

11.S945 Urbanizing China

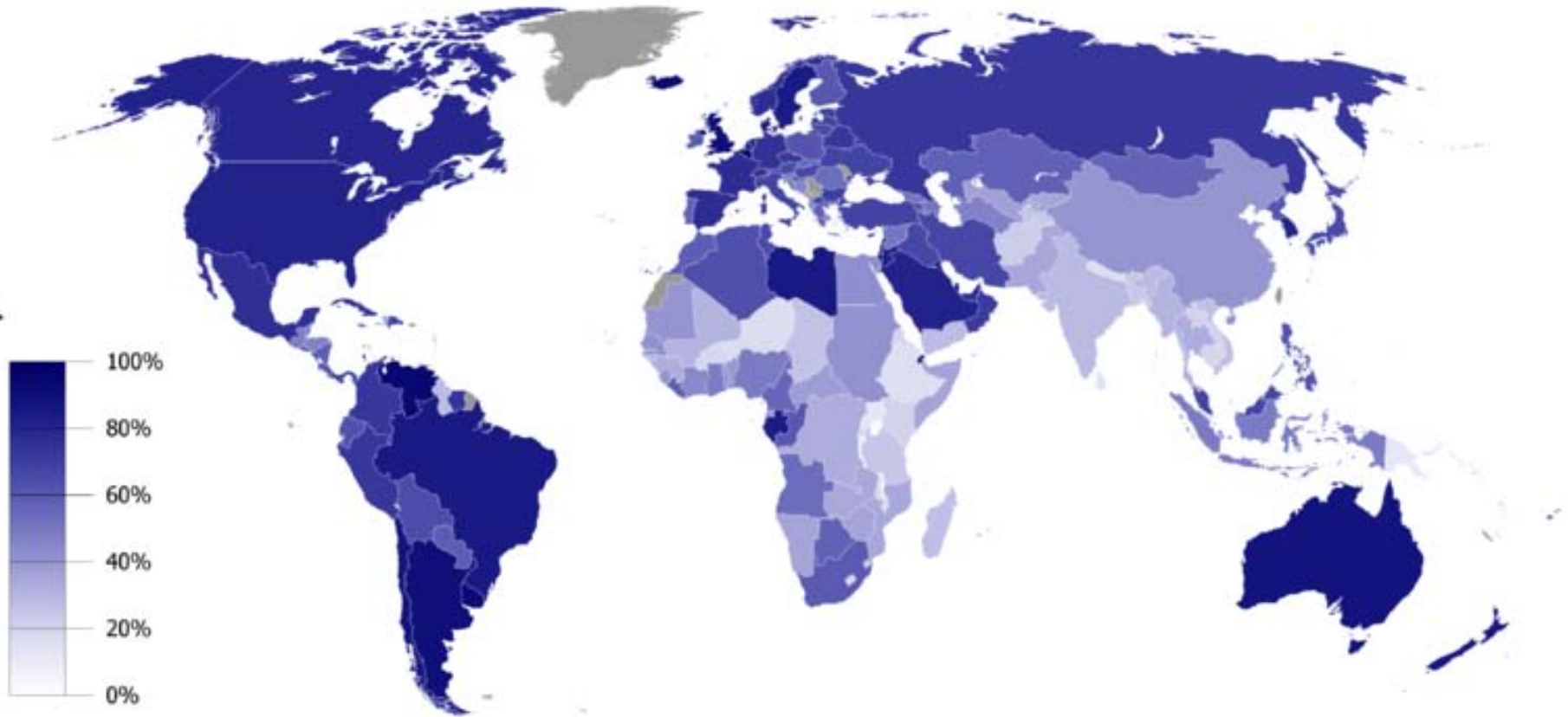
Is China an Outlier?

