



# Open and Free Knowledge Sharing: The Experience of the World Bank

Carlos Rossel, Publisher  
The World Bank Group  
Athens, 13 June 2014

# Outline

- The World Bank
- The Impetus for Open Access
- Open Access mandates
- Open Development
- What if someone has already figured out the answers to the world's most pressing policy problems, but those solutions were buried deep in a PDF, somewhere nobody will ever read them?
- Conclusion



# The World Bank

A vital source of financial and technical assistance to developing countries around the world

## **Financial Products & Services**

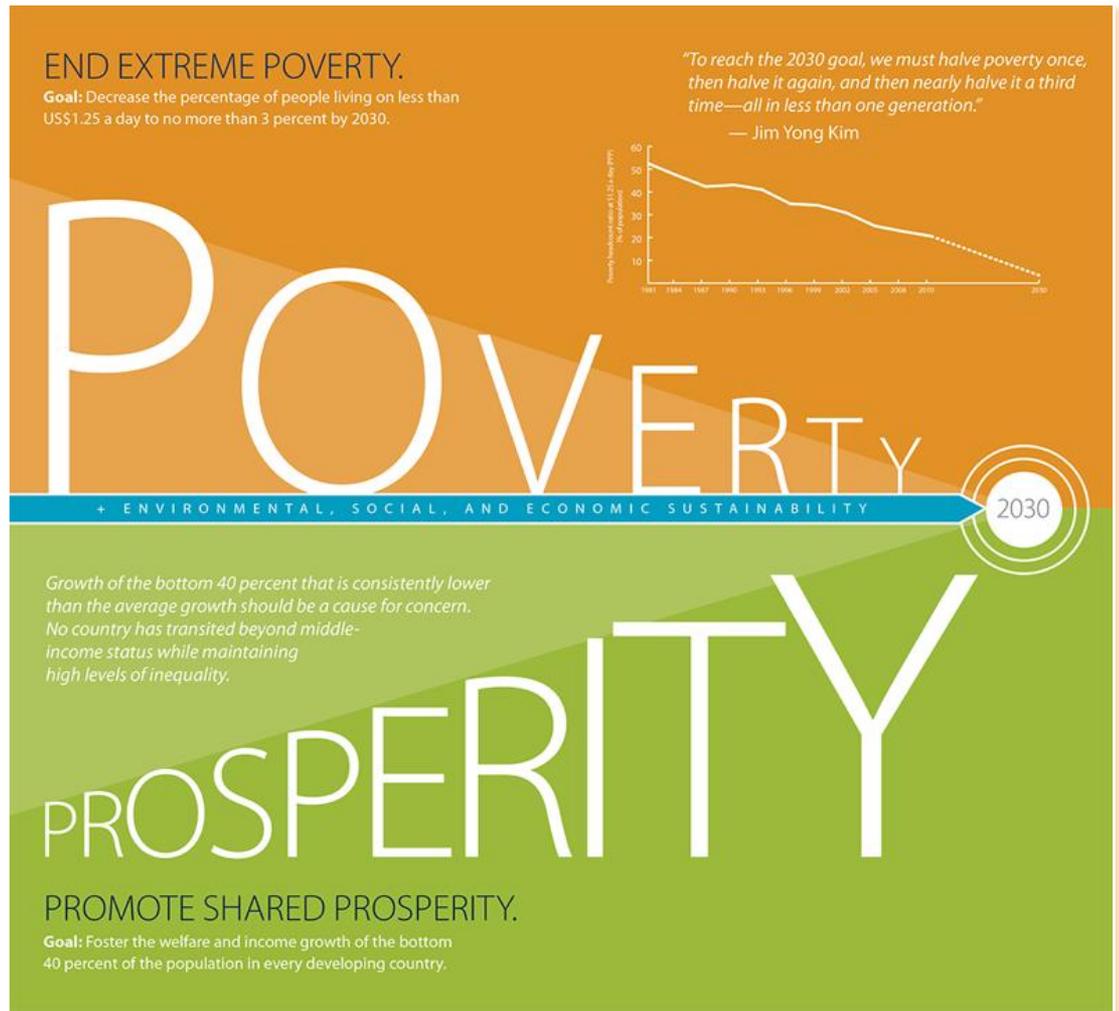
- Provides low-interest loans, interest-free credits, and grants to developing countries
- Supports investments in such areas as education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management

## **Innovative Knowledge Sharing**

- Supports developing countries with policy advice, research and analysis, and technical assistance
- Supports capacity building in the countries it serves

# The World Bank Group has two ambitious goals

- End extreme poverty within a generation
  - Decrease the percentage of people living on less than US\$1.25 a day to no more than 3 percent by 2030
- Promote shared prosperity
  - Foster the welfare and income growth of the bottom 40 percent of the population in every developing country



