Coefficient  
  
The coefficient in the PAWN method refers to the Kolmogorov-Smirnov (KS) statistic that is used to measure the distance between the unconditional and conditional cumulative distribution functions (CDFs).

Specifically, the KS statistic for an input xi is:

KS(xi) = max |Fy(y) - Fy|xi(y)|

Where:

* Fy(y) is the unconditional CDF of the model output
* Fy|xi(y) is the conditional CDF when xi is fixed
* max is taken over all values of y

KS(xi) measures the maximum vertical distance between the unconditional and conditional CDFs. It ranges from 0 (no influence) to 1 (maximum influence).

To make KS unconditional on the fixed value of xi, PAWN takes a statistic (e.g. median or max) over multiple KS values at different fixed points for xi.

This coefficient, denoted Ti, is the final PAWN sensitivity index for input xi. A higher Ti indicates xi has a larger influence on the output distribution.

In summary, the coefficient in PAWN refers to the KS statistic used to quantify the distance between CDFs. Taking a summary statistic over KS values at multiple fixed points gives the final sensitivity index Ti for each input.

CDFs are used instead of PDFs because they are easier to estimate empirically from a sample without any tuning parameters. This makes PAWN straightforward to implement.

It can focus on any region of the output distribution, not just the full range. This enables regional sensitivity analysis.

Uses latin hypercube sampling