

IS POVERTY REDUCTION PART OF THE INTEGRATED GROSS CITY INTERNAL PRODUCT (IGCIP)?

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THE EVOLUTION OF ECONOMIC AND SOCIAL PERFORMANCE EVALUATION METHODS AND TECHNIQUES

- The study of different techniques, methodologies, and models to evaluate any performance such as economic or social output in any cities around the world is focused on the quantification of the total final production or basic social welfare indicators separately.
- We find in this research that is crucial to build an alternative indicator that involve the quantification of economic, social, technological, and political aspects together into a single indicator by using a basic methodology to quantified approximately the final material and social output together of any city.
- We believe that the final material or total production of goods and services are not enough to show the real material output or social welfare stage of the reality in the society situation as a whole. Therefore, we concern also about more factors additionally to material production output or social welfare indicators.

GROSS DOMESTIC PRODUCT (GDP) IS INCREASINGLY A POOR MEASURE OF PROSPERITY. IT IS NOT EVEN A RELIABLE GAUGE OF PRODUCTION

THE GDP IS THE MONETARY MEASURE OF THE MARKET VALUE IN NOMINAL OR REAL PRICES UNDER DIFFERENT APPROACHES: PRODUCTION, INCOME, EXPENDITURE (THE MOST APPLIED AMONG ECONOMISTS).

GROSS DOMESTIC PRODUCT (GDP) VR. GROSS NATIONAL INCOME (GNI)

GDP PER CAPITA AND GDP GROWTH RATE

MEASURING GDP REQUIRES ADDING UP THE VALUE OF WHAT IS PRODUCED, NET OF INPUTS, ACROSS A WIDE VARIETY OF BUSINESS LINES, WEIGHTING EACH ACCORDING TO ITS IMPORTANCE IN THE ECONOMY. BOTH THE OUTPUT AND THE MATERIALS (IF ANY) USED UP IN MAKING IT HAVE TO BE ADJUSTED FOR INFLATION TO ARRIVE AT A FIGURE THAT ALLOWS FOR COMPARISON WITH WHAT HAS GONE BEFORE.

THE PROBLEM IS NOT JUST THAT IT IS HARD TO MAKE THESE CALCULATIONS. IT IS THAT WHAT THE CALCULATIONS PRODUCE IS A MEASURE PUT TO TOO MANY PURPOSES, AND, THOUGH USEFUL, NOT TRULY FIT FOR ANY OF THEM.

THE GDP GROWTH BECAME A GOAL FOR POLITICIANS, ALSO BECAME AN OCCASION FOR CRITICISM.

SOURCE: THE ECONOMIST

The Trouble with GDP

1937: SIMON KUZNETS, AN ECONOMIST AT THE NATIONAL BUREAU OF ECONOMIC RESEARCH, PRESENTS THE ORIGINAL FORMULATION OF GROSS DOMESTIC PRODUCT IN HIS REPORT TO THE U.S. CONGRESS, “NATIONAL INCOME, 1929-35.” HIS IDEA IS TO CAPTURE ALL ECONOMIC PRODUCTION BY INDIVIDUALS, COMPANIES, AND THE GOVERNMENT IN A SINGLE MEASURE, WHICH SHOULD RISE IN GOOD TIMES AND FALL IN BAD. GDP IS BORN.

1944: FOLLOWING THE **BRETTON WOODS CONFERENCE** THAT ESTABLISHED INTERNATIONAL FINANCIAL INSTITUTIONS SUCH AS THE WORLD BANK AND THE INTERNATIONAL MONETARY FUND, GDP BECOMES THE STANDARD TOOL FOR SIZING UP A CITY’S ECONOMY.

1959: ECONOMIST **MOSES ABRAMOVITZ** BECOMES ONE OF THE FIRST TO QUESTION WHETHER GDP ACCURATELY MEASURES A SOCIETY’S OVERALL WELL-BEING. HE CAUTIONS THAT “WE MUST BE HIGHLY SKEPTICAL OF THE VIEW THAT LONG-TERM CHANGES IN THE RATE OF GROWTH OF WELFARE CAN BE GAUGED EVEN ROUGHLY FROM CHANGES IN THE RATE OF GROWTH OF OUTPUT.”

