

International Development

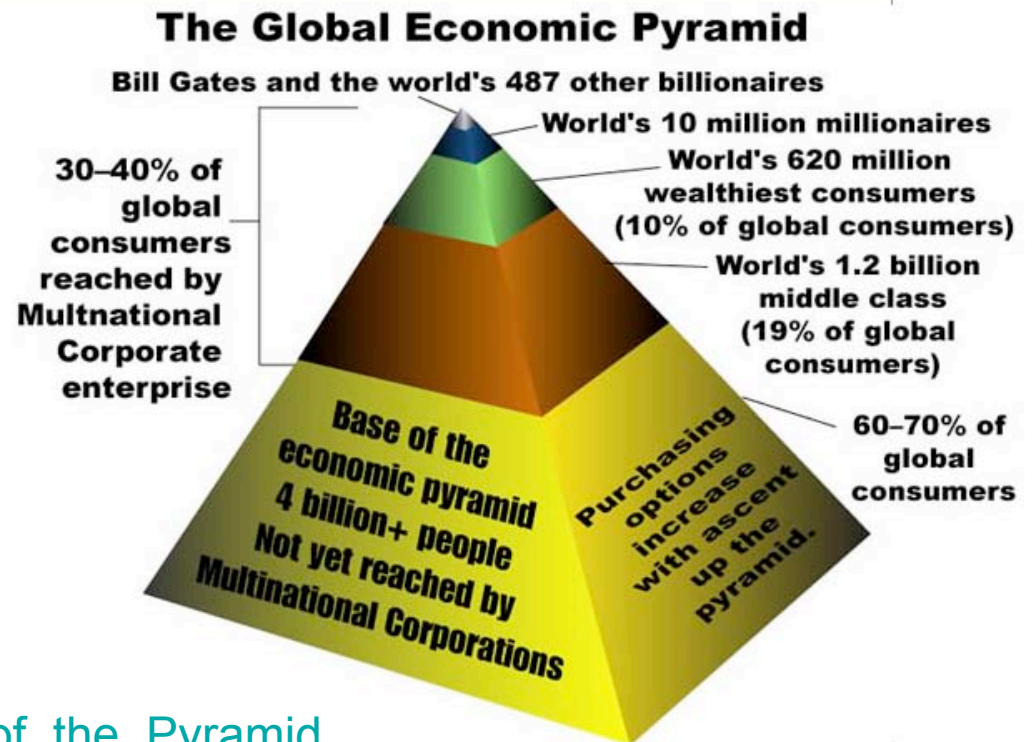
Applying science, technology, engineering, business, & economics to improve the lives of people in different economies and cultures

Brian Rasnow
Lecturer, Physics
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BoP

- The distribution of wealth is approximately pyramidal
- The bottom or base of the economic pyramid (“BoP”) consists of ~4 billion people earning <\$2/day*
- The BoP is the largest emerging market
- Growing numbers of students are eager to learn about and work in this sector



* http://en.wikipedia.org/wiki/Bottom_of_the_Pyramid

Educating for Development

- The “Professional pyramid” is inverted: >90% of professionals work for the top <10% of the economic pyramid.
- Education has focused on teaching problem solving at the ToP
 - The BoP has many different problems, resources, constraints, methods, challenges, and contexts
- Several new university programs focus on the BoP
 - [MIT D-Lab](#) and [IDDS](#)
 - [Caltech E105](#)
 - [UCDavis](#)
 - [Cal Poly D-Lab](#)



Positive Results

- BoP problems & opportunities are numerous & tractable
 - [Intelligent Mobility International](#), a wheelchair NGO from of Caltech E105
 - [Pearl Millet Thresher](#) from MIT IDDS 2008
 - [Other D-Lab successes](#)
- BoP study generates positive student outcomes
 - [Caltech E105 video part 1](#), [part 2](#) (~15 minutes), [photos](#)
 - [IDDS on NPR](#) and [YouTube](#)
 - Better prepare students for work and life
- Appropriate technical and business innovations improve lives and generate commerce at the BoP
 - Microloans, LED and solar lighting, [drip irrigation](#), [treadle water pumps](#), [peanut sheller](#)

Teaching International Development at CSUCI

- Top down
 - Identify and organize stakeholders
 - Identify and organize collaborations
 - Identify and organize projects/classes
- Bottom Up
 - Establish pearl millet threshing research project
 - Physics department involvement
 - Collaboration with MIT (plus minor funding from MIT)
 - Class project for Ph106
- BoP programs can run on modest resources

