

# Open Data for Social Innovation

Colombo, Sri Lanka      June 23, 2014

Webpage Screenshot

Mail : [datadredger@internews.org](mailto:datadredger@internews.org) Search in site

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**redger**

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<http://internewskenya.org/dataportal/> Sat Jun 21 2014 19:43:40 GMT+0530 (Sri Lanka Standard Time)

# Who am I?

Eva Constantaras, Internews Data  
Journalism Advisor

[econstantaras@internews.org](mailto:econstantaras@internews.org) @evaconstantaras

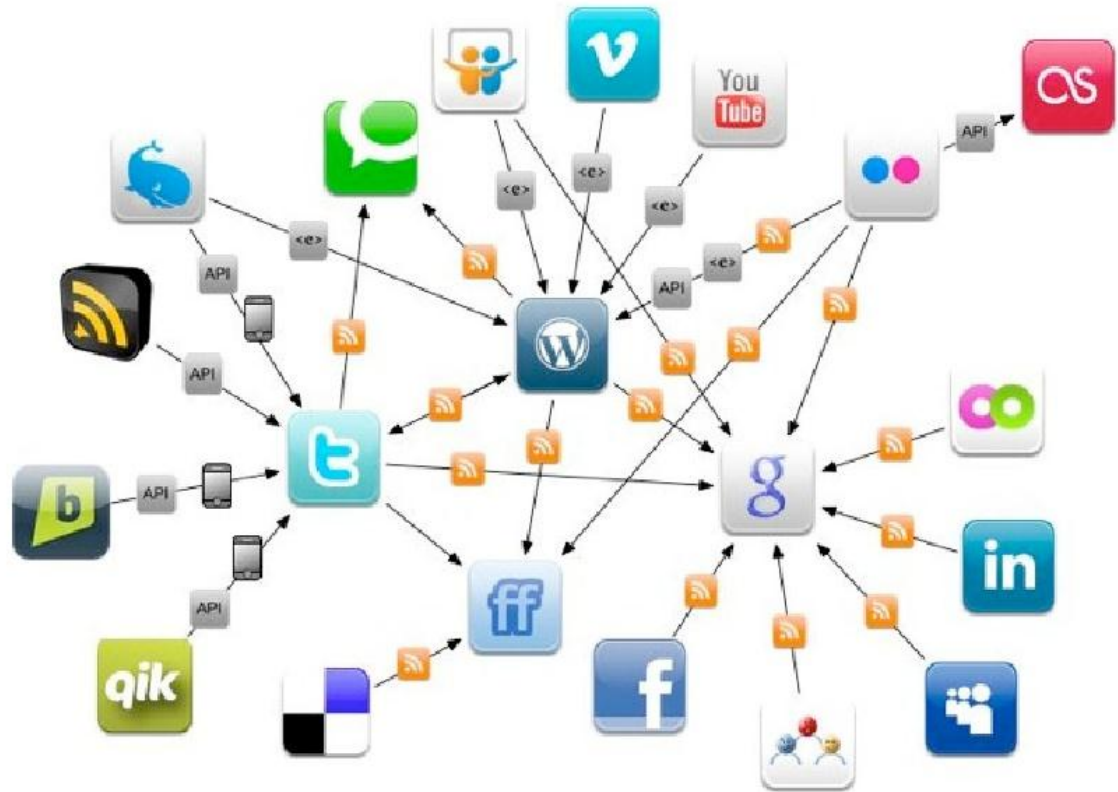
Some of my projects:

- [Land Quest Kenya](#)
- [The Mafia's Shadow in the Americas](#)
- [Internews Data Dredger](#)

# Contents

- **Open Data in the Digital Age**
- Keys to Open Data for Social Innovation: Data, Design and Dissemination
- Employment: India, Kenya and the United States
- Education: Global
- Health: Kenya and Bangladesh
- Economic growth: Brainstorming

# Open Data in the Digital Age



Anne Helmond, May 2009

# Open Data in the Digital Age

**Access to tools** has been liberated (Excel, Google Spreadsheets).

**Open data**: governments around the world have published thousands of databases.

**Trust**: including open data with your projects increases transparency and builds trust between you and the audience.

**Ease of today's tools** that allow anyone to make beautiful maps and visualizations without much technical knowledge.

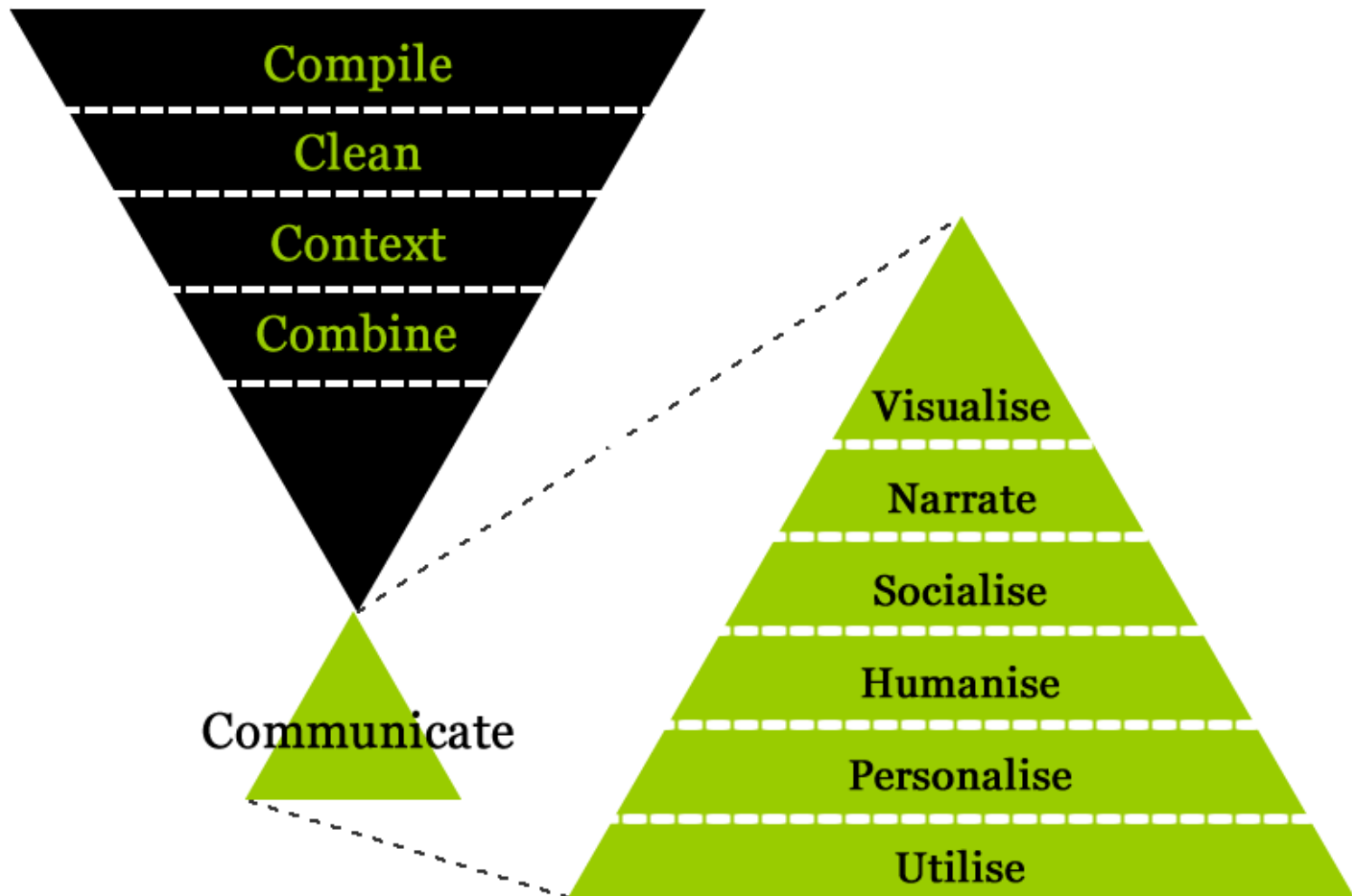
## The Guardian:

- 
- ```
graph TD; ShareData((SHARE DATA)) --> Spreadsheets((SPREAD SHEETS)); Spreadsheets --> Calculations((PERFORM CALCULATIONS ON THE DATA)); Calculations --> Output((OUTPUT)); Calculations --> Recalc[RECALCULATE IF NEEDED]; Recalc --> Calculations; Output --> Graphics[OUR GRAPHICS TEAM]; Output --> Story[STORY]; Output --> VizTools[FREE VIZ TOOLS]; Output --> FusionTable[GOOGLE FUSION TABLE]; Output --> Publish[JUST PUBLISH];
```
- The flowchart illustrates a data analysis process with four main stages in blue circles, connected by downward arrows. Each stage has associated inputs and outputs represented by smaller blue arrows, and feedback loops represented by grey arrows.
- SHARE DATA** (Top stage):
    - Inputs: SENT DATA, BREAKING NEWS, RECURRING EVENTS, THEORIES TO BE EXPLORED.
    - Output: WHAT DOES THE DATA MEAN.
  - SPREAD SHEETS** (Second stage):
    - Input: WHAT TO COMPARE OR SHOW CHANGE.
    - Output: WHAT OTHER DATA SETS TO USE WITH IT?
  - PERFORM CALCULATIONS ON THE DATA** (Third stage):
    - Inputs: DATA IN WRONG FORMAT, MERGED CELLS, UNNECESSARY COLUMNS OF DATA, DATA MEASURED DIFFERENT UNIT.
    - Output: SANITY CHECK THE RESULTS.
    - Feedback loop: RECALCULATE IF NEEDED (from the bottom of the stage back to the top).
  - OUTPUT** (Bottom stage):
    - Outputs: OUR GRAPHICS TEAM, STORY, FREE VIZ TOOLS, GOOGLE FUSION TABLE, JUST PUBLISH.

# The Open Data Process

## The Inverted Pyramid of Data Journalism (complete)

Paul Bradshaw, [OnlineJournalismBlog.com](http://OnlineJournalismBlog.com)



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# What defines a successful Open Data project?

## **Data**

- Government
- INGOs
- Think Tanks
- Academia
- Private Sector

# What defines a successful Open Data project?

## **Design**

- Who is your audience?
- What do you want them to learn/do or contribute?
- What is their level of graphical, data and technical literacy?

# What defines a successful Open Data project?

## **Simple design/Designer**

- Infographics, charts/Graphic designer
- Interactive maps/Graphic designer, Cartographer

## **Advanced Design/Designer**

- News app/Developer
- Phone app/Developer
- Web portal/Developer

# What defines a successful Open Data project?

## **Dissemination**

- Where does your audience go for trusted news and information?
- What networks can you tap into to amplify your message? (Both online and offline)
- How have similar projects reached their audience?
- Watch out for preaching to the choir!