*China's Urbanization in Historical and
International Contexts*

Liyan Xu, Jinhua Zhao

9/9/2013

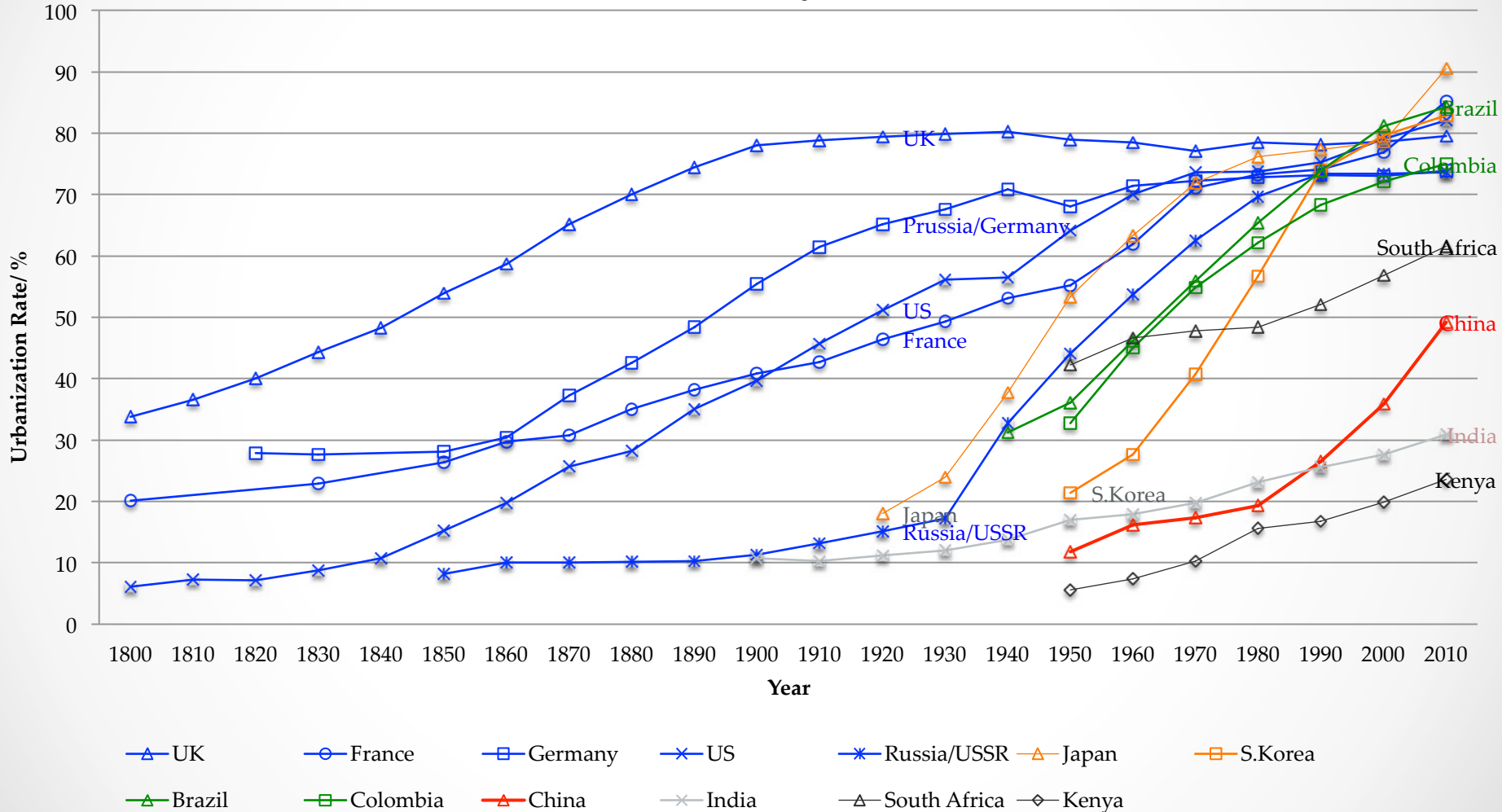
Facts of World Urbanization



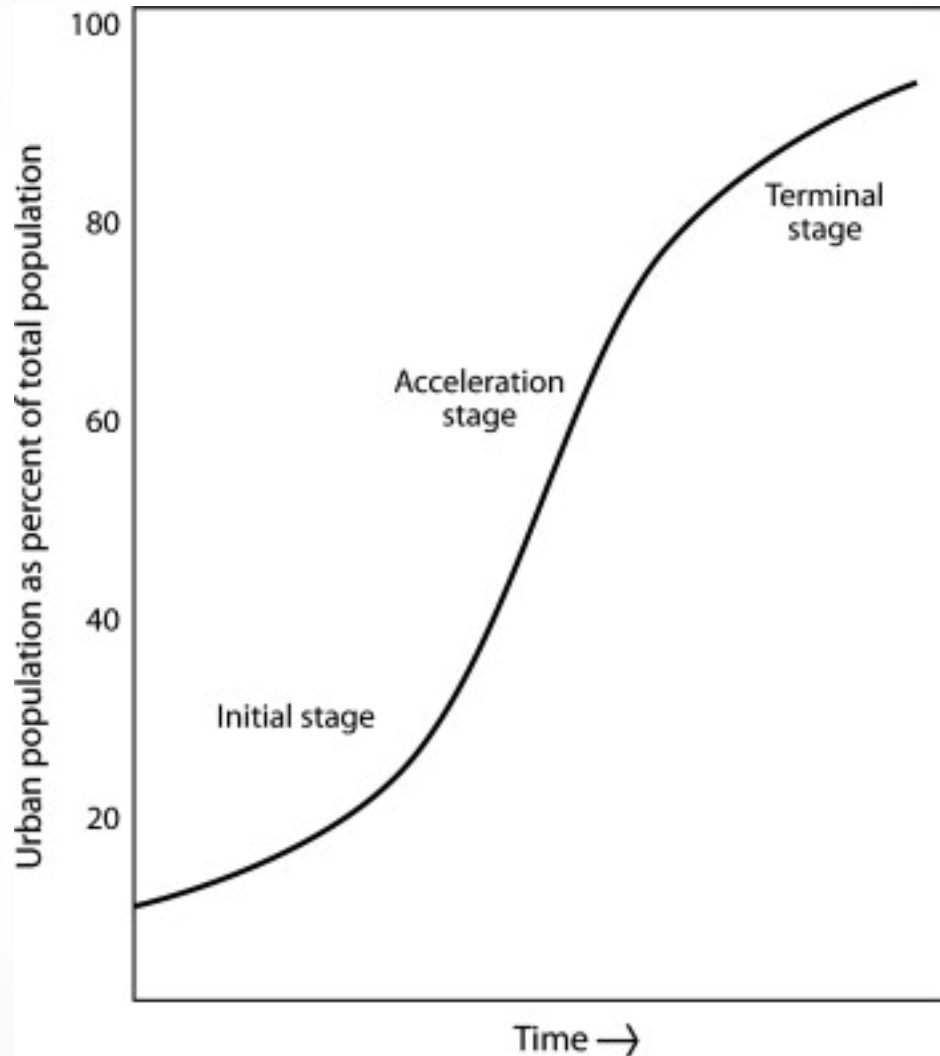
This image is in the public domain.

Urbanization History by Countries

World Urbanization by Countries, 1800-2010



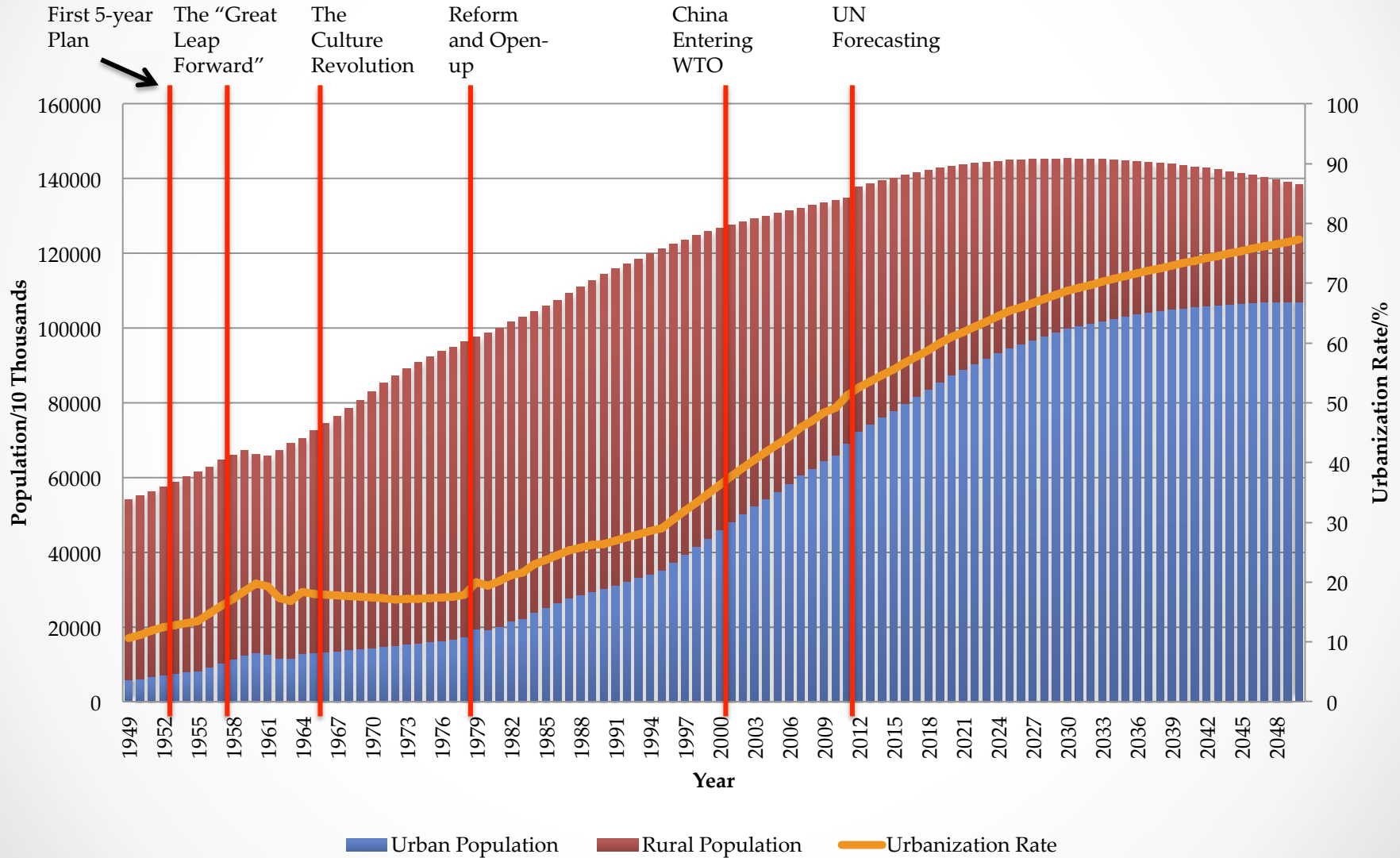
The Urbanization Curve



Courtesy of Elsevier, Inc., <http://www.sciencedirect.com>. Used with permission.