# The Impetus for Open Access

- Open Access literature is digital, online, free of charge, and free of most copyright and licensing restrictions\*
- The Internet is an enabler but political, social, and economic factors are driving change
  - If the taxpayer funds the research, the taxpayer should be able to access for free
  - Ensure research has maximum impact, e.g., as a driver for innovation and economic growth
- Open Access is not a panacea
  - Quality and peer review
  - Provenance
  - Predatory OA journal publishers
  - Double dipping
  - New digital divide

\* Peter Suber, Director, Harvard Office for Scholarly Communication. [legacy.earlham.edu/~peters/fos/brief.htm](http://legacy.earlham.edu/~peters/fos/brief.htm)

# EU Commission and Open Access

*“If I have seen further it is by standing on the shoulders of giants.”* Isaac Newton, 1676

## OA Pilot in the Seventh Research Framework Program (2007)

- Fast and reliable access to research results can **drive innovation, advance scientific discovery and support development of a strong knowledge-based economy**
- Ensure that research results are disseminated as widely and effective as possible to **guarantee maximum exploitation and impact in the world of research and beyond**
- Grant agreements signed after the beginning of the pilot require Open Access

## Commission Recommendation on Access To and Preservation of Scientific Information (2012)

- Policies on open access to scientific research results should **apply to all research that receives public funds**
- **Business will benefit from wider access. Small and medium-sized enterprises in particular will improve their capacity to innovate**
- Recommends that Member States define clear policy on Open Access for publicly funded research, with access preferably immediately or in any case not later than six months after publication (twelve months for social sciences and humanities)
- All materials published under Horizon 2020, the EU’s €80 billion Research and Innovation Program for 2014 to 2020 must be Open Access

# White House Directive to Promote Open Access, February 2013

- Seeks to ensure that the results of federally funded scientific research, including peer-reviewed publications and digital data, are made available to and useful for the public, industry, and the scientific community
- Directs every Federal agency with over \$100 million in annual R&D expenditures to develop a plan to support increased public access to the results of federally funded research

***Wider availability of peer-reviewed publications and scientific data in digital formats will create innovative economic markets for services related to curation, preservation, analysis, and visualization.***

***Policies that mobilize these publications and data for re-use through preservation and broader public access also maximize the impact and accountability of the Federal research investment. These policies will accelerate scientific breakthroughs and innovation, promote entrepreneurship, and enhance economic growth and job creation.***

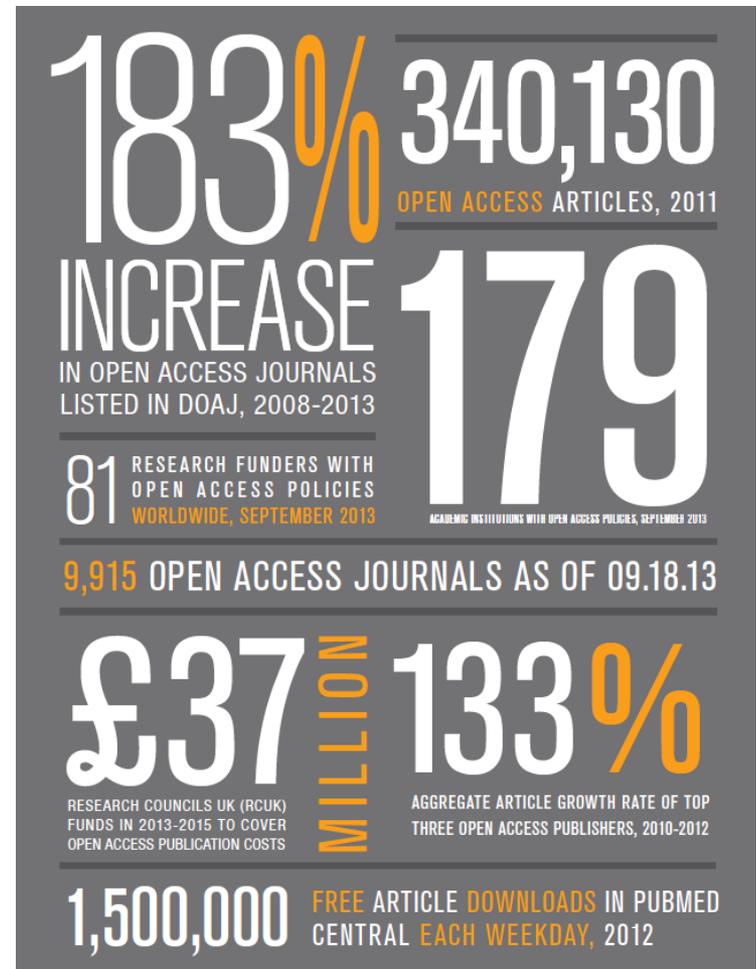


# ASAP: Accelerating Science Award Program

How the Unrestricted Exchange of Information can Advance Science and Medicine and Benefit Society

“Open Access publishing stimulates an economic engine that creates jobs and new businesses worldwide. This portfolio features examples of these high-impact results”

Elizabeth Marincola, CEO, PLOS



We don't want to cut a path through the jungle and then lay landmines behind us



## Tesla boss Elon Musk hints at technology giveaway



Tesla boss Elon Musk: "It is possible to create a compelling electric car"

Tesla boss **Elon Musk** has given the strongest hint yet that the firm is considering "freeing" its patents to help speed up electric car development.