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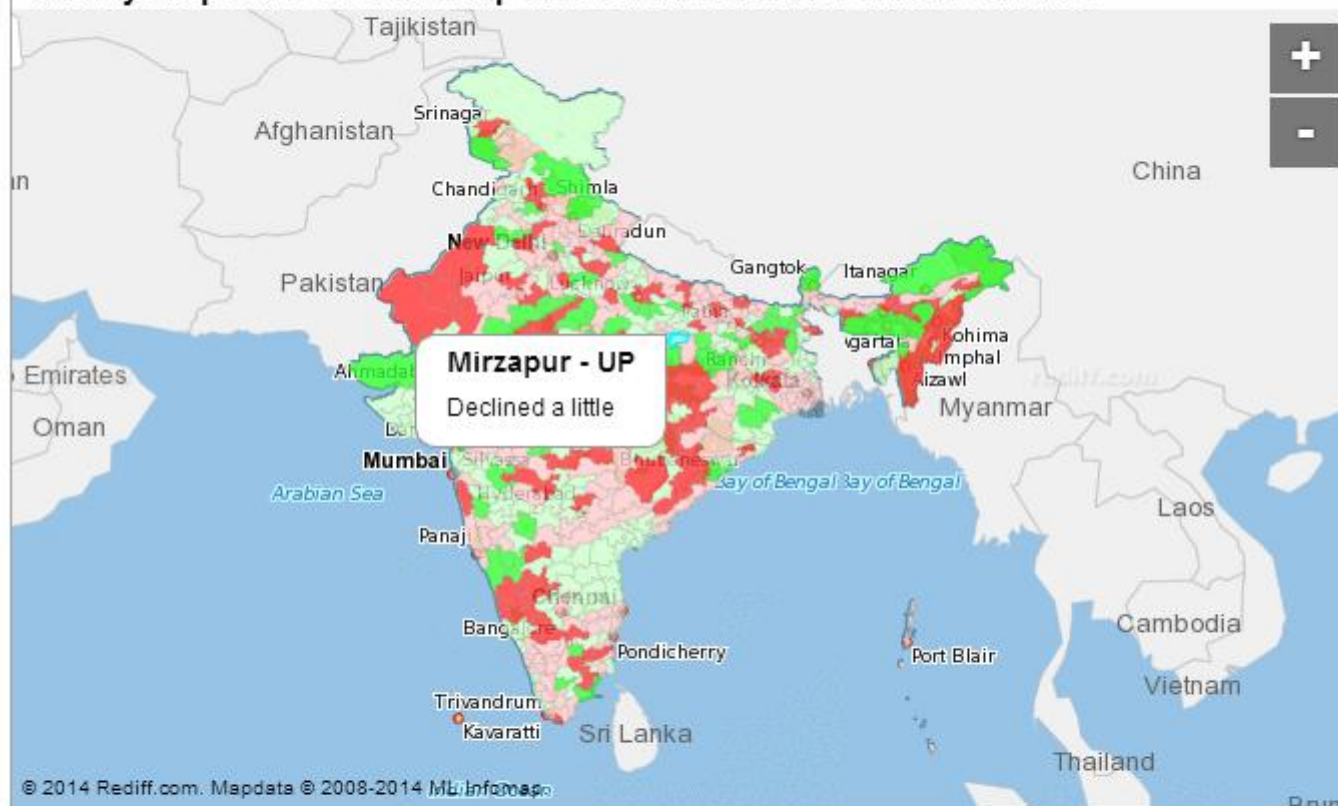
Rediff.com » News » This map tells you where unemployment is dropping the most

## This map tells you where unemployment is dropping the most

Last updated on: May 28, 2014 17:22 IST

[More](#)

Move your pointer over the map to see details. Double click to zoom in.



### Change in Unemployment (2009-10 to 2011-12)

Light red: Rose a little  
Dark red: Rose a lot

Light green: Declined a little  
Dark green: Declined a lot



**B**y some estimates, India will become the world's youngest country by the year 2020, with 64 per cent of its population in the working age group.

# Open Data for Employment

*This map tells you where unemployment is dropping the most, Rediff News, India*

**Data:** India's Ministry of Statistics' National Sample Survey Office. Links to data? No

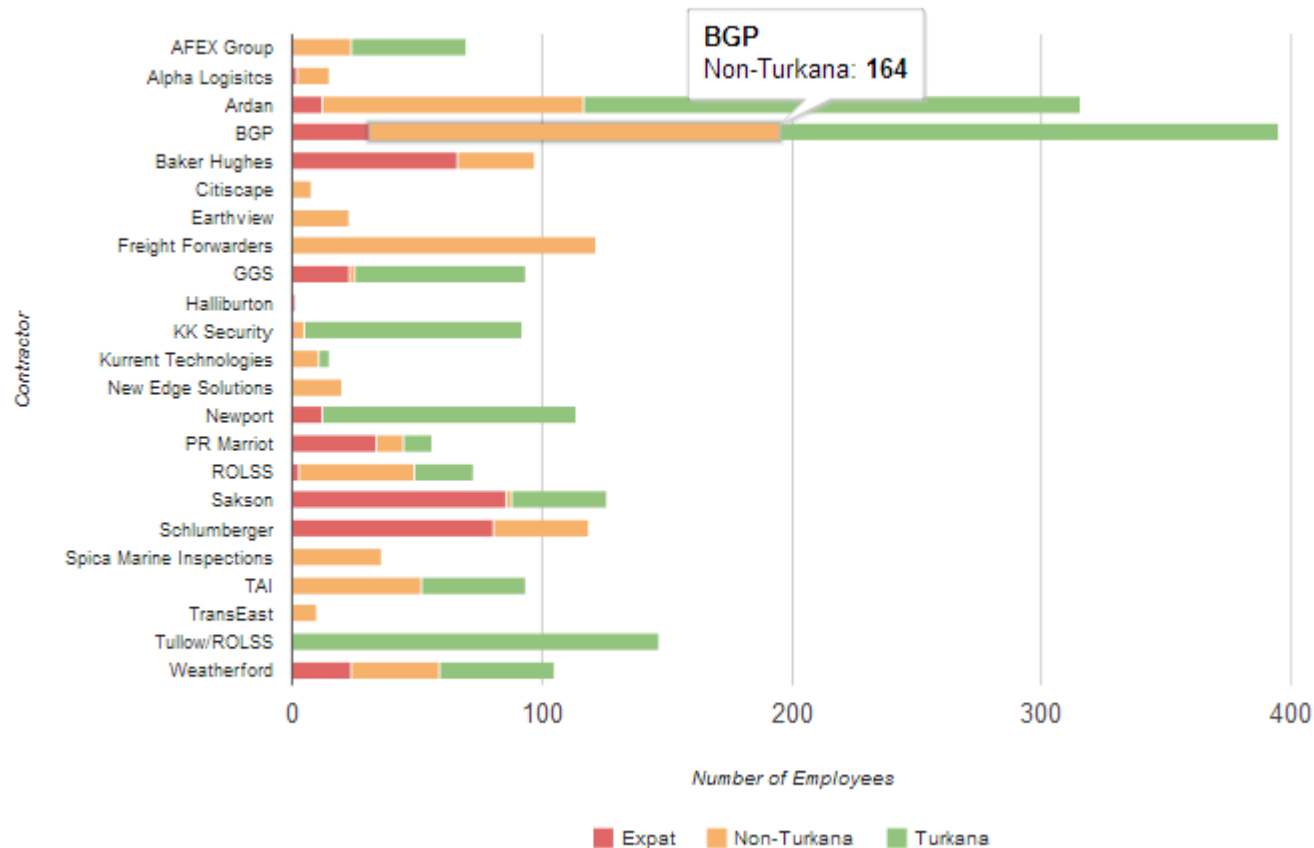
**Design:** Map allows for easy visual comparison. Specific unemployment numbers are not available, nor are changes in employment by sector.

**Dissemination:** 17th most popular Indian web portal. Superficial accompanying story, no response to story leads in comments section.