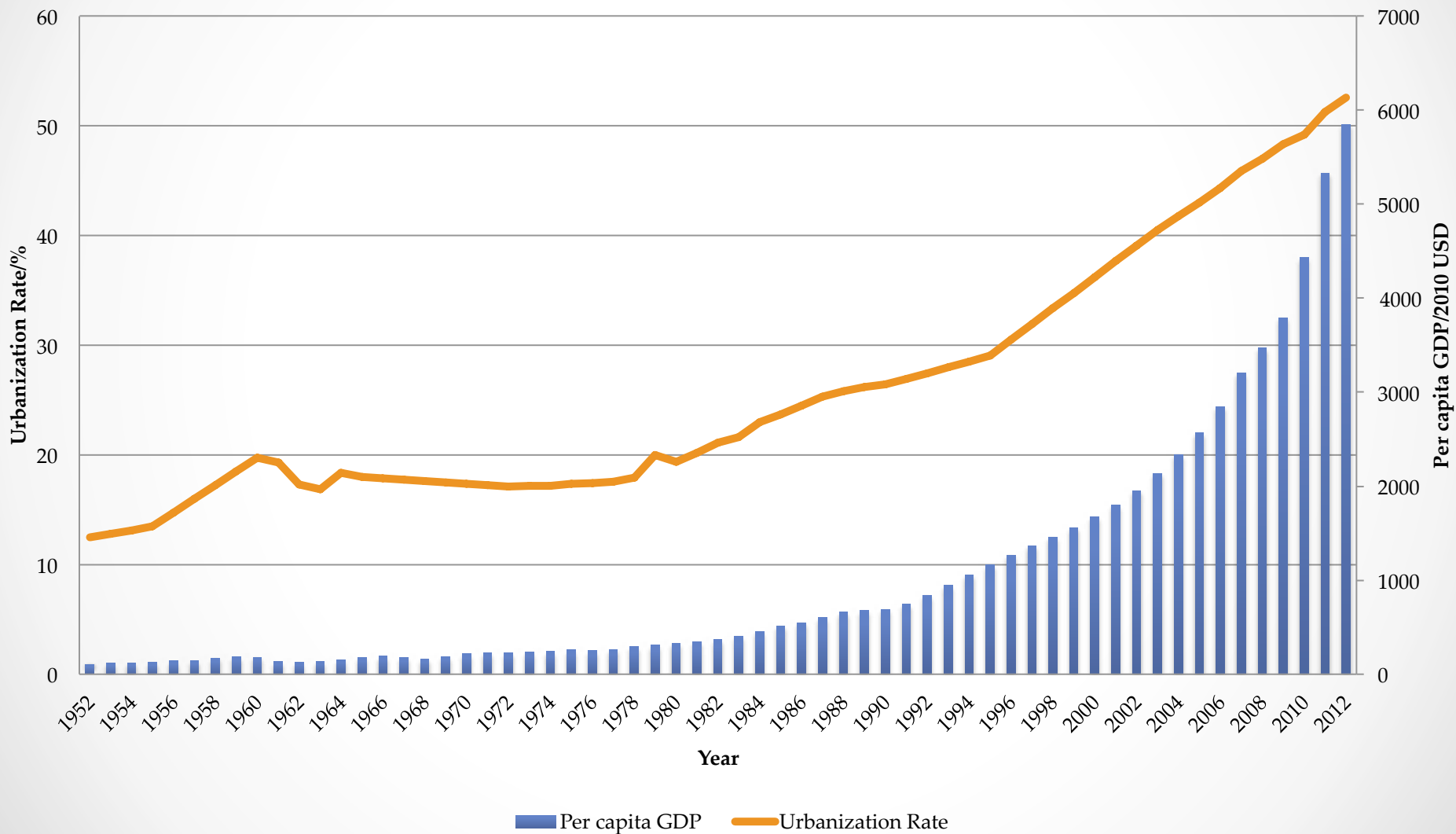
Facts of China's Urbanization

China's Urbanization 1949-2050



Facts of China's Urbanization

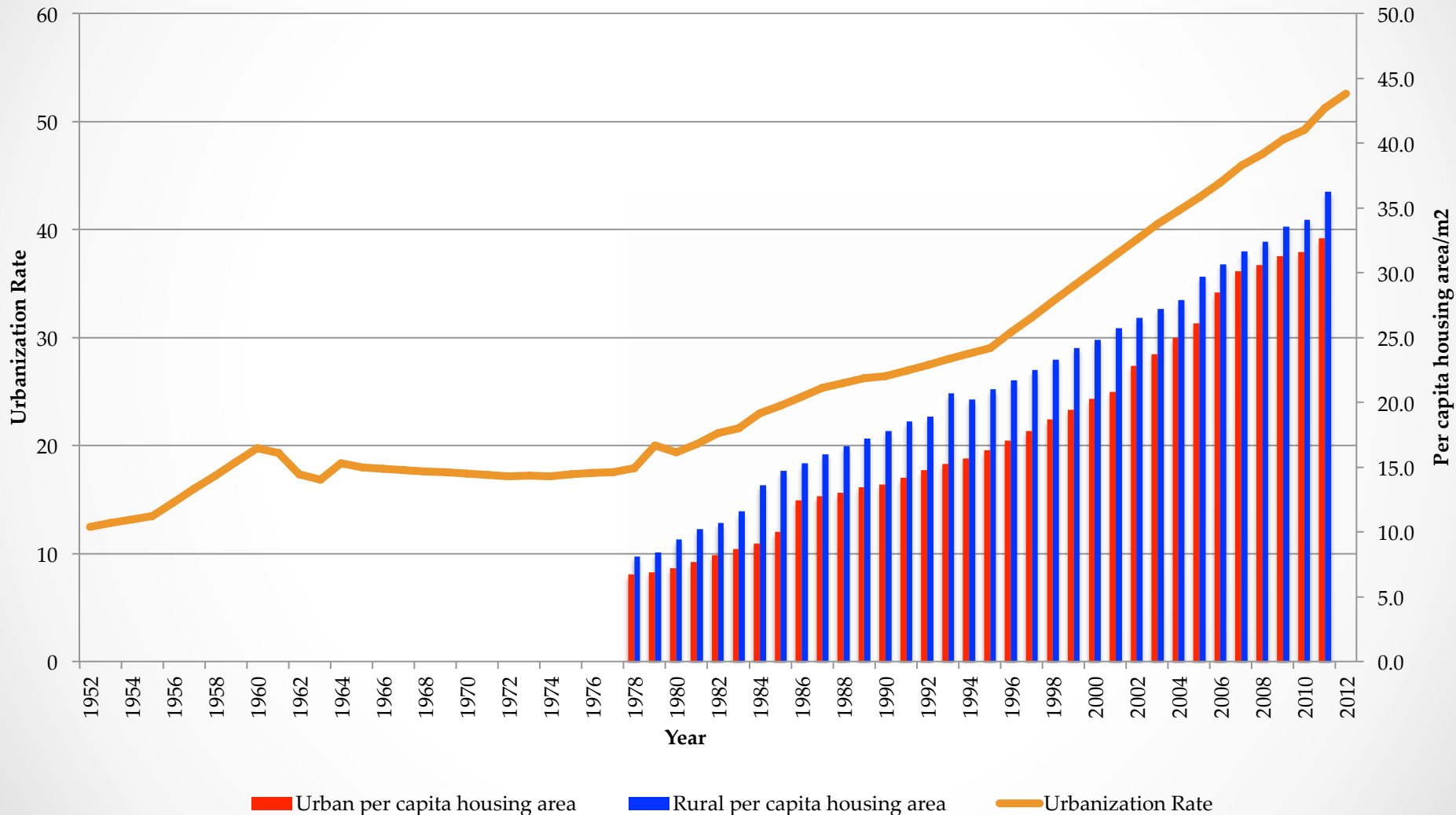
China's Urbanization and Economic Development 1952-2012



Source: Own calculation based on *China Compendium of Statistics 1949-2008*.