When asked by the BBC's Theo Leggett if he was considering giving technology away, Mr Musk said "you're on the right track".

Mr Musk said he hoped to break down technological barriers to help speed up electric car adoption.

The firm will deliver the first five of its Model S cars to the UK on Saturday.

Mr Musk told the BBC: "We don't want to cut a path through the jungle and then lay a bunch of landmines behind us."

Earlier this week, Mr Musk **told Tesla shareholders** that in order to speed up the pace of adoption of electric cars, Tesla was "playing with doing something fairly significant on this front which would be kind of controversial with respect to Tesla's patents".

### Global Car Industry

**Ford recalls 1.4m cars due to fault**

**China to scrap millions of cars**

**GM in another car safety recall**

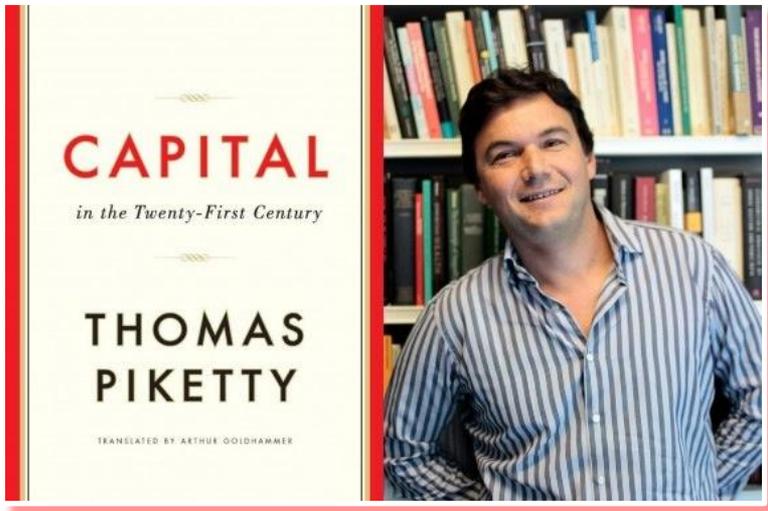
**European car sales rise 4.6% in April**

6 June 2014

- Tesla boss Elon Musk hints that the firm is considering "freeing" its patents to help speed up electric car development
- Mr. Musk said he hoped to break down technological barriers to help speed up electric car adoption
- Mr. Musk told the BBC: "We don't want to cut a path through the jungle and then lay a bunch of landmines behind us."



# The diffusion and sharing of knowledge—the public good par excellence



- “Knowledge and skill diffusion is the key to overall productivity growth as well as the reduction of inequality both within and between countries”
- “The technological convergence process may be abetted by open borders for trade, but it is fundamentally a process of diffusion and sharing of knowledge—the public good par excellence—rather than a market mechanism”

Piketty Thomas, 2014. *Capital in the Twenty-First Century*, Cambridge, MA: The Belknap Press of Harvard University Press, p. 21

Photo & cover: [dollarsandsense.org/blog/2014/05/prologomena-future-reading-piketty.html](http://dollarsandsense.org/blog/2014/05/prologomena-future-reading-piketty.html)

# Democratizing Development

We need to throw open the doors, recognizing that others can find and create their own solutions. And this open research revolution is underway. We need to recognize that development knowledge is no longer the sole province of the researcher, the scholar, or the ivory tower.

The aim is to open the treasure chest of the World Bank's data and knowledge to everyone.

Robert Zoellick, President, The World Bank Group  
Georgetown University, September 2010



# Open Development

Open development is about making information and data freely available and searchable, encouraging feedback, information-sharing, and accountability.