1962: BUT GDP EVANGELISTS REIGN. **ARTHUR OKUN**, STAFF ECONOMIST FOR U.S. PRESIDENT JOHN F. KENNEDY’S COUNCIL OF ECONOMIC ADVISERS, COINS OKUN’S LAW, WHICH HOLDS THAT FOR EVERY 3-POINT RISE IN GDP, UNEMPLOYMENT WILL FALL 1 PERCENTAGE POINT. THE THEORY INFORMS MONETARY POLICY: KEEP GROWING THE ECONOMY, AND EVERYTHING WILL BE JUST FINE.

1972: UPON BEING NAMED KING OF BHUTAN, **JIGME SINGYE WANGCHUCK** DECLARES HIS AIM IS NOT TO INCREASE GDP, BUT GNH — “GROSS NATIONAL HAPPINESS.”

SOURCE: [HTTP://FOREIGNPOLICY.COM/](http://foreignpolicy.com/)

GDP: a brief history

JUNE 1978: IRVING B. KRAVIS, ALAN W. HESTON, AND ROBERT SUMMERS COMPILE THE FIRST ESTIMATES OF GDP PER CAPITA WORLDWIDE, WITH FIGURES FOR MORE THAN 100 COUNTRIES.

1990: THE UNITED NATIONS LAUNCHES THE HUMAN DEVELOPMENT INDEX, WHICH MEASURES SUCH FACTORS AS EDUCATION, GENDER EQUALITY, AND HEALTH. U.N. ECONOMIST MAHBUB UL HAQ CONVINCES FUTURE NOBEL LAUREATE AMARTYA SEN TO CREATE “AN INDEX AS VULGAR AS GDP BUT MORE RELEVANT TO OUR OWN LIVES.”

SEPTEMBER 14, 2009: THE FRENCH GOVERNMENT RELEASES A REPORT, CO-AUTHORED BY NOBEL PRIZE-WINNING ECONOMIST JOSEPH STIGLITZ, THAT CALLS FOR AN END TO “GDP FETISHISM.”

SOURCE: [HTTP://FOREIGNPOLICY.COM/](http://foreignpolicy.com/)


GDP: a brief history

THE INTEGRATED GROSS CITY INTERNAL PRODUCT (IGCIP)

- ▶ This paper aim introduce an alternative indicator to evaluate the socio-economic performance of any city. This new indicator is termed the “the Integrated Gross City Internal Product (IGCIP)”. The IGCIP will show the real socio-economic situation of a city based on the use of a new set of variables such as: (i) education demand and supply; (ii) production of goods and services (Supply); (iii) goods and services demand; (iv) social protection coverage; (v) poverty levels; (vi) income per capita distribution; (vii) public transportation supply; (viii) final total net sells yearly; (ix) real states prices and transactions annually; (x) savings ratio; (xi) labor market demand and supply; (xii) population gross; (xiii) immigrants gross rate; (xiv) formal and informal sector income generation; (xv) local government spending (investment and maintenance); (xvi) unemployment ratio; (xvii) physical infrastructure value, (xviii) tax value, (xix) local forces security budget; (x) demand and supply of public goods and services; and other important variables. We believe that by evaluating large cities in the same city we can have a better understanding of how the socio-economic development variables are performing and its evolution in the short and long run. We believe that the IGCIP could be an important guide for targeted public policy measures to address the social aspects of economic development, especially in relation to the rise of poverty in urban areas.

THE INTEGRATED GROSS CITY INTERNAL PRODUCT (IGCIP) DEFINITION

The Integrated Gross City Internal Product (IGCIP) is a single socio-economic indicator that measure the Integrated and sustainable development performance globally of any city in a period (yearly) in a specific geographical space that keeps its landmark and autonomy (jurisprudence and law). IGCIP estimates are commonly used to determine the socio-economic development level of a city based on the uses of a multi-disciplinary approach (economic, social, technological, political), and to make international comparisons.



THE INTEGRATED GROSS CITY INTERNAL PRODUCT (IGCIP) VARIABLES

- ▶ The IGCIP will show the real socio-economic situation of a city based on the use of a new set of variables such as: (i) education demand and supply; (ii) production of goods and services (Supply); (iii) goods and services demand; (iv) social protection coverage; (v) poverty levels; (vi) income per capita distribution; (vii) public transportation supply; (viii) final total net sells yearly; (ix) real states prices and transactions annually; (x) savings ratio; (xi) labor market demand and supply; (xii) population gross; (xiii) immigrants gross rate; (xiv) formal and informal sector income generation; (xv) local government spending (investment and maintenance); (xvi) unemployment ratio; (xvii) physical infrastructure value, (xviii) tax value, (xix) local forces security budget; (x) demand and supply of public goods and services; and other important variables.