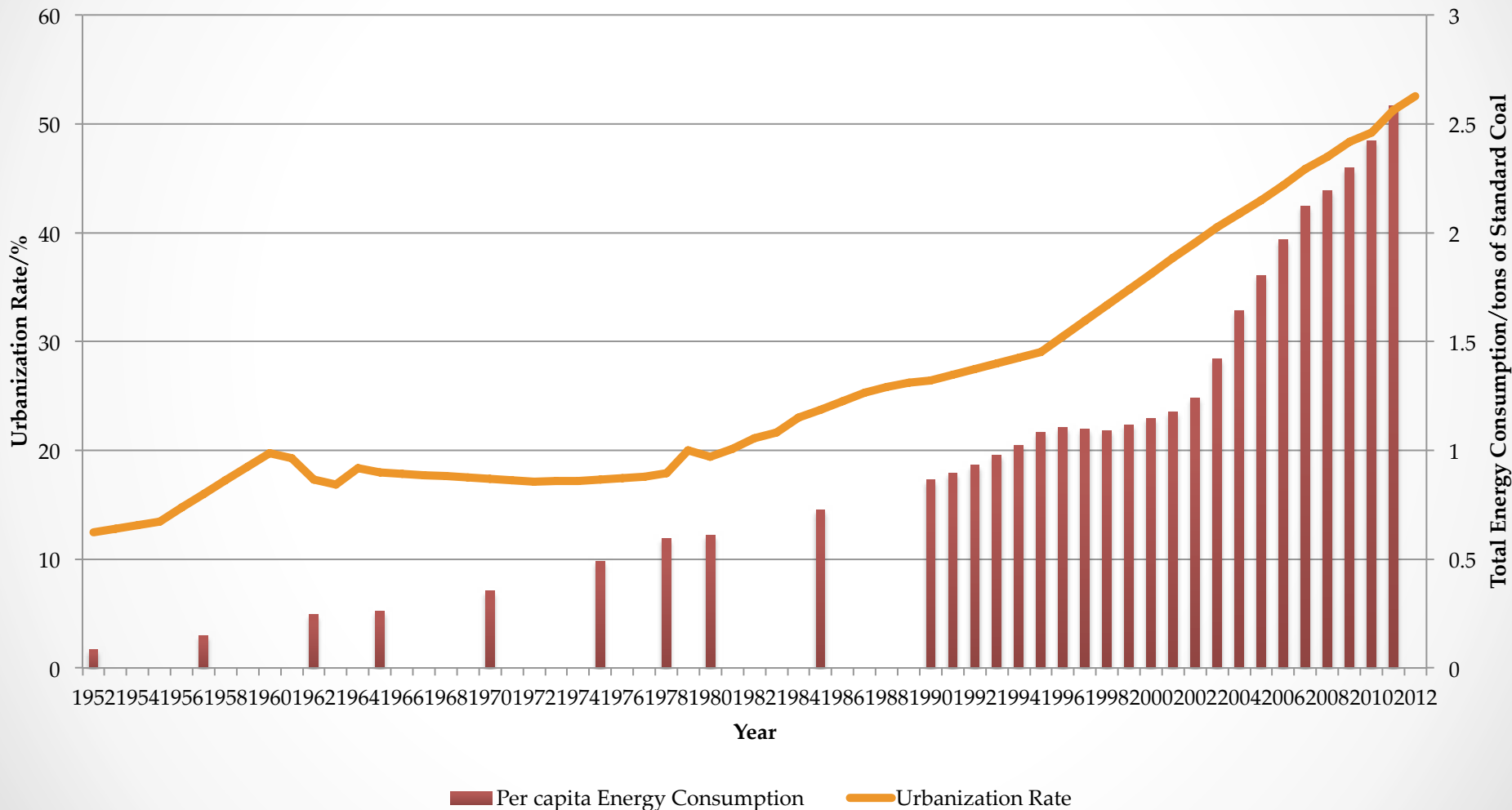
Facts of China's Urbanization

China's Urbanization and Housing Improvement, 1952-2012



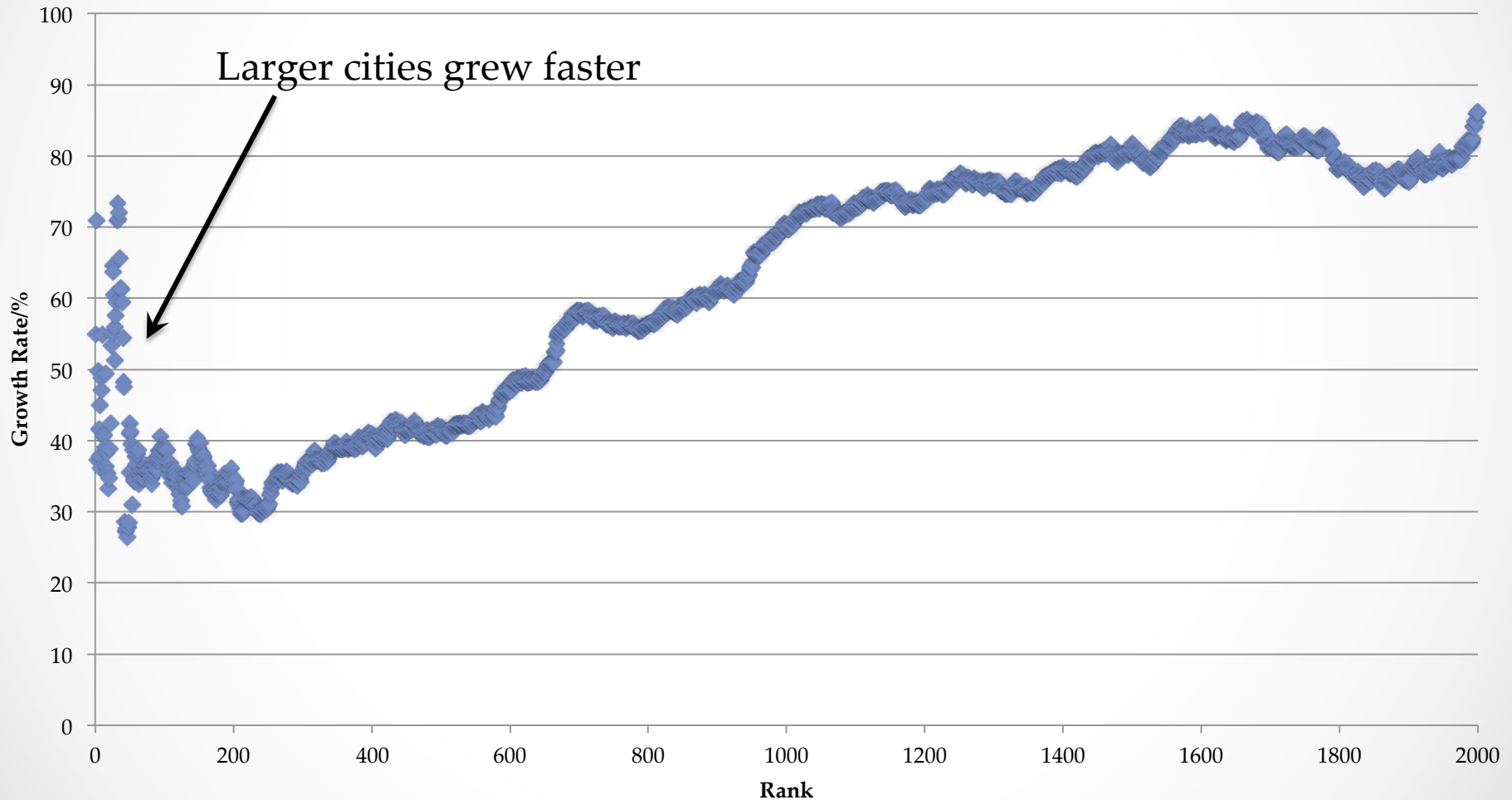
Facts of China's Urbanization

China's Urbanization and Per capita Energy Consumption, 1952-2012



Facts of China's Urbanization

Population Growth of Chinese Cities of Different Sizes, 2000-2010



China's Urbanization: What's So Special?

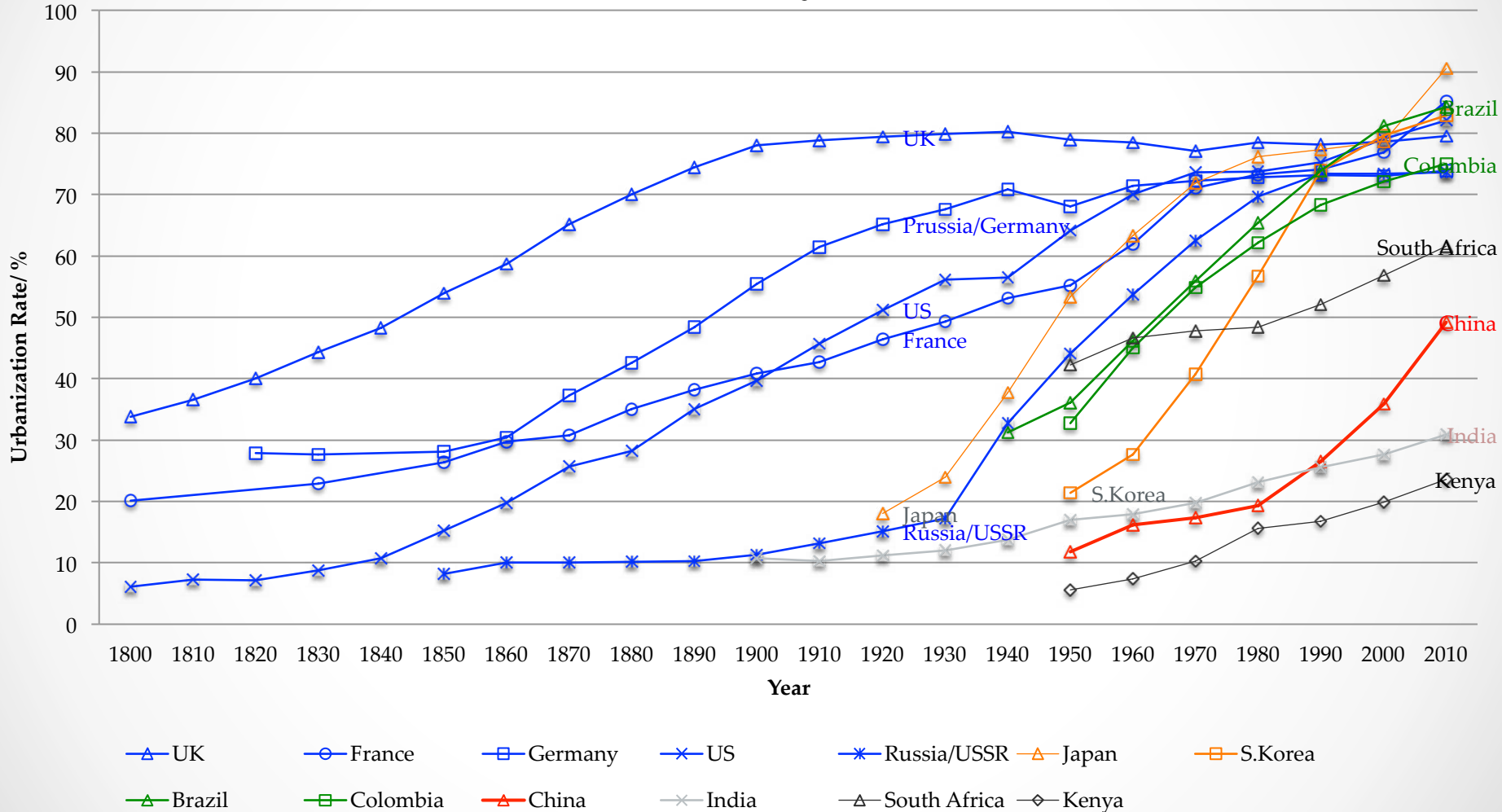
- Speed
- Economic Outcomes
- Resource/Environment Costs

Speed of Urbanization

- Rapid urbanization: far from “unprecedented”
 - Historical counterpart: Lowell, MA
 - Contemporary counterpart: Dubai
 - Country-level counterparts:
 - USSR, Japan, South Korea
 - Latin America