## Open About What We Know

(Data, Tools, and  
Development  
Knowledge)



## Open About What We Do

(Operations,  
Projects, Finances,  
and Commitments)



## Open About How We Work

(Partnerships,  
Engagement  
Platforms, and  
Solutions)



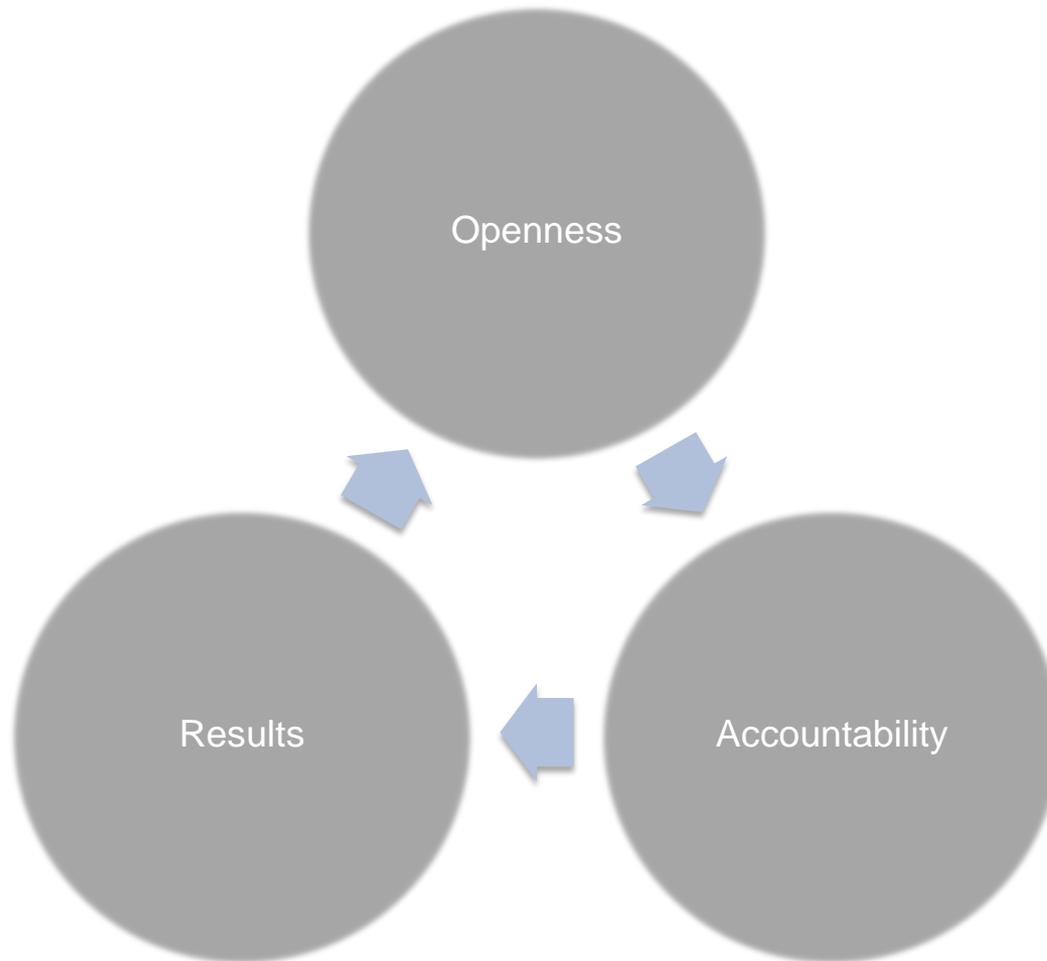
## Open Government

(Transparency,  
Accountability)

**THE WORLD BANK OPEN AGENDA**



# Openness drives accountability, and accountability drives results



# Access to Information

- Effective July 1, 2010
- Modeled after the US and Indian Freedom of Information Acts
- Five principles
  - Maximize access
  - Clear list of exceptions
  - Safeguard the deliberative process
  - Clear procedures for making information available
  - Right to appeal
- Millions of documents accessed since

The screenshot shows the World Bank's 'Access to Information' web page. At the top, there is a navigation menu with links for 'About', 'Countries', 'Data & Research', 'Learning', 'News', 'Projects & Operations', and 'Publications'. Below this is a search bar with a 'GO' button. The main content area is titled 'Access to Information' and features a paragraph explaining the World Bank's policy on transparency. To the right of the text are several icons and links for 'Submit Request for Information', 'Newly Disclosed Documents', 'Recently Declassified Documents', 'Simultaneous Disclosure', 'Open Development', and 'Board Work Program'. A photograph of women working at computers is also visible. At the bottom, there is a search box with a 'Go' button and a note that it searches the entire website.