The Integrated Gross City Internal Product (IGCIP): Methodology

- ▶ **The Integrated Gross City Internal Product (IGCIP): Methodology** serves as a new index to study the Integrated development of a city anywhere and anytime. The basic idea behind this indicator is to generate purposeful indicators by running a large and several numbers of simulations until we arrive at a possible answer or measure the Integrated development as a whole. The Integrated Gross City Internal Product (IGCIP) requires the use of serial assumptions such as Omnia Mobilis (Ruiz Estrada, 2011). In our case, we applied the Integrated Gross City Internal Product (IGCIP) to the case of 100 cities around the world. Basically, the Integrated Gross City Internal Product (IGCIP) uses quantitative secondary data to input in 150 different equations. Hence, we can proceed to the calculation of the Integrated Gross City Internal Product (IGCIP). In addition the Integrated Gross City Internal Product (IGCIP) was adapted and running in Mathematica Wolfram software version 10.0. All equations in this model were transformed into a large algorithm by using Mathematica Wolfram version 10 language programming that allows us to generate a large pool of possible results to the problem at hand. Specifically, we solve differential equations and perform geometric computations to generate a range of different scenarios in different development stages. The implementation of the Integrated Gross City Internal Product (IGCIP) rests on seven basic steps:
 - ▶ a. Data collection from different institutions such as domestic and international institutions.
 - ▶ b. Database format design.
 - ▶ c. Storage process by using EXCEL.
 - ▶ d. Programming IPIO-Table in Mathematica Wolfram version 10 algorithm application.
 - ▶ e. Import spread sheet data from EXCEL to Mathematica Wolfram version 10.
 - ▶ f. Final output or results from solving differential equations solving and performing Geometric computations
 - ▶ g. Final results, graph production, and analysis of results
 - ▶

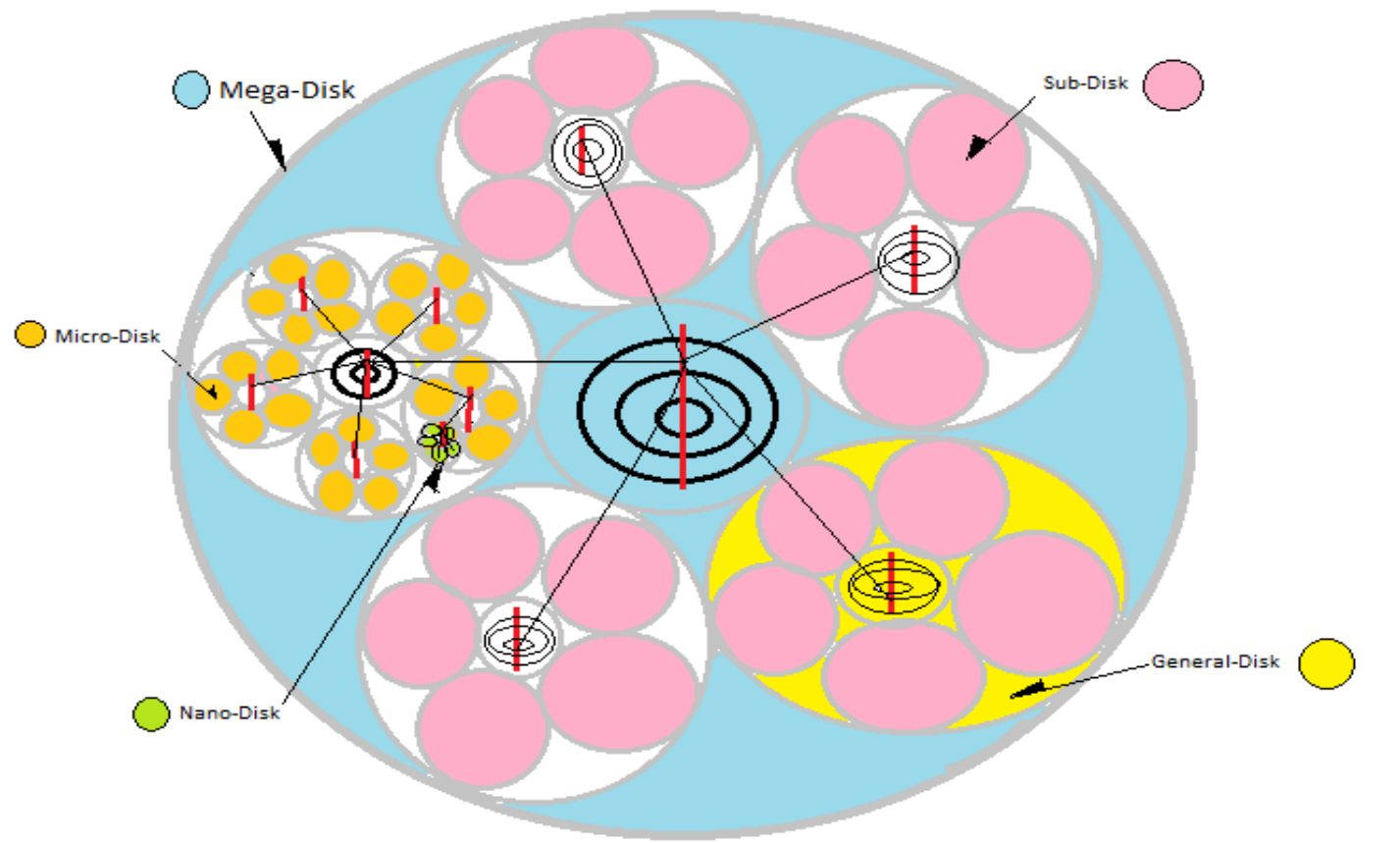
The main benefit of using Mathematica Wolfram version 10 is greater versatility and efficiency of model results due to modelling and simulating future socio-economic development platform in an extended time framework. The data used in our model come from various reliable sources. More specifically, we secured the data from 10 different domestic and international institutions.