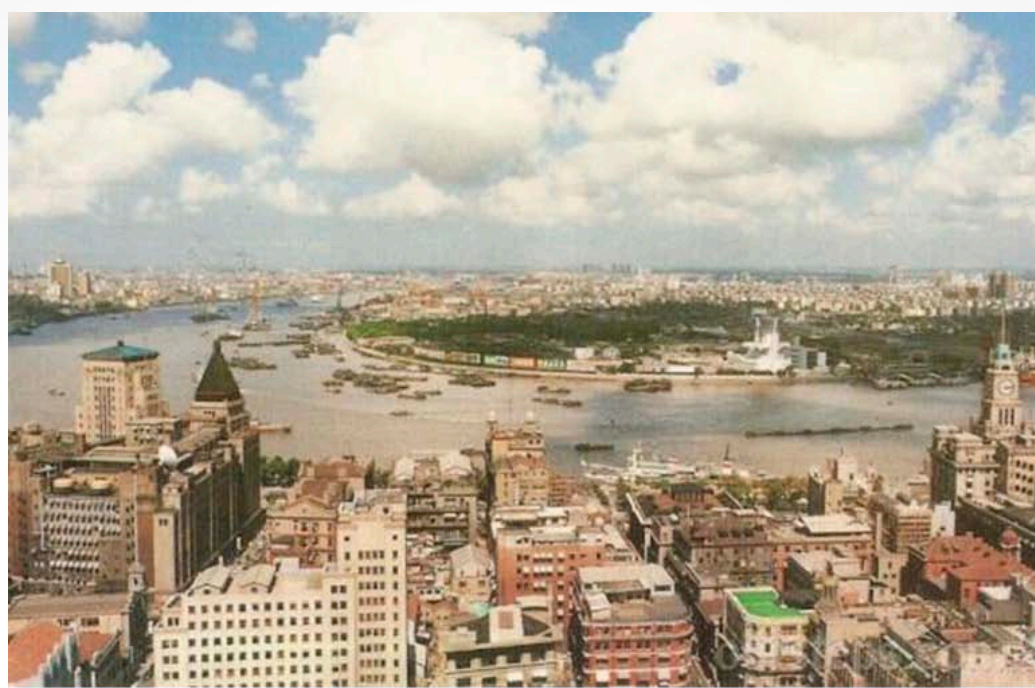
Urbanization History by Countries

World Urbanization by Countries, 1800-2010



Shanghai

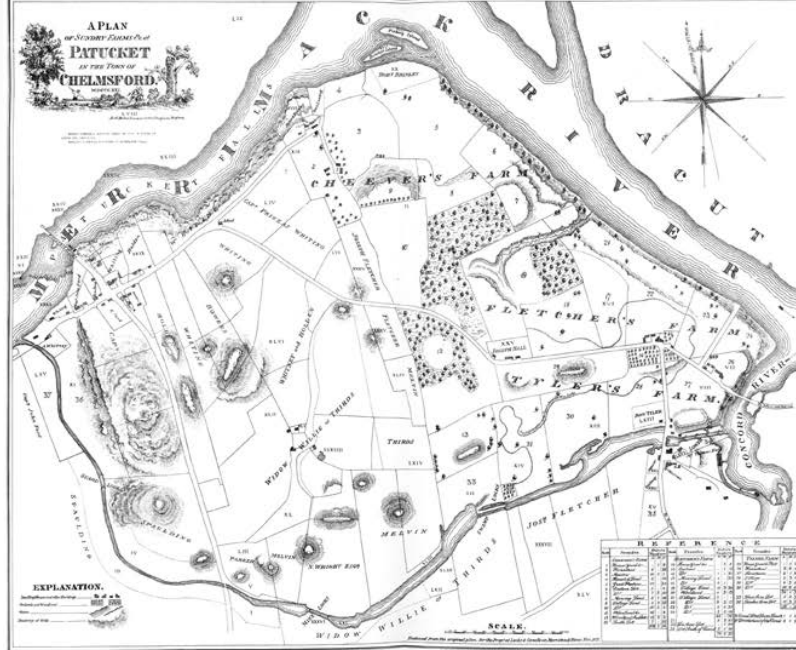
1990-2010



© sources unknown. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <http://ocw.mit.edu/help/faq-fair-use/>.

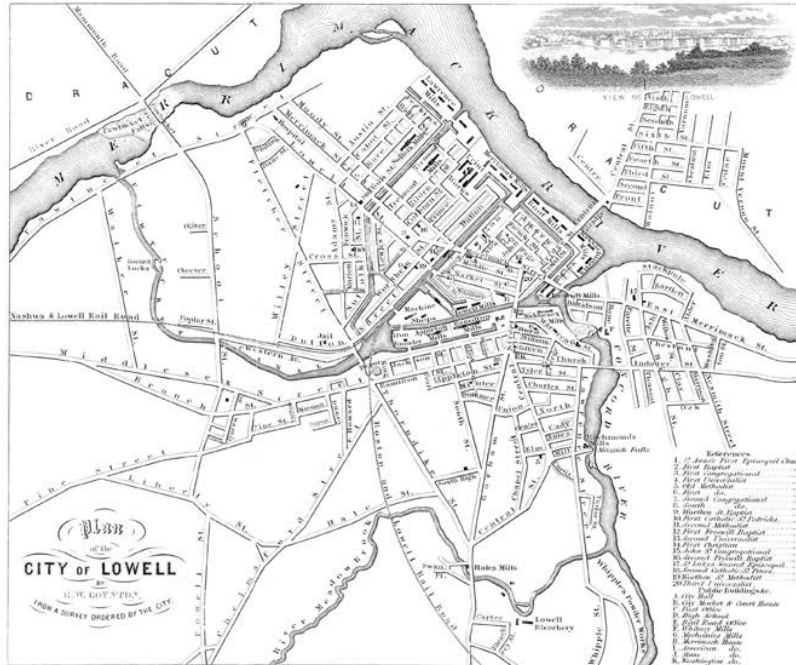
Lowell, MA

1821-1845



I. Patucket Farms - 1821 - by J. G. Hale

Collection of the Lowell Historical Society



III. City of Lowell - 1845 - by G. W. Boynton

Collection of the Lowell Historical Society

These maps are in the public domain.