# Open Data for Employment



Contractor Hiring Practice by Employee Origin





# Open Data for Employment

*Tullow Oil sub-contractor employee data reveal contracting driven by market forces, not economic policy in Turkana, Land Quest, Kenya*

**Data:** Tullow Oil Kenya's subcontractor database, required by an MOU between Tullow Oil and Ministry of Energy. Links to data? Yes.

**Design:** Simple chart formats to illustrate hiring practices and narrative analysis.

**Dissemination:** Summary published by *El Mundo* in Spain. Topic considered too controversial for Kenyan media despite public debate around draft Energy Bill, which regulates local hiring practices

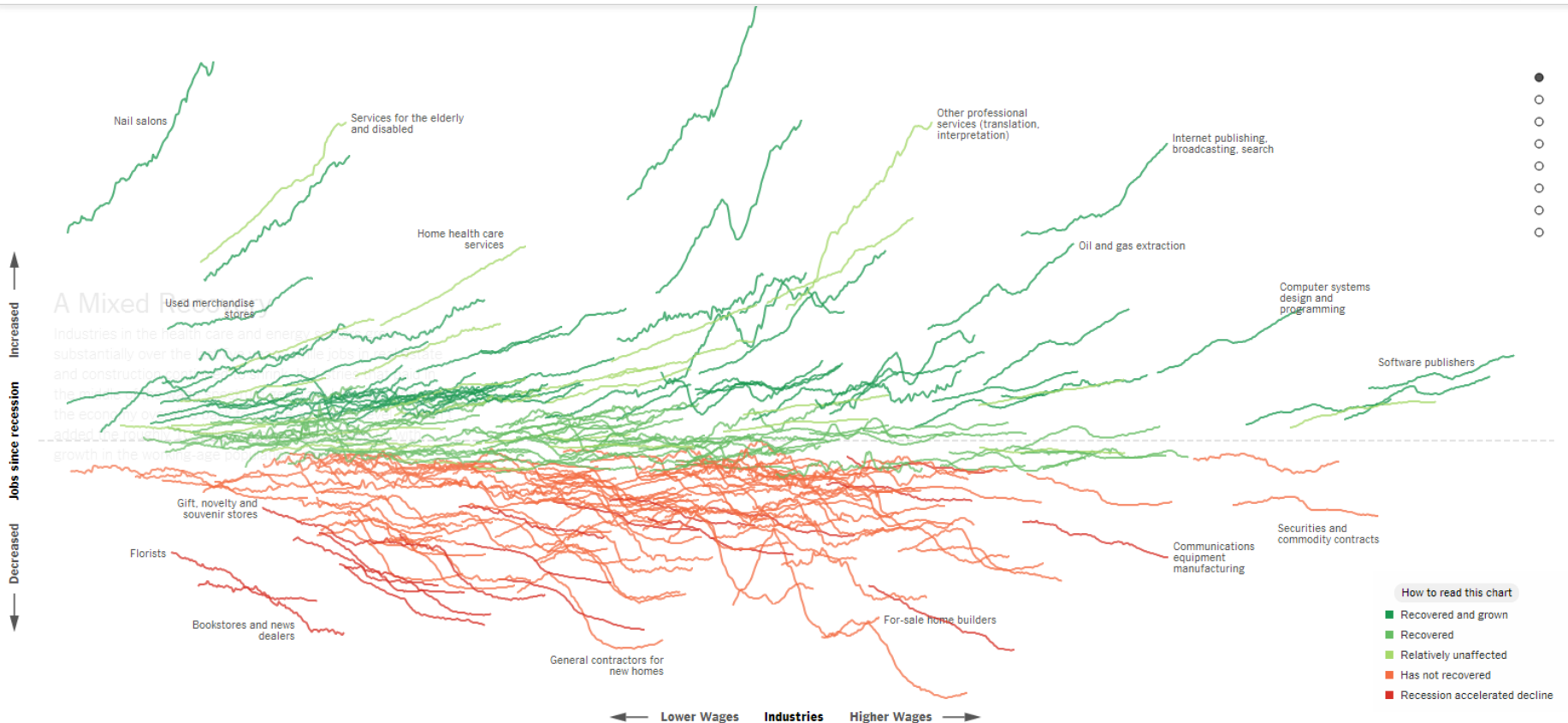
# Open Data for Employment

Webpage Screenshot



THE UPSHOT | How the Recession Reshaped the Economy, in 255 Charts

SHARE



[http://www.nytimes.com/interactive/2014/06/05/upshot/how-the-recession-reshaped-the-economy-in-255-charts.html?\\_r=0](http://www.nytimes.com/interactive/2014/06/05/upshot/how-the-recession-reshaped-the-economy-in-255-charts.html?_r=0) Sat Jun 21 2014 20:17:09 GMT+0530 (Sri Lanka Standard Time)



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# Open Data for Employment

[How the Recession Reshaped the Economy, in 255 Charts](#),  
Upshot, The New York Times, United States

**Data:** Bureau of Labor Statistics' Current Employment Statistics program Links to data? Yes.

**Design:** Varied chart formats to illustrate changes in the job market since the recession.

**Dissemination:** Published by the *New York Times'* new data journalism portal The Upshot, accompanied by narrative analysis, marketed through social media.

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# Open Data for Education

## BENEFITS OF SECONDARY EDUCATION

IN AFRICA

Investing in secondary education **improves lives.**



One extra year of schooling increases an individual's earnings by up to 10%

Each additional year of schooling raises average annual gross domestic product (GDP) growth by 0.37%



If all girls completed secondary education...



**64%**

Fewer child marriages.



**59%**

Decrease in teenage pregnancies.



**49%**

Decrease in child mortality.

## BARRIERS TO SECONDARY EDUCATION



In Africa, the cost of secondary education can be **2X** more expensive than primary school.



Girls are often held back from school to perform domestic labour.



Many students forgo secondary education due to the impression that schools do not offer a quality education.

**Secondary education is critical for young people - and their communities - to reach their full potential.**

The MasterCard Foundation Scholars Program, through its partners, is providing 11,000 students in Sub-Saharan Africa, primarily girls, with academic, financial, and social support to complete secondary education.



Thousands of Program graduates will also receive comprehensive support to attend universities in Africa or to transition to the workforce.