# Open Data

- Effective April 2010
- Legally open
- Technically open
  - Editable electronic format or an API
- In five languages
  - Arabic, Chinese, English, French and Spanish
- Data by
  - Country & region
  - Topic
  - Indicator
- Data visualization
- Chart and map an indicator

The screenshot shows the World Bank Open Data website. At the top, there's a navigation bar with 'Home', 'About', 'Data', 'Research', 'Learning', 'News', 'Projects & Operations', 'Publications', 'Countries', and 'Topics'. Below this is a red 'Data' header with sub-navigation for 'By Country', 'By Topic', 'Indicators', 'Data Catalog', 'Microdata', and 'Blog'. A search bar is located in the top right corner. The main content area features a 'World Bank Open Data: free and open access to data about development in countries around the globe.' banner. Below this, there are several sections: 'Find an indicator' with a search box for 'GNI per capita, Atlas method (current US\$)'; 'BROWSE DATA' with buttons for 'By Country', 'By Topic', 'Indicators', and 'Use our Data'; 'FEATURED' articles including 'International tourism data: top destinations, number of arrivals, and more' and 'How we do Open Data: #1 - choosing development indicators'; 'RECENTLY UPDATED' articles like 'World Development Report 2014' and 'IDA Results Measurement System'; and a video player for 'For China's Economy, 7 Is a Favorite Number'. On the right side, there's a 'The World at a Glance' sidebar with charts for 'Economy & Growth' (GDP at \$72.68 trillion), 'Health' (Life expectancy at 71 years), 'Education' (90% completion rate), and 'Environment' (33,615,389 CO2 emissions).

# Open Access

- Effective July 2012
- Applies to manuscripts and associated datasets
  - Journal articles, working papers, books, chapters
- If published by the World Bank
  - Available immediately in the OA repository
  - Creative Commons Attribution, CC BY
- If published externally, Green OA
  - Working paper version (of journal articles) available immediately, CC BY
  - Accepted author manuscript after publisher's embargo, CC BY-NC-ND
- 15,380 documents / 3.6 million downloads
- Centerpiece of the OA Policy

[openknowledge.worldbank.org](http://openknowledge.worldbank.org)

The screenshot shows the Open Knowledge Repository (OKR) website. At the top, it features the World Bank logo and the OKR logo, along with the text "OPEN KNOWLEDGE REPOSITORY". A search bar is located in the top right corner. The main content area is divided into two columns. The left column, titled "Browse the OKR", lists various navigation options: Collections (15,355 publications available), Authors, Dates, Topics, Titles, Author profiles, View, Site Statistics, Most Popular Items, Downloads by Country, Other, About, Terms of Use, FAQ, Harvesting the OKR, Resources, Open Access Policy, Access to Information Policy, Open Data, Open Development, Documents & Reports, Stay Connected, Facebook, Twitter, and RSS. The right column, titled "Latest Publications", displays three featured publications with their respective cover images and brief descriptions. The first publication is "Building Integrated Markets within the East African Community : EAC Opportunities in Public-Private Partnership Approaches to the Region's Infrastructure Needs" by World Bank (2014-06-01). The second is "The Little Data Book on Information and Communication Technology 2014" by World Bank (2014-05-30). The third is "The Little Data Book on Private Sector Development 2014" by World Bank (2014-05-30). Below these, there are two more publications: "Making Remittances Work : Balancing Financial Integrity and Inclusion" by Todoroki, Emiko; Noor, Wameek; Celik, Kuntay; Kulathunga, Anoma (2014-05-29) and "Resource Financed Infrastructure : A Discussion on a New Form of Infrastructure Financing" by Halland, Havard; Beardsworth, John; Land, Bryan; Schmidt, James (2014-05-29). At the bottom of the page, there is a footer with the World Bank Group logo and the text "IBRD | IDA | IFC | MIGA | ICSD", a legal notice, and a "Fraud & Corruption Hotline" number.

**WHAT IF SOMEONE HAS ALREADY FIGURED OUT THE ANSWERS TO THE WORLD'S MOST PRESSING POLICY PROBLEMS, BUT THOSE SOLUTIONS WERE BURIED DEEP IN A PDF, SOMEWHERE NOBODY WILL EVER READ THEM?**



# Which World Bank Reports Are Widely Read?

Doemeland, Dorte and James Trevino, World Bank Policy Research Working Paper 6851. May 2014.

The Washington Post PostTV Politics Opinions Local Sports National World Business

## The solutions to all our problems may be buried in PDFs that nobody reads

BY CHRISTOPHER INGRAHAM  May 8 at 11:37 am

**“What if someone has already figured out the answers to the world’s most pressing policy problems, but those solutions were buried deep in a PDF, somewhere nobody will ever read them?”**

Many of these reports are long and highly technical, and just about all of them get released to the world as a PDF report posted to the organization's Web site.