Dubai

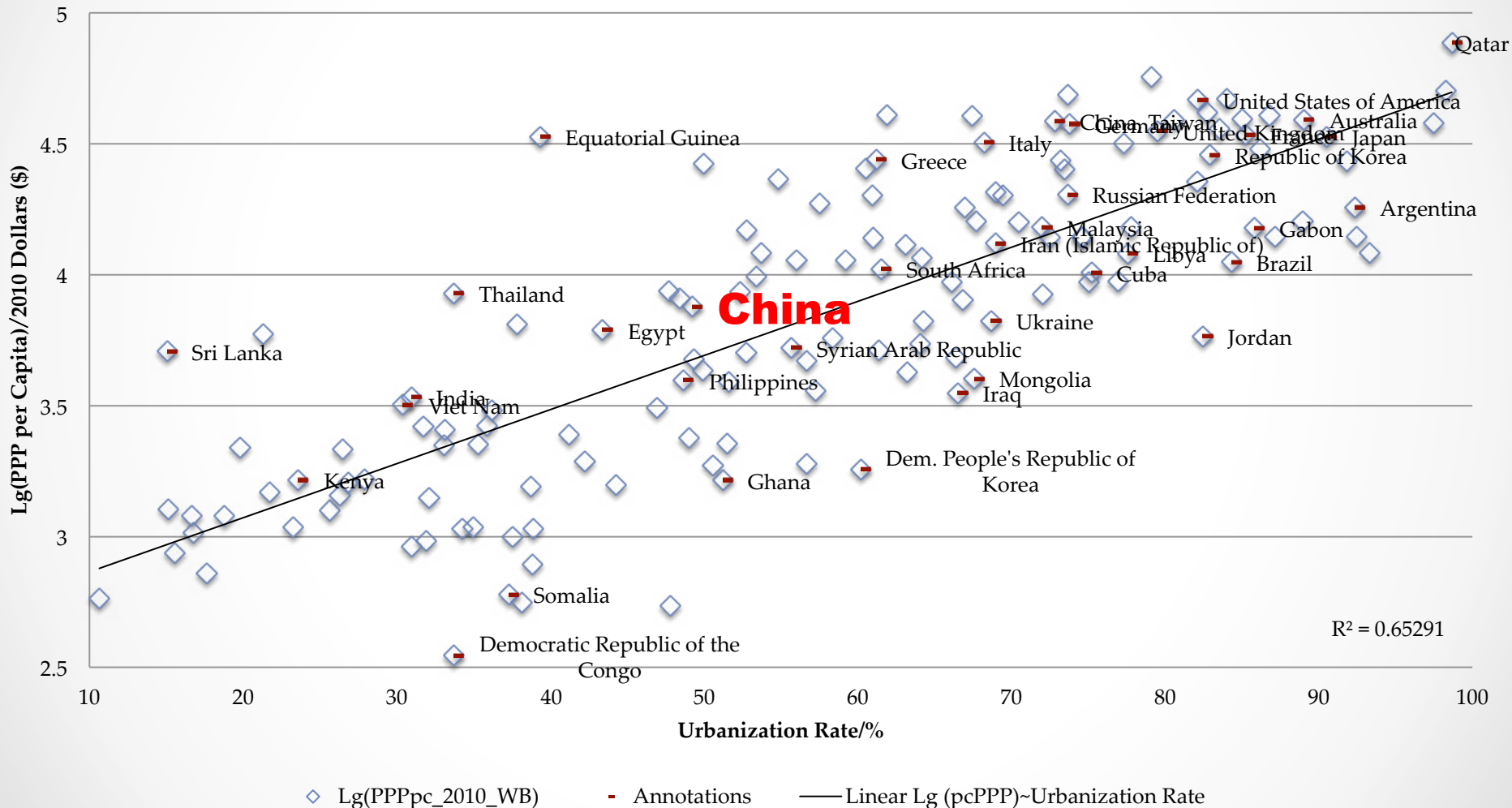
c.1990-2010



Top image © source unknown. Bottom image © Hatim Saleh, ChopperShoot.com. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <http://ocw.mit.edu/help/faq-fair-use/>.