The secondary school component of The MasterCard Foundation Scholars Program is implemented in collaboration with:



For more information, visit [www.mastercardfndscholars.org](http://www.mastercardfndscholars.org)

THE MASTERCARD FOUNDATION  
Scholars Program

References:  
UNESCO, 2011  
UNESCO, 2013  
Brookings, 2017

# Open Data for Education

[Creating Change in Africa, One Student at a Time](#), The MasterCard Foundation Scholars Program is a \$500 million over 10 years

**Data:** UNESCO 2011, 2013, Brookings 2011

Links to data? No

**Design:** Series of related infographics

**Dissemination:** Published on the MasterCard Foundation website and disseminated through social media and through partners: BRAC, one of the largest non-profit development organizations in the world, Camfed, a non-profit dedicated to the education of girls in Africa and the Forum for African Women Educationalists. Scholars stories featured on site.

# Open Data for Education

Webpage screenshot

Nine years of SSLC in Karnataka beta

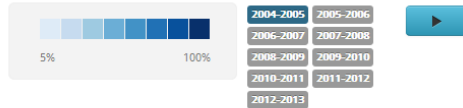
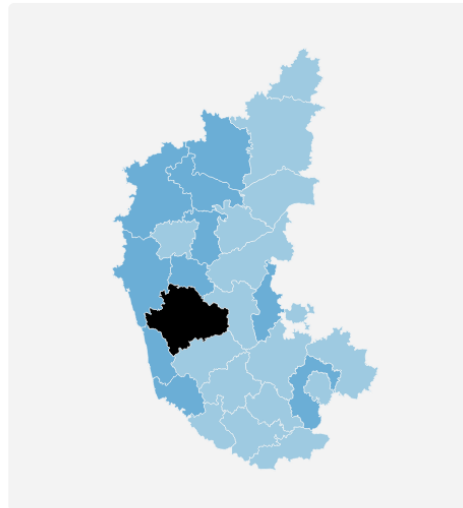
Subject

Gender

Medium

Map

Shimoga



2004-2005

Shimoga

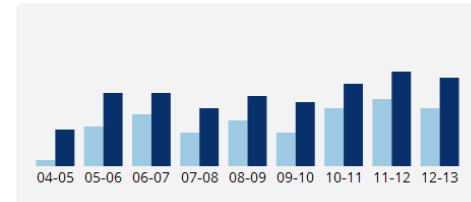
Government

76%

Private

81%

Government and Private schools performance.



Mathematics

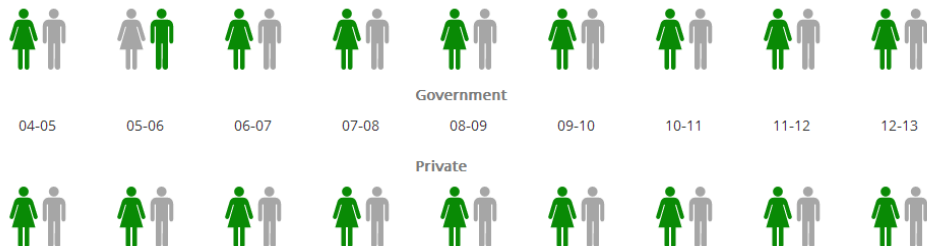


Kannada




English

Who is performing better?



# Open Data for Education

Under Construction: We are in BETA 

Find My School

Home

Discover  
Schools Near You

By Score  
See Schools By Scores

Performance  
See Examination Results



## Welcome To Find My School .Ke

**Find My School** is your platform to easily find the school for you in these three simple ways.

1

### Location: Discover Schools Near You

Select a location on our **interactive map** and discover schools near you.

2

### Exam Scores: Which school would select you based on a given score

Using **Performance** and **Placement Data** from the **Ministry of Education** we help find your most probable **Secondary School** placement.


3

### Search Results: Enter the School Name and Hit Enter

Search schools' **KCPE** and **KCSE** results.

**Location**

Find schools near you using our **interactive map**. Simply drag the marker on the map below and hit "**Discover**".



[Discover](#)

## By Exam Scores

Find a **Secondary School** based on a given score in the final exam. Simply select the **County** your **Primary School** is in and your **KCPE marks** and let us do the rest.

Select Your County

400 out of 500

[Find My School](#)

## Search Results

Find a school's exam **results** by entering the name and hitting 'Search'.

Search Schools...

[Search](#)

## Share FMS.Ke





# Open Data for Education

## The Opportunity Gap

Is Your State Providing Equal Access to Education?

[Tweet](#) 131

By Jennifer LaFleur, Al Shaw, Sharona Coutts and Jeff Larson, ProPublica, Updated January 24, 2013

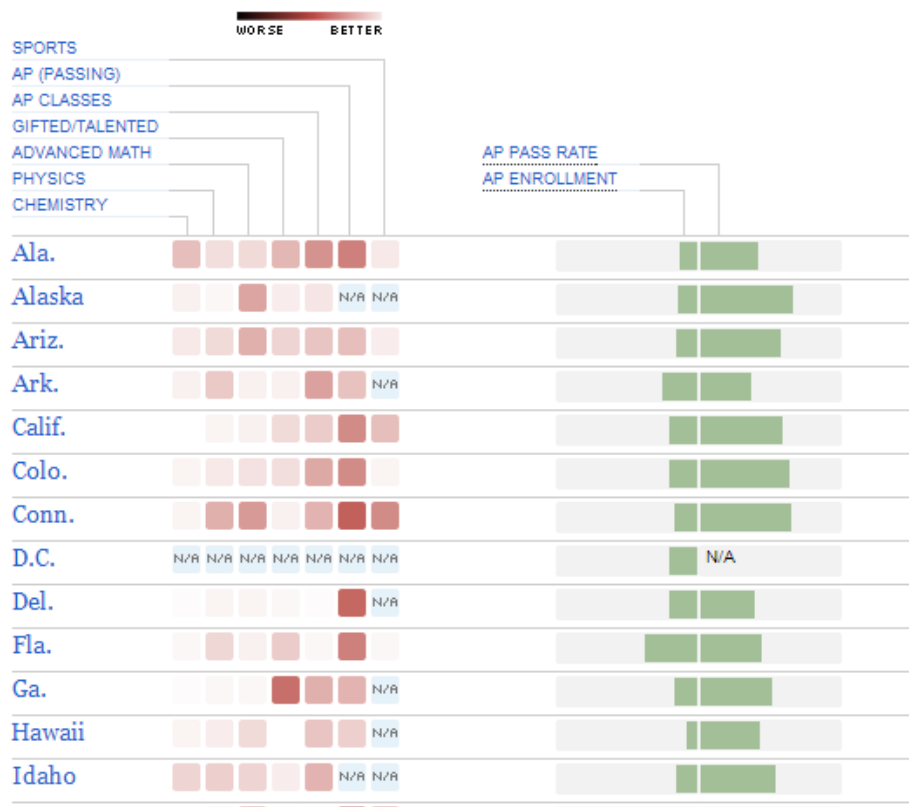
This database includes all public schools in districts with more than 3,000 students from the 2009-2010 school year -- about three-quarters of all such students in the country. Use it to find out how well your state provides poor and wealthier schools equal access to advanced classes that researchers say will help them later in life. | Our latest data also includes AP pass rates and sports participation | Related: [About the Data and Our Analysis](#) ».