All the data were used to build a single large database that was distributed into 150 equations are laid out in our index. In addition, we run nine simulations based on the different presidential administrations to identify the Integrated Gross City Internal Product (IGCIP) with the highest Integrated development footprint.

The main contribution of the **Integrated Gross City Internal Product (IGCIP)** is that it is based on the use of social and economic variables together, and it can generate a range of different results as well as the likely calculated **Integrated Gross City Internal Product (IGCIP)** for 100 cities between 2005 and 2015. The advantage of **Integrated Gross City Internal Product (IGCIP)** is that it does not impose any restriction on the time framework or geographical space. The \mathcal{D} -Index can be applied anytime and anywhere without any restriction on any society or city around the world.

In the present paper, we run our simulation on a large database under different possible scenarios to evaluate Integrated development in 100 different cities. In fact, another advantage of the Integrated Gross City Internal Product (IGCIP) is that it is not based solely on economic factors but also incorporates social factors. Such a comprehensive, multi-dimensional analysis gives us a more accurate assessment of possible corruption levels under more realistic scenarios.

We believe that the **Integrated Gross City Internal Product (IGCIP)** can help policy makers, rating agencies, and academics to identify a new way to evaluate Integrated development of any city from a global perspective of analysis, and thus to take necessary action to improve an Integrated and sustainable socio-economic development platform in the long run.



0-0.25 = NON INTEGRATED DEVELOPMENT (LEVEL-4)
 0.26-0.50 = POOR INTEGRATED DEVELOPMENT (LEVEL-3)
 0.51-0.75 = PARTIAL INTEGRATED DEVELOPMENT (LEVEL-2)
 0.76-1 = FULL INTEGRATED DEVELOPMENT (LEVEL-1)

SINGAPORE-IGCIP
MALAYSIA-IGCIP
BANGKOK-IGCIP
JAKARTA-IGCIP
MANILA-IGCIP

0.59 = PARTIAL INTEGRATED DEVELOPMENT (LEVEL-2)
0.50 = POOR INTEGRATED DEVELOPMENT (LEVEL-3)
0.39 = POOR INTEGRATED DEVELOPMENT (LEVEL-3)
0.29 = POOR INTEGRATED DEVELOPMENT (LEVEL-3)
0.27 = POOR INTEGRATED DEVELOPMENT (LEVEL-3)

ASEAN-IGCIP RESULTS

END