The World Bank recently decided to ask an important question: Is anyone actually reading these things? They dug into their Web site traffic data and came to the following conclusions: **Nearly one-third of their PDF reports had never been downloaded, not even once.**”

THE SLATEST YOUR NEWS COMPANION BY BEN MATHIS-LILLEY MAY 8 2014 1:08 PM

Slate



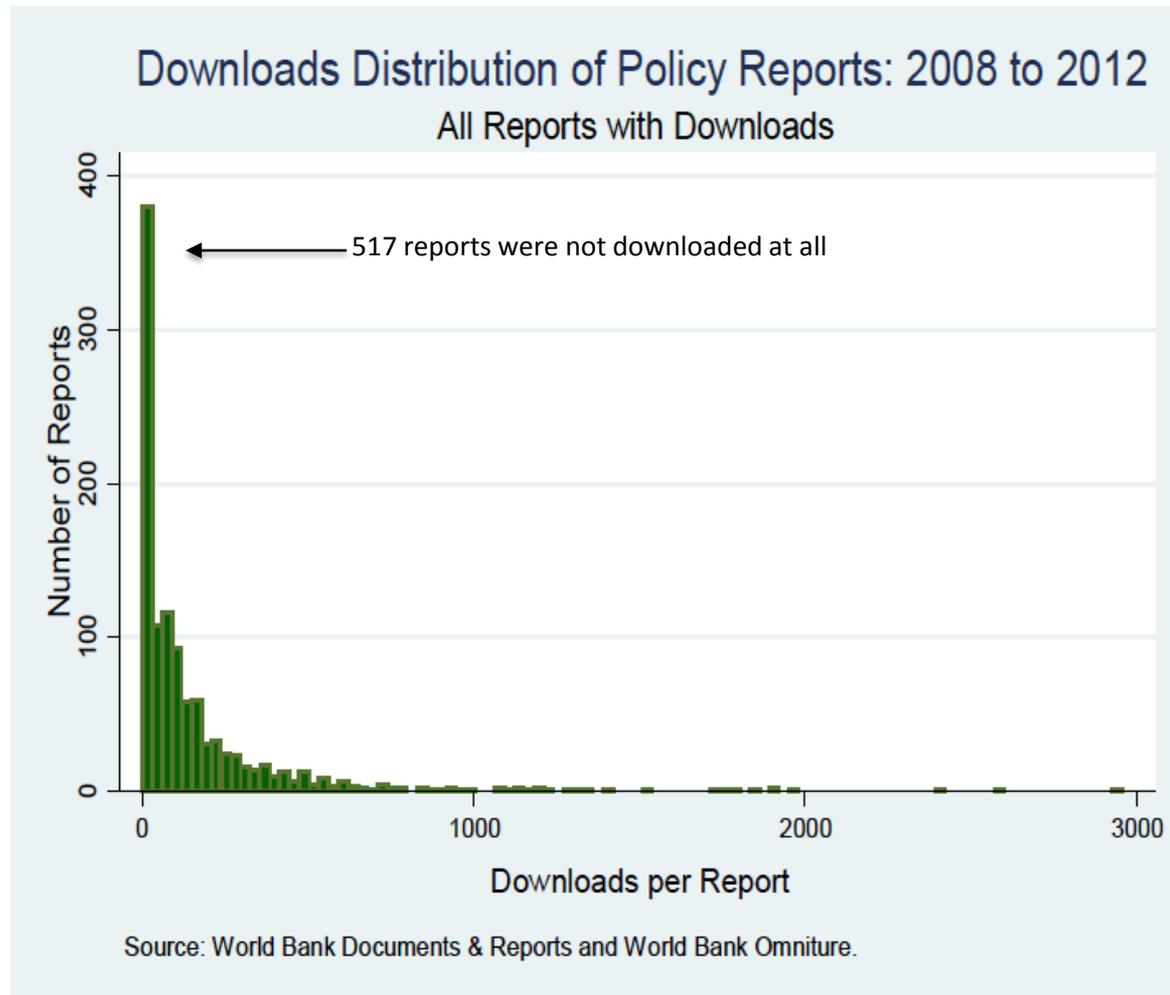
## Literally a Third of World Bank Policy Reports Have Never, Ever Been Read Online, By Anyone