### How States Compare

RESET

...at providing students these programs across all income levels...

...at enrolling and passing students in Advanced Placement classes...



### Find a School

Your Address, ZIP, or school name

Submit

For example, 1605 E. 55th St. Chicago, IL or 77054 or Stuyvesant High

### Latest Local Stories Based on This Project

Univision: [Problemas Escolares: Escuelas en Philadelphia Reprueban](#)

Virginian-Pilot: [In Norfolk, newest teachers face tougher tasks](#)

Boise State Public Radio: [Students Who Take Advanced Courses Do Well In Idaho](#)

Faribault Daily News: [Faribault School District needs to improve AP opportunities](#)

Shawnee Dispatch: [As student bodies diversify, school districts have trouble finding minority candidates](#)

California Watch: [Low-income students score lower on AP tests](#)

NBC New York: [AP Opportunity Gap: NY's Poor Students Enroll in Fewer College-Prep Courses](#)

StateImpact Ohio: [Why the Feds are Investigating the Toledo Public Schools](#)

C-Ville Weekly: [Feed your head](#)

The Reporter: [Study shows area districts stack up well against state averages](#)



# Open Data for Education: School Dashboard

[Find My School](#), Twaweza, Kenya

[Nine Years of SSLC Scores in Karnataka](#), Karnataka Learning

[The Opportunity Gap](#), ProPublica, United States

## Data

Kenya: Kenyan National Examinations Council 2010 Links to data? No

India: Karnataka Secondary School Examinations Board Links to data? No

United States: US Department of Education

## Design

Kenya: App, map

India: Charts, maps

United States: App, charts, investigation

## Dissemination

Kenya: NGO website, Hacks/Hackers Nairobi

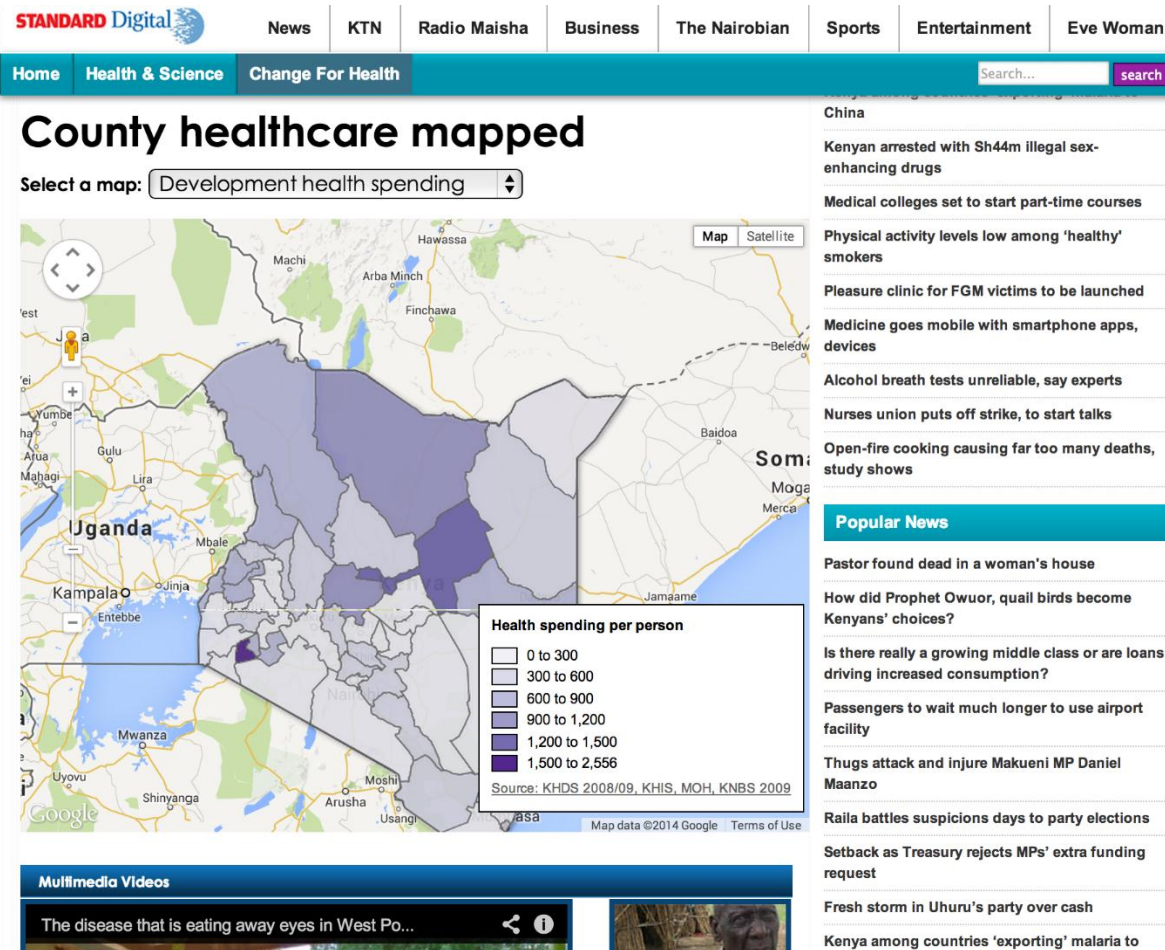
India: NGO website

United States: Mass media, rights for media to republish data and content

# Contents

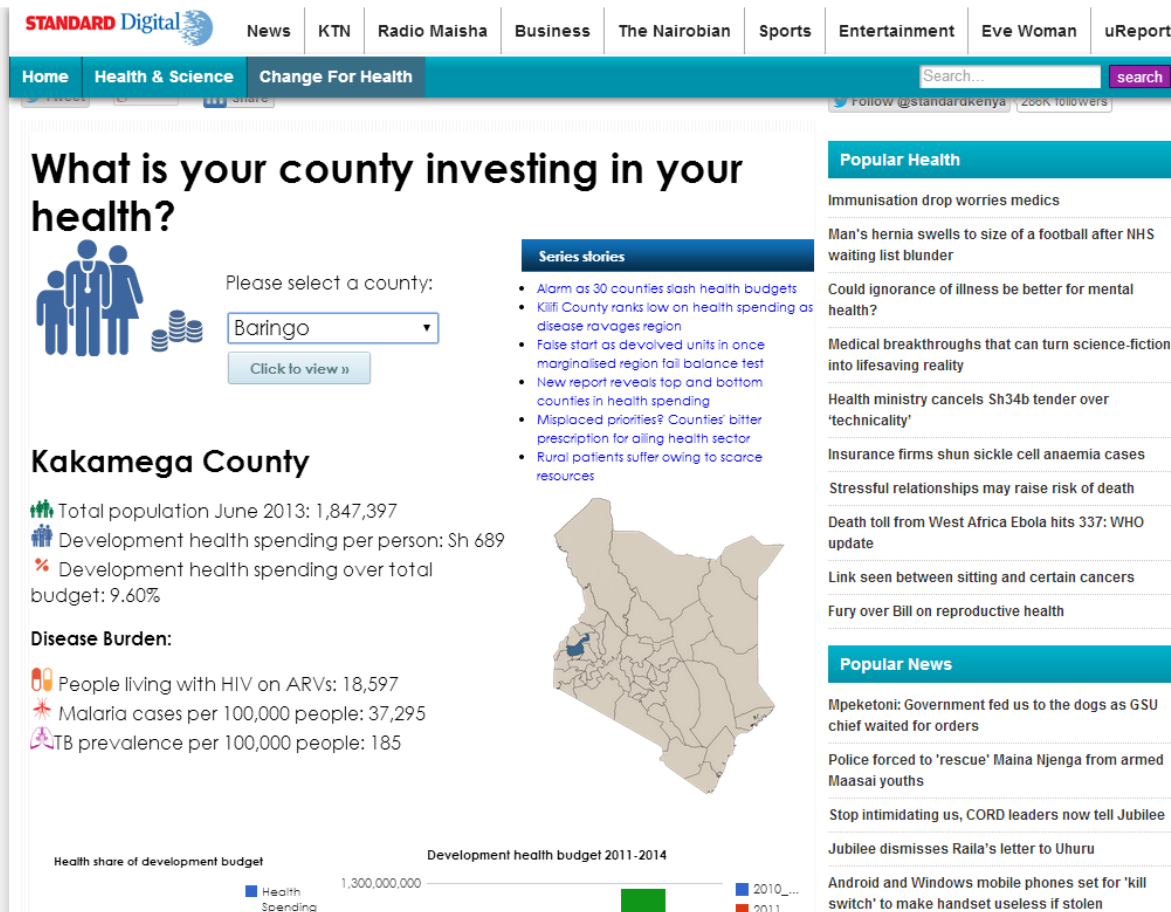
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# Open Data for Health: Kenya



# Open Data for Health: Health

Webpage Screenshot



