Big Data in Growth Markets
Small Data in Growth Markets
Data Reciprocity
ACTIVE MOBILE SUBSCRIPTIONS

Developing Countries

Developed Countries


0 1 2 3 4 5 6 7
ANDROID PRICE-POINT

+ 3G
+ Wifi
+ GPS
+ Android
+ Touchscreen

= $175 USD (Jan 2011)
$85 USD (Jan 2012)
$48 USD (Feb 2013)
$32 USD (Oct 2013)
$22 USD (April 2014)
WORLD’S MOST POPULAR OS

March 2014
1.3 Billion Windows Users
1.35 Billion Android Users
INTERNET USERS

- Developing Countries
- Developed Countries
<table>
<thead>
<tr>
<th>#</th>
<th>Country</th>
<th>Users (millions)</th>
<th>YoY Change (millions)</th>
<th>Annual growth</th>
<th>% of Internet users</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>146.8</td>
<td>5.2</td>
<td>3.7%</td>
<td>59.9%</td>
</tr>
<tr>
<td>2</td>
<td>India</td>
<td>114.8</td>
<td>36.7</td>
<td>47.0%</td>
<td>71.0%</td>
</tr>
<tr>
<td>3</td>
<td>Brazil</td>
<td>69.0</td>
<td>22.5</td>
<td>48.4%</td>
<td>69.6%</td>
</tr>
<tr>
<td>4</td>
<td>Indonesia</td>
<td>63.2</td>
<td>14.0</td>
<td>28.5%</td>
<td>86.8%</td>
</tr>
<tr>
<td>5</td>
<td>Mexico</td>
<td>35.7</td>
<td>6.5</td>
<td>22.3%</td>
<td>63.2%</td>
</tr>
<tr>
<td>6</td>
<td>Turkey</td>
<td>32.3</td>
<td>2.4</td>
<td>8.0%</td>
<td>88.1%</td>
</tr>
<tr>
<td>7</td>
<td>Philippines</td>
<td>30.2</td>
<td>5.7</td>
<td>23.3%</td>
<td>88.9%</td>
</tr>
<tr>
<td>8</td>
<td>UK</td>
<td>29.9</td>
<td>1.6</td>
<td>5.7%</td>
<td>62.5%</td>
</tr>
<tr>
<td>9</td>
<td>Germany</td>
<td>22.1</td>
<td>2.1</td>
<td>10.5%</td>
<td>38.0%</td>
</tr>
<tr>
<td>10</td>
<td>France</td>
<td>22.0</td>
<td>1.6</td>
<td>7.8%</td>
<td>53.0%</td>
</tr>
</tbody>
</table>
MOBILE OPERATOR DATA: CDR

**CDR Column Elements**
- Caller (Texter) / Receiver
  - Hashed MSISDN
  - Hashed IMEI
- Time / Duration
- Cellular Towers

**TYPICAL DATA**
- 1 Month – 5 Years
- 5% – 100% of the population
The Physics of Society: “People are Particles”

Towards “Universal Laws” of Human Behavior?

\[ r_g^a(t) = \sqrt{\frac{1}{n_c^a(t)} \sum_{t=1}^{n_c^a} (\vec{r}_i^a - \vec{r}_{cm}^a)^2} \]

UK CALL GRAPH & NETWORK DIVERSITY

• Social Diversity
  – Edge Entropy

\[ D_{social}(i) = - \sum_{j=1}^{k} p_{ij} \log(p_{ij}) \]

\[ \frac{\log(k)}{\log(A)} \]

• Spatial Diversity
  – Node Entropy

\[ D_{spatial}(i) = - \sum_{a=1}^{A} p_{ia} \log(p_{ia}) \]

\[ \frac{\log(A)}{\log(A)} \]

DIVERSITY AND ECONOMIC OPPORTUNITY
TOWARDS A SOCIAL STIMULUS PACKAGE?

Are Slums Good? Economic Springboards and Resource Allocation

REATIONS TO REGIONAL SHOCKS

• Spatial Dynamic Bayesian Anomaly Detection
  – Quantify tower-level behavioral

H1N1, MEXICO, 2009
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Data Reciprocity
PREDICTING CHOLERA IN RWANDA?
MOBILE PAYMENTS: SMS BLOODBANK
PREPAID AIRTIME IS VIEWED AS EQUIVALENT TO 10% of daily wages spent on airtime.
Meet Gowri from Bangalore.

Mom, Sister, $50 Android, $3/day on
Jana Drives Consumer Action With Mobile Airtime.

We Connect Global Companies to 3.48 Billion Emerging Market Consumers in 102 Countries.
JANA: OUR GLOBAL NETWORK

3.48 BILLION MOBILE SUBSCRIBERS

Partnerships with 237 mobile phone carriers in 101 countries

MOBILE ENGAGEMENT

Mobile interaction with the consumer – in any country, on any handset – using a range of engagement channels

MOBILE REWARDS PLATFORM

Mobile Airtime Rewards in over 70 currencies worldwide

Global Footprint in 101 Emerging Markets Across Asia, the Americas, Sub-Saharan Africa, Middle East, and Eastern Europe
PARTNERSHIPS WITH 237 MOBILE OPERATORS...
Global Research

Take the pulse of over 5 million consumers across the world

Gather insights from millions of emerging market consumers in over 100 countries

Rapid, accurate, and cost-efficient

Our mobile platform is optimized for all types of web-enabled phones, making it simple for our panelists to complete a survey quickly. Ask panelists a question and begin receiving results within minutes. Our panelists are actual people who are eager to share their insights. Receive robust, valid results at scale from individuals across the world. Minimum panel sizes or survey questions are not required. Survey Jana panelists starting at $0.10 per question.

Learn more at jana.com/products/global-research
ALL THIS DATA, AND DIGITAL ADVERTISING STILL SUCKS.
If we can redirect half of the $200 billion spent on emerging market advertising, Jana will be able to provide one billion people with the equivalent of a 5% raise.
Thank You!