By *Ben Mathis-Lilley*

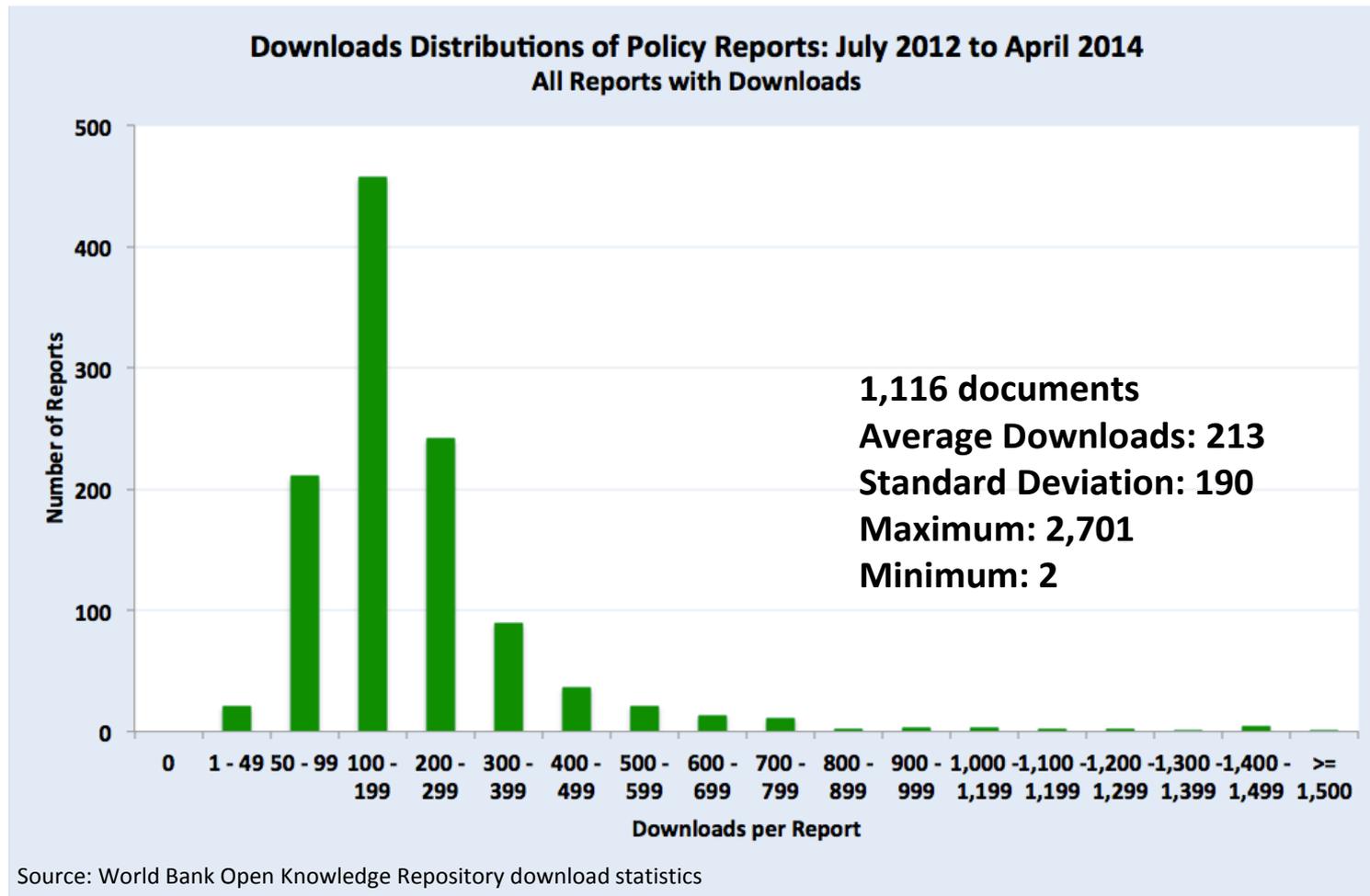
“The World Bank is an organization of 10,000-plus employees whose mission is the eradication of poverty. One element of what they do is writing policy reports about how to make the world better. And today the Washington Post's Wonkblog notes an unsettling fact about these reports, which was discovered by the bank itself: **31 percent of the reports the World Bank has put online have never been downloaded, ever, by anyone...**”



Author's conclude that 517 reports are have not been downloaded from the Documents & Reports Database