<http://www.standardmedia.co.ke/health/changeforhealth> Sun Jun 22 2014 16:21:58 GMT+0530 (Sri Lanka Standard Time)

# Open Data for Health

[Change for Health](#), The Standard, Kenya

**Data:** [www.crackenya.org](http://www.crackenya.org), County Factsheets, Commission on Revenue Allocation (CRA), County budgets 2013 – 2014, Kenya National Bureau of Statistics, 2009 Census, Kenya Health Demographic Survey 2008/2009, The World Bank, International Budget Partnership Links to data? Yes

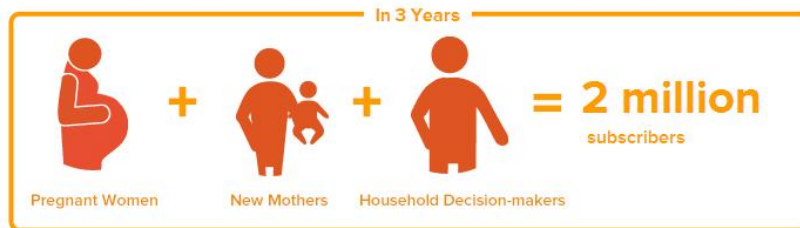
**Design:** Maps, app, infographics, charts, investigative reporting.

**Dissemination:** Published through the Standard newspaper and website, disseminated through social media.

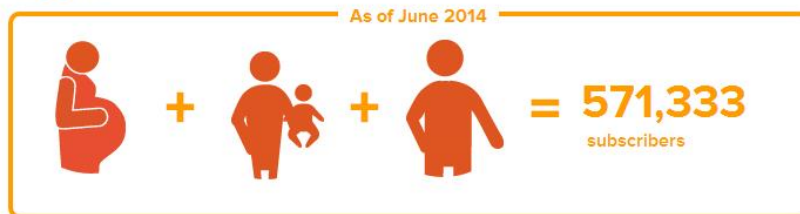
# Open Data for Health: Bangladesh

Webpage Screenshot

## Goals



## Progress



## Partners

MAMA Bangladesh is implemented by **Dnet**, a social enterprise. Dnet has secured a number of critical partnerships that span government agencies, telecommunications operators, outreach partners, and the private sector.

For more information about the MAMA Bangladesh country program, please visit [www.aponjon.com.bd](http://www.aponjon.com.bd).



"I was nervous about the birth of my second child but the messages helped me understand what to expect and how to care for her. I have learned many things I didn't know when my first child was born."

*Asha Rani, Aponjon subscriber*

▲ [back to top](#)

<http://www.mobilemamaalliance.org/mama-bangladesh> Sun Jun 22 2014 16:38:08 GMT+0530 (Sri Lanka Standard Time)



# Open Data for Health

[Mobile Alliance for Maternal Action](#), Bangladesh

**Data:** Dnet, in partnership with the Government of Bangladesh Ministry of Health and Family Welfare Links to data? No

**Design:** SMS and voice message system to disseminate information to mothers.

**Dissemination:** Six outreach organizations, five mobile network operators, and three corporate partners. Since launching, it has grown to serve more than 500,000 mothers and families and trained over 3,000 community agents.



