City (NTC) is noted 1, Taoyuan City (TYC) is 2, Taichung City (TCC) is 3, Tainan City (TNC) is 4, Kaohsiung City is 6, Yilan County is 7, and Keelung City is 8.
Unsorted_per_ca	Numeric data. The amount of unsorted waste (tons)
Income_thous	Numeric data. Annual household income (in 1,000 NTD, 1U\$=30 NTD).
Monthly_Population	Numeric data. A number of inhabitant lives in City i.
Baby	Numeric data. Percentage of population aged 0 to 3.
Household_Size	Numeric data. A number of member per household.
TimeIndicator	Integer data. A sequence of numbers from 1 to 180.
TT_NTC	Integer data. An indicator variable is 1 if an observed time in which the policy is effective in NTC, 0 otherwise.
FE_NTC	Integer data. An indicator variable is 1 if an observed city is NTC, 0 otherwise.
TE.NTC	Integer data. The treatment effect in NTC.
FE_TYC	Integer data. The fixed effect for TYC.
FE_TCC	Integer data. The fixed effect for TCC.
FE_TNC	Integer data. The fixed effect for TNC.
FE_KSC	Integer data. The fixed effect for KSC.
mXX	Integer data. The fixed effect for Month XX.
yXXXX	Integer data. The fixed effect for Year XXXX.
DATE_XXXX	Binary data. The dynamic treatment effect in entire XXXX year.

File name: DF_Biowaste.csv

Variable name	Description
Time	From January 2003 to December 2014.
City_code	Integer data from 1 to 6. New Taipei City (NTC) is noted 1, Taoyuan City (TYC) is 2, Taichung City (TCC) is 3, Tainan City (TNC) is 4, Kaohsiung City is 6, Yilan County is 7, and Keelung City is 8.
Biowaste_per_ca	Numeric data. The amount of biodegradable waste (tons).
Income_thous	Numeric data. Annual household income (in 1,000 NTD, 1US\$=30 NTD)
Monthly_Population	Numeric data. A number of inhabitant lives in City i.
Baby	Numeric data. Percentage of population aged 0 to 3.
Household_Size	Numeric data. A number of member per household.
TimeIndicator	Integer data. A sequence of numbers from 1 to 156.
TT_NTC	Integer data. An indicator variable is 1 if an observed time in which the policy is effective in NTC, 0 otherwise.
FE_NTC	Integer data. An indicator variable is 1 if an observed city is NTC, 0 otherwise.
TE.NTC	Integer data. The treatment effect in NTC.
FE_TYC	Integer data. The fixed effect for TYC.
FE_TCC	Integer data. The fixed effect for TCC.
FE_TNC	Integer data. The fixed effect for TNC.
FE_KSC	Integer data. The fixed effect for KSC.
mXX	Integer data. The fixed effect for Month XX.
yXXXX	Integer data. The fixed effect for Year XXXX.
DATE_XXXX	Binary data. The dynamic treatment effect in entire XXXX year.

File name: DF_Recycling.csv

Variable name	Description
Time	From January 1998 to December 2015.
City_code	Integer data from 1 to 6. New Taipei City (NTC) is noted 1, Taipei City (TPC) is 2, Taoyuan City (TYC) is 3, Taichung City (TCC) is 4, Tainan City (TNC) is 5, Kaohsiung City is 6, Yilan County is 7, and Keelung City is 8.
Paper; Retort.pouch Aluminum.can; Metal; Plastic; Tires; Glass; Light.bulb; Batteries; Appliance Electronics; Textiles; Others	Numeric data. The amount of each recycling item (tons).
Recycling_per_ca	Numeric data. The amount of total recycling (tons).
Income_thous	Numeric data. Annual household income (in 1,000 NTD, 1US\$=30 NTD).
Monthly_Population	Numeric data. A number of inhabitant lives in City i.
Baby	Numeric data. Percentage of population aged 0 to 3.
Household_Size	Numeric data. A number of member per household.
TimeIndicator	Integer data. A sequence of numbers from 1 to 216.
TT_TPC	Integer data. An indicator variable is 1 if an observed time in which the policy is effective in TPC, 0 otherwise.
TT_NTC	Integer data. An indicator variable is 1 if an observed time in which the policy is effective in NTC, 0 otherwise.
FE_TPC	Integer data. An indicator variable is 1 if an observed city is TPC, 0 otherwise.
FE_NTC	Integer data. An indicator variable is 1 if an observed city is NTC, 0 otherwise.
TE.TPC	Integer data. The treatment effect in TPC.
TE.NTC	Integer data. The treatment effect in NTC.
FE_TYC	Integer data. The fixed effect for TYC.
FE_TCC	Integer data. The fixed effect for TCC.
FE_TNC	Integer data. The fixed effect for TNC.
FE_KSC	Integer data. The fixed effect for KSC.
mXX	Integer data. The fixed effect for Month XX.
yXXXX	Integer data. The fixed effect for Year XXXX.
XXXX_percapita	Numeric data. The amount of recycling for each recycling item (kg/per capita).
DATE_XXXX	Binary data. The dynamic treatment effect in entire XXXX year.

File name: DF_Illegal_dumping.csv

Variable name	Description
Time	From January 1998 to December 2015.
City_code	Integer data from 1 to 6. New Taipei City (NTC) is noted 1, Taipei City (TPC) is 2, Taoyuan City (TYC) is 3, Taichung City (TCC) is 4, Tainan City (TNC) is 5, Kaohsiung City is 6, Yilan County is 7, and Keelung City is 8.
Violation_per_ca	Numeric data. A number of illegal dumping per 1,000 people.
Income_thous	Numeric data. Annual household income (in 1,000 NTD, 1US\$=30 NTD).
Monthly_Population	Numeric data. A number of inhabitant lives in City i.
Baby	Numeric data. Percentage of population aged 0 to 3.
Household_Size	Numeric data. A number of member per household.
TimeIndicator	Integer data. A sequence of numbers from 1 to 180.
TT_TPC	Integer data. An indicator variable is 1 if an observed time in which the policy is effective in TPC, 0 otherwise.
TT_NTC	Integer data. An indicator variable is 1 if an observed time in which the policy is effective in NTC, 0 otherwise.
FE_TPC	Integer data. An indicator variable is 1 if an observed city is TPC, 0 otherwise.
FE_NTC	Integer data. An indicator variable is 1 if an observed city is NTC, 0 otherwise.
TE.TPC	Integer data. The treatment effect in TPC.
TE.NTC	Integer data. The treatment effect in NTC.
FE_TYC	Integer data. The fixed effect for TYC.
FE_TCC	Integer data. The fixed effect for TCC.
FE_TNC	Integer data. The fixed effect for TNC.
FE_KSC	Integer data. The fixed effect for KSC.
mXX	Integer data. The fixed effect for Month XX.
yXXXX	Integer data. The fixed effect for Year XXXX.