**Global Sensitivity Analysis**

P ~ Type I Extreme Value(mean=2000, cov=0.2)

E ~ Lognormal(mean=30000, cov=0.1)

I ~ Normal(mean=10, cov=0.05)

Create a surrogate model for Y = P/EI using Gaussian Process

1. Double-loop sampling
   1. First-order (main-effect) index
   2. Total-effect
2. Single-loop sampling
   1. First-order (main-effect) index

1. PCE with an analytical formula
   1. First-order (main-effect) index
   2. Total-effect