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# Open Data for Economics

## Sri Lanka solving China's unemployment! *Daily FT*, June 19, 2013

*Over 26,000 Sri Lankan work visas have been issued to Chinese nationals over the last seven years to meet the demand for skilled labour, the Government revealed in Parliament yesterday, as ties between the two countries continue to burgeon.*

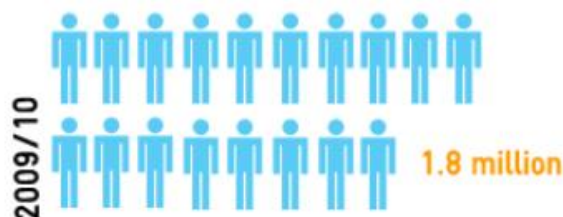
*Responding to a question posed by UNP MP Ravi Karunanayake who highlighted growing unemployment in the country, Minister of Water Supply and Drainage and Chief Government Whip Dinesh Gunawardena said the growing number of construction related projects under the Board of Investment and the shortage of skilled workers in the country had prompted the Government to issue work permits to Chinese workmen.*

## Sri Lanka can be integral part of Asian transformation: ADB Chief, Lanka Business Online, June 19, 2014

*Sri Lanka should look at private partnerships to expand infrastructure, reform state enterprises and strengthen the investment climate by improving rule of law and governance, Asian Development Bank chief Takehiko Nakao said.*

# Open Data for Economics: IPS

Around one million Sri Lankans have managed to get out of poverty between 2006/07 and 2009/10



If the poverty line is raised by 10%

**800,000**

more people will fall in to poverty

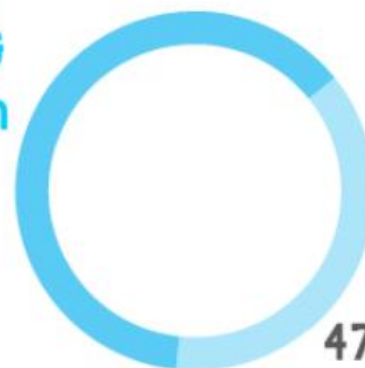


of Sri Lankans are 'multidimensionally poor' according to a new tool of poverty analysis, the Multidimensional Poverty Index (MPI)

Health and Nutrition factors influence Multidimensional Poverty the most

Health & Nutrition

**53%**



**47%**

Living conditions & Education

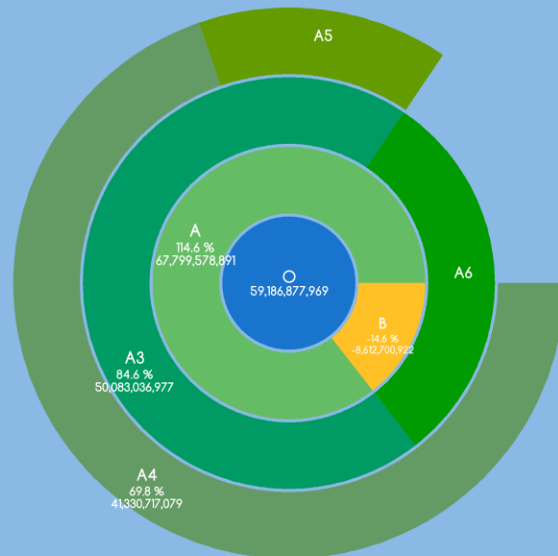


**Internews**

Local voices. Global change.

# Open Data for Economics: Macro Economy Meter

Sri Lanka : GDP Composition Breakdown



O : GDP (current US\$)

A : Gross national expenditure

A3 : Final consumption expenditure, etc.

A4 : Household final consumption expenditure

A5 : General government final consumption expenditure : 14.8 % 8,752,319,898

A6 : Gross capital formation : 29.9 % 17,716,541,914

B : External balance on goods and services

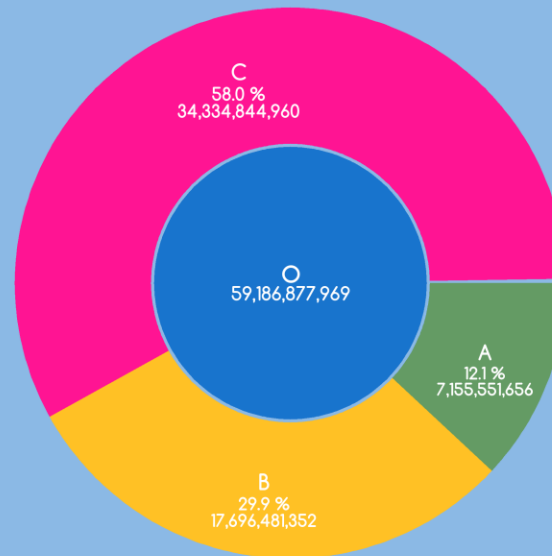
Help : How to read and make sense of the Circloid?

Each slice of a circle is the summation of the sub-slices in the layer on top of it. I.e.

$O = A + B$

$A = A3 + A6$

$A3 = A4 + A5$



O : GDP (current US\$)

A : Agriculture, value added

B : Industry, value added

C : Services, etc., value added

Help : How to read and make sense of the Circloid?

Each slice of a circle is the summation of the sub-slices in the layer on top of it. I.e.

$O = A + B + C$



# Brainstorming

What are the strengths and weaknesses of each of these economic stories in terms of data, design and dissemination?

How could these issues be addressed more effectively to lead to action?

# Brainstorming

What data sources are available for providing actionable solutions for the economy?

- Governmental
- Academic
- Think tanks
- NGOs
- Donors
- Private Sector

# Brainstorming

What technical resources are available to design these solutions?

- Civic hacker groups
- University computer science faculty
- Social innovators
- Private sector
- Grants

# Brainstorming

What platforms already exist to host open data for disaster mitigation tools and resources?

- Government online portals
- Humanitarian coordination groups
- Civil hacker sites
- Online media



# Resources



Open Knowledge  
Foundation



ONLINE NEWS  
ASSOCIATION