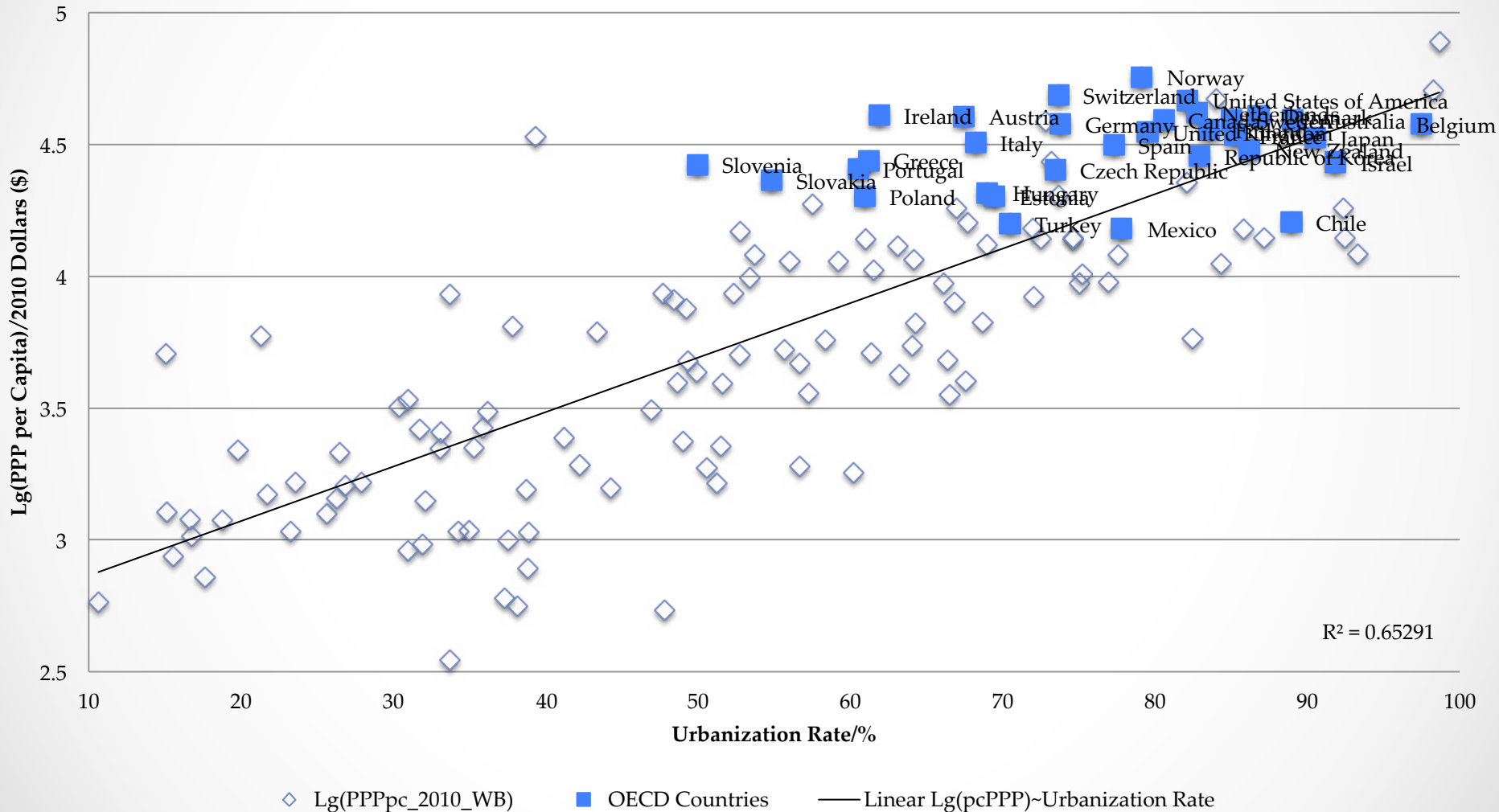
Urbanization and Economic Development

Urbanization Rate vs. Lg(PPP per Capita), World, 2010



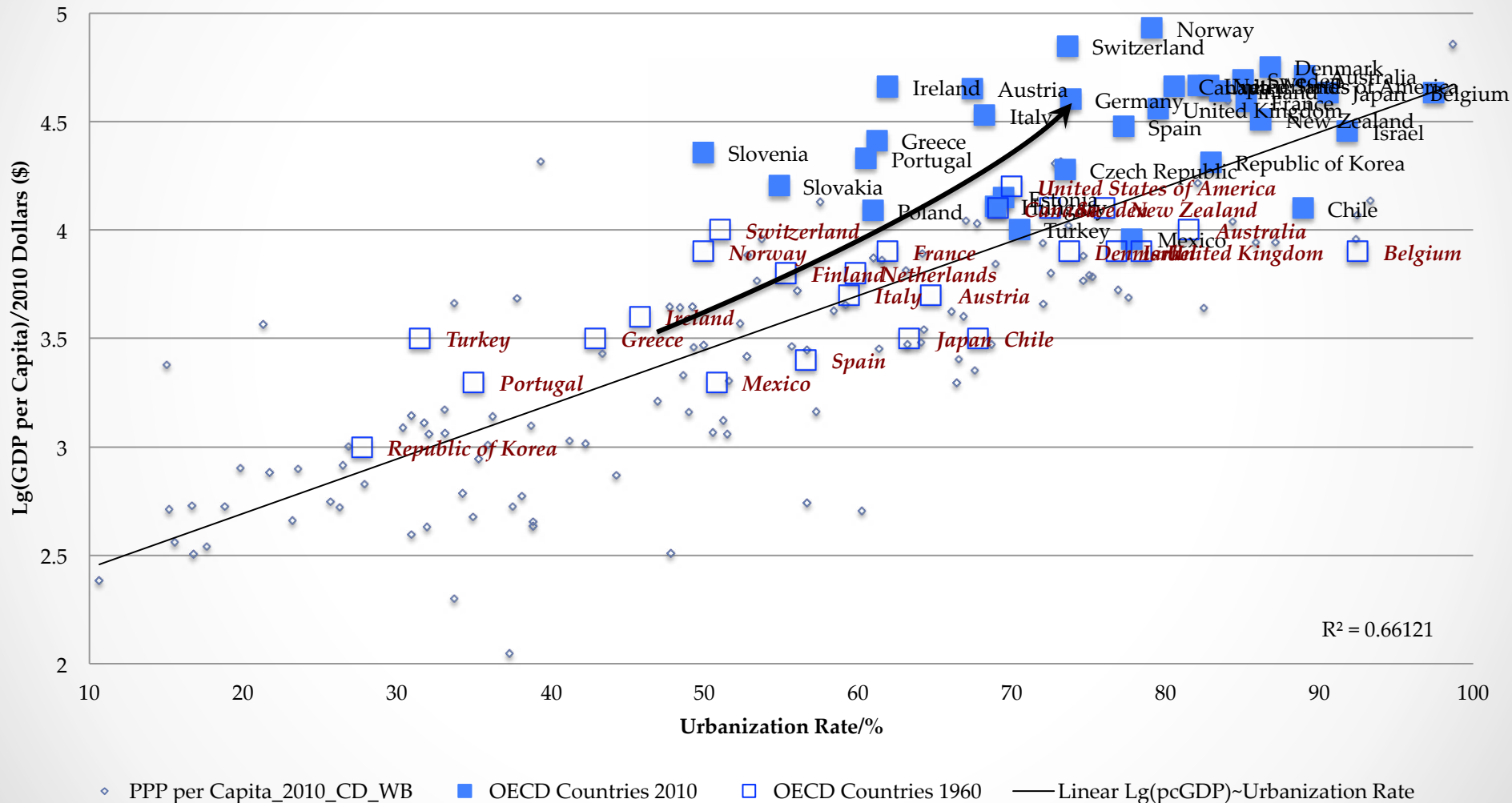
Healthy Urbanization

Urbanization Rate vs. Lg(PPP per Capita), World + OECD Members, 2010



Healthy Urbanization

Urbanization Rate vs. Lg(GDP per Capita), OECD Countries, 1960 - 2010



Healthy Urbanization

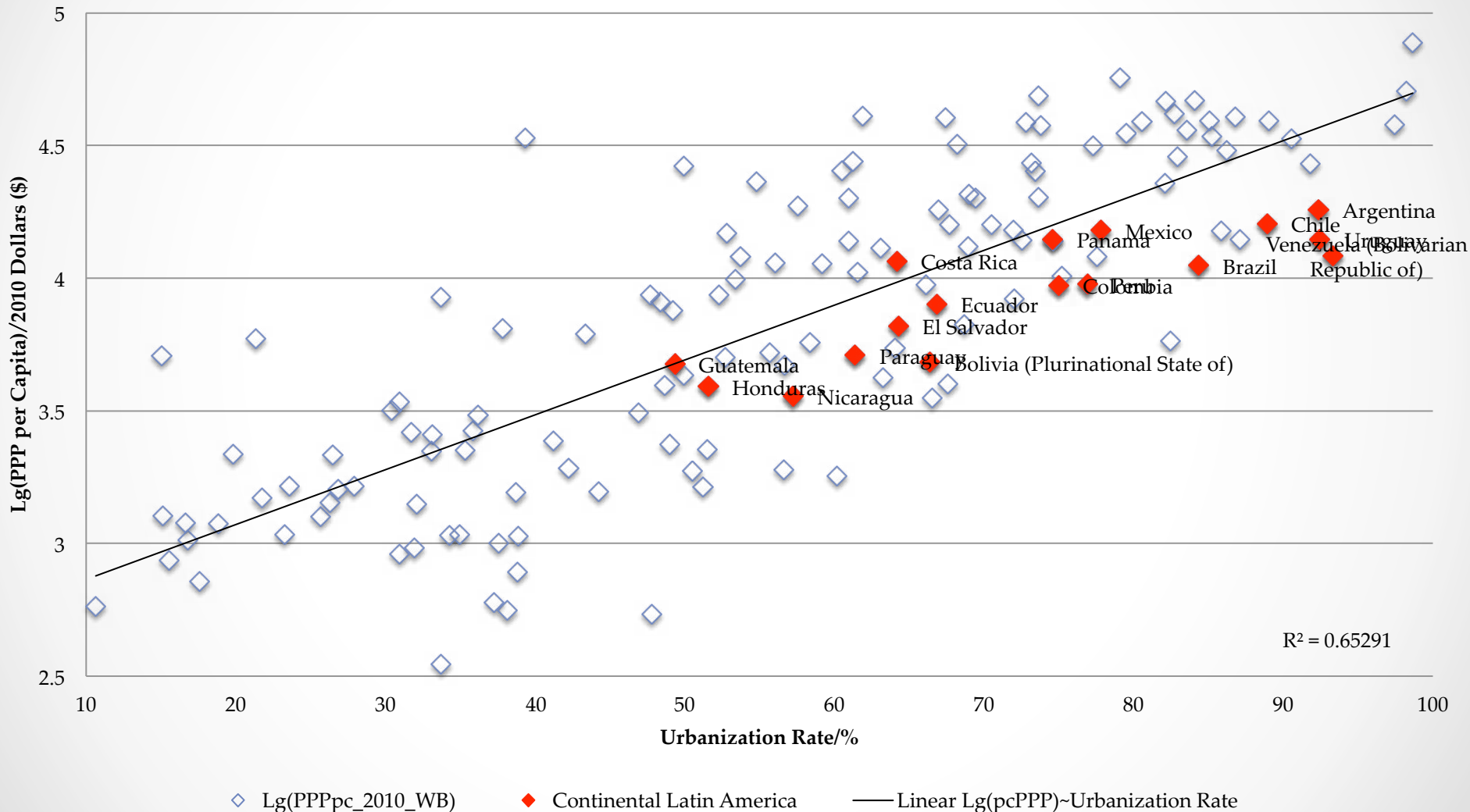


Photograph courtesy of [global_jet](#) on Flickr. Under CC-BY.

Photographs of suburb and suburban neighborhood removed due to copyright restrictions.

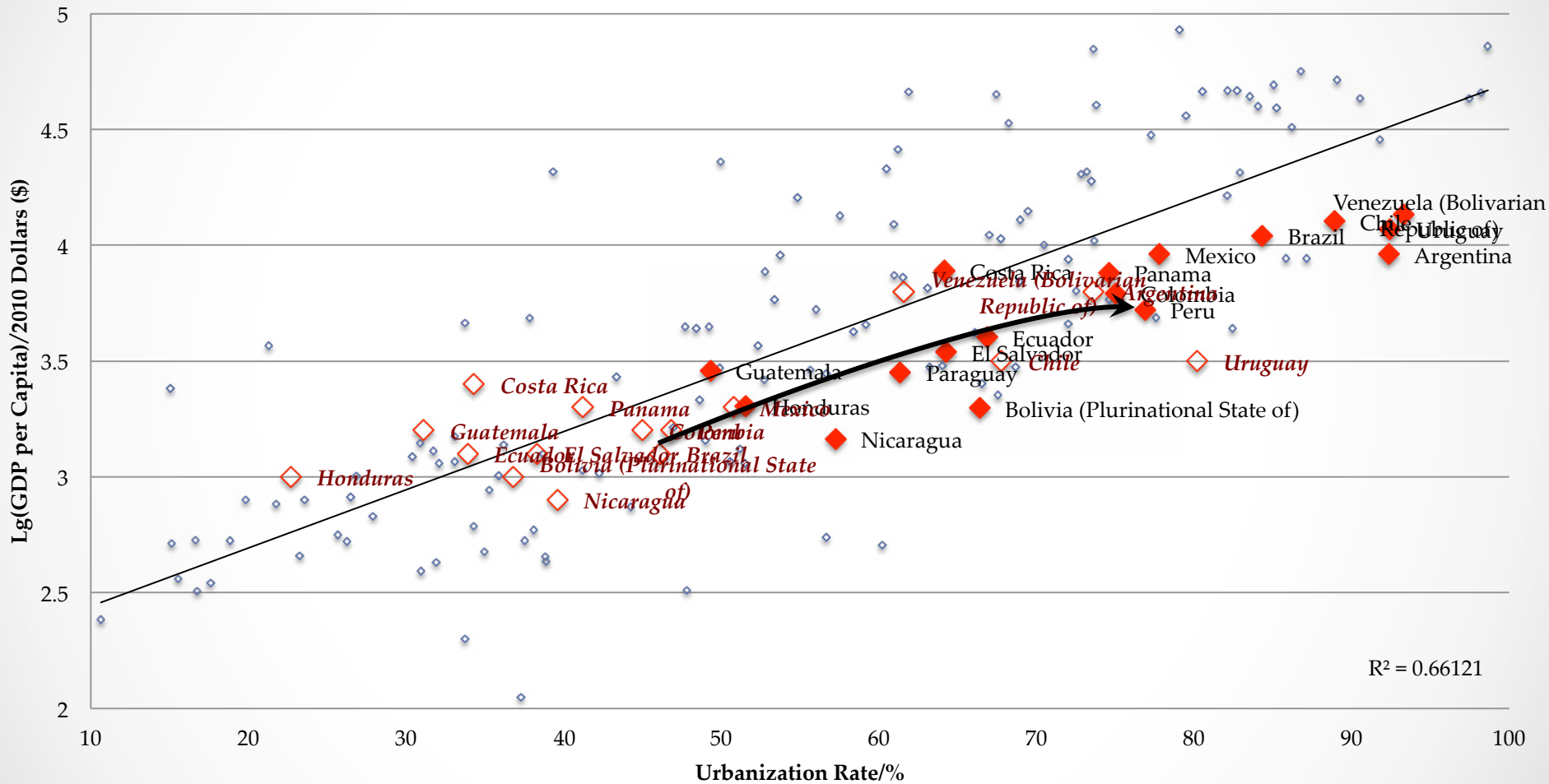
Over-urbanization/Pseudo Urbanization

Urbanization Rate vs. Lg(PPP per Capita), World + Continental Latin America, 2010



Over-urbanization/Pseudo Urbanization

Urbanization Rate vs. Lg(GDP per Capita), Continental Latin America, 1960 - 2010



- ◆ PPP per Capita_2010_CD_WB
- ◆ Continental Latin America 2010
- ◇ Continental Latin America 1960
- Linear Lg(pcGDP)-Urbanization Rate

Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank GDP per capita data 2012.

