

DMIE_MODEL Presentation Sheet



Did you know that you can estimate a country's informal economy with a simple math equation? This is the DMIE Model.

1. What is the DMIE Model?

The DMIE Model (Diophantine Model of Informal Economy) is a new, clear, and easy-to-use math method. It helps estimate the size of a country's informal economy using simple data and modular arithmetic.

It uses a special type of math equation called a linear Diophantine equation, which has been used since ancient times. Here, it is adapted to fit modern economies where some activities are hidden.

2. What is the equation?

The model's equation is:

$$-aX + bY = C$$

- X = informal production we want to find
- Y = total real production of the country (informal production + official GDP)
- a = coefficient for X, to be calculated
- b = coefficient for Y, which is 1 by definition.

3. Why is this new?

- It is the first time informal economy is measured using a simple Diophantine equation, making DMIE_Model a pioneer.
- It focuses only on the informal economy, excluding illegal activities.

4. Why use the DMIE Model?

- **Simple and effective:** Needs few complex data, so it can be used easily by researchers, NGOs, students, and government officials.
- **Accurate:** Uses modular arithmetic for strong and reliable estimates, ensuring math rigor and real economic relevance.
- **Flexible:** Can be adjusted for different countries, regions, or specific sectors.
- **Decision-making tool:** Shows how much legal activity the government misses in the economy, helping create better economic policies that include informal small businesses.

5. Software:

Save time by using the software made for DMIE_Model:

<https://dmie-model.intobinary.org>