# Downloads from the Open Knowledge Repository, July 2012 through April 2014



# There have been 570 Thousand Downloads of ESW in the Two Years Since the Launch of the OKR



OPEN KNOWLEDGE REPOSITORY

## Browse the OKR

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## Most Popular Items

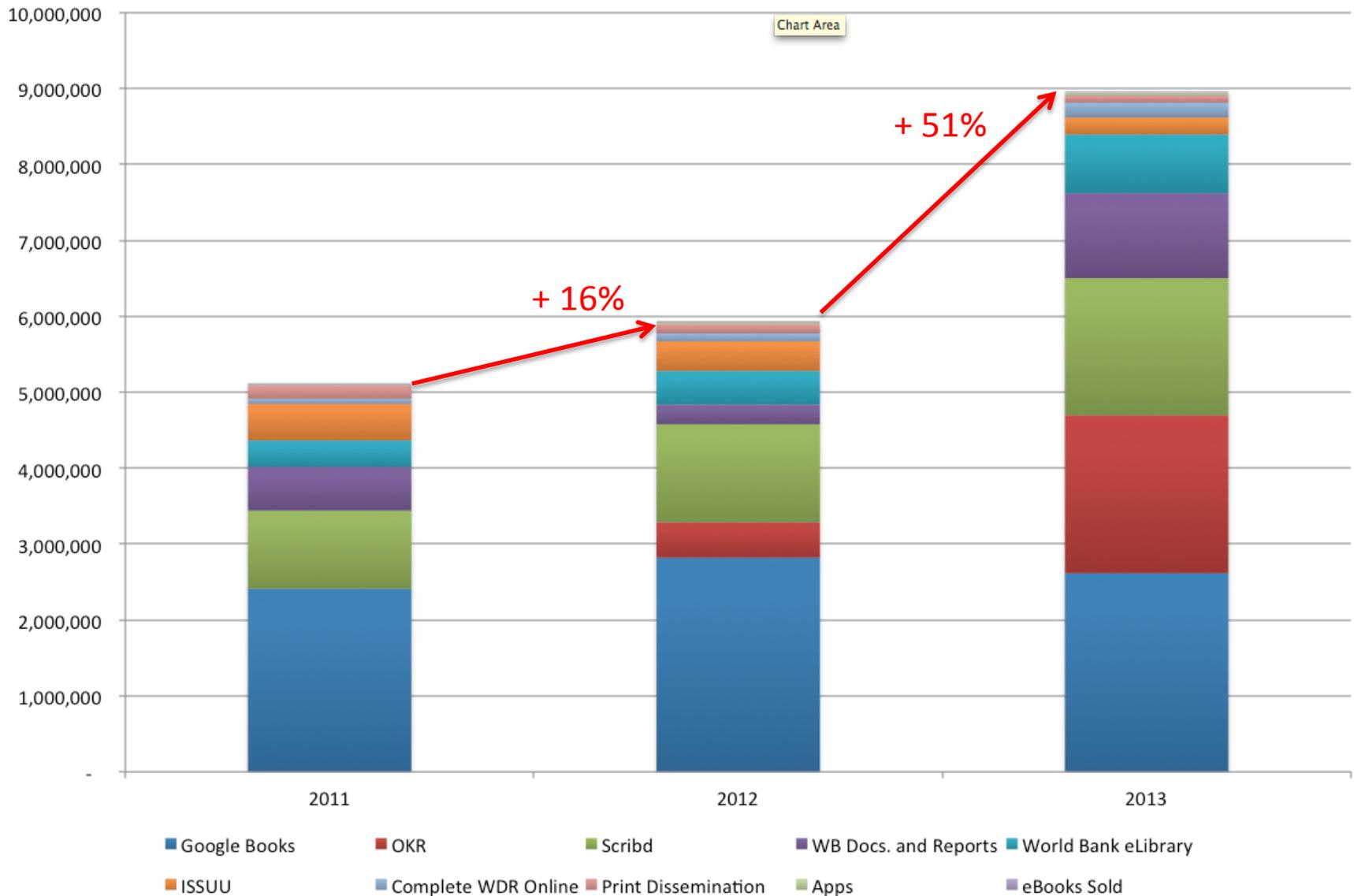
10 results  All regions All time

Item title	File downloads ▼	Abstract views	Sum
Vietnam Urbanization Review : Technical Assistance Report	6,084	1,372	7,456
Out-of-School Children and Youth in the Philippines : Issues and Opportunities	4,851	320	5,171
Introducing Energy-efficient Clean Technologies in the Brick Sector of Bangladesh	2,945	470	3,415
India Marine Fisheries : Issues, Opportunities and Transitions for Sustainable Development	2,860	546	3,406
Zambia - Commercial Value Chains in Zambian Agriculture : Do Smallholders Benefit?	2,363	428	2,791
Health Financing in Ghana at a Crossroads	2,342	1,138	3,480
Asmara Power Distribution and Rural Electrification Project : Pre-electrification Survey Analysis	2,153	139	2,292
Boom, Bust and Up Again? Evolution, Drivers and Impact of Commodity Prices: Implications for Indonesia	2,066	239	2,305
"...and then she died" : Indonesia Maternal Health Assessment	2,032	572	2,604
Uganda - Legal and Judicial Sector Study Report	1,528	220	1,748

**File downloads, total**  
569,633

**Abstract views, total**  
446,035

# Dissemination of World Bank Publications, 2011 to 2013



# Conclusions

- Knowledge, to have value, must be shared
- Fast and reliable access to knowledge will advance science, drive innovation, and spur economic growth
- Publicly funded research should be published Open Access, ideally with immediate availability
- Posting PDF files on a website does not ensure discoverability or access
- To ensure wide and effective dissemination and impact, knowledge assets must be
  - organized and structured
  - tagged for easy, reliable discovery and access
  - optimized for desktop, laptop, tablet, and smartphone
  - provided in a format that supports sharing and reuse
  - be licensed in a manner that supports sharing and reuse (CC BY license)



# Thank You!

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