Over-urbanization/Pseudo urbanization



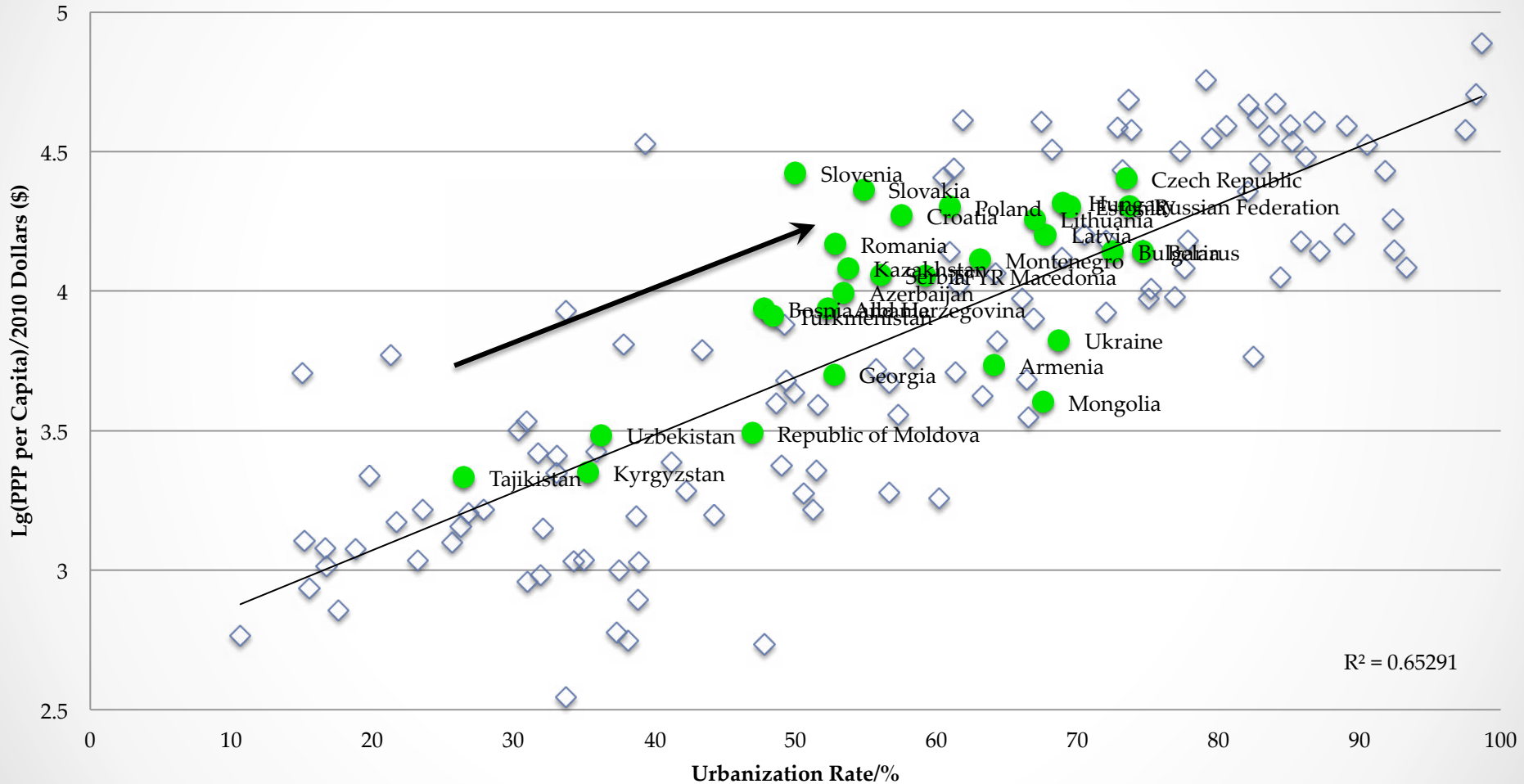
Photograph courtesy of [dany13](#) on Flickr. Under CC-BY.



Photograph courtesy of [dany13](#) on Flickr. Under CC-BY.

Under-urbanization

Urbanization Rate vs. Lg(PPP per Capita), World + Post-Soviet/Socialist Countries, 2010



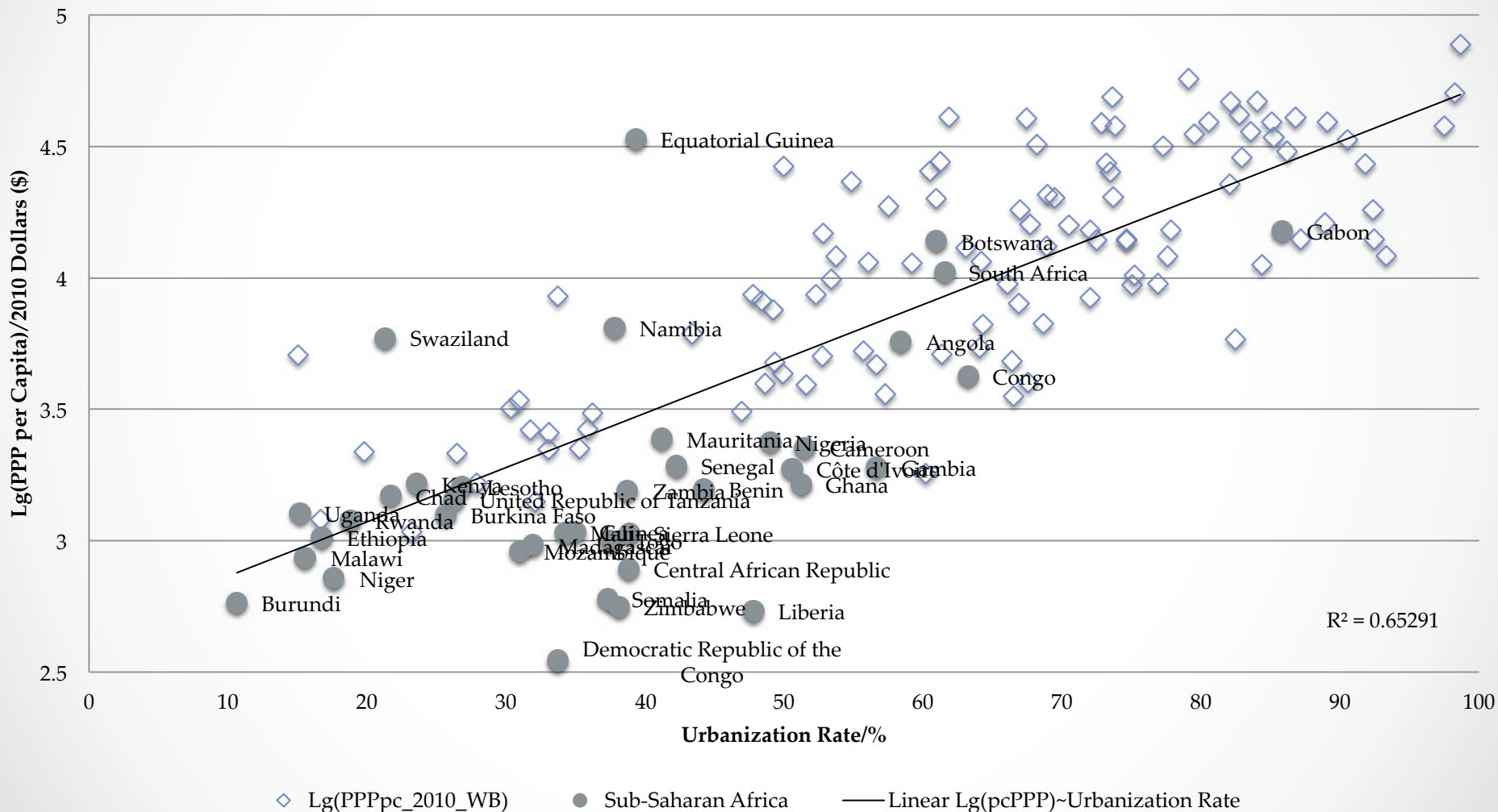
◇ Lg(PPPpc_2010_WB) ● Post-Soviet/Socialist Countries — Linear Lg(pcPPP)~Urbanization Rate

Under-urbanization

Photograph of Soviet baku removed due to copyright restrictions.

Over-urbanization and Economic Stagnation

Urbanization Rate vs. Lg(PPP per Capita), World + Sub-Saharan Africa, 2010



Source: Own calculation based on the UN World Urbanization Perspective 2012, World Bank PPP per capita data 2012.

Over-urbanization at a Low Development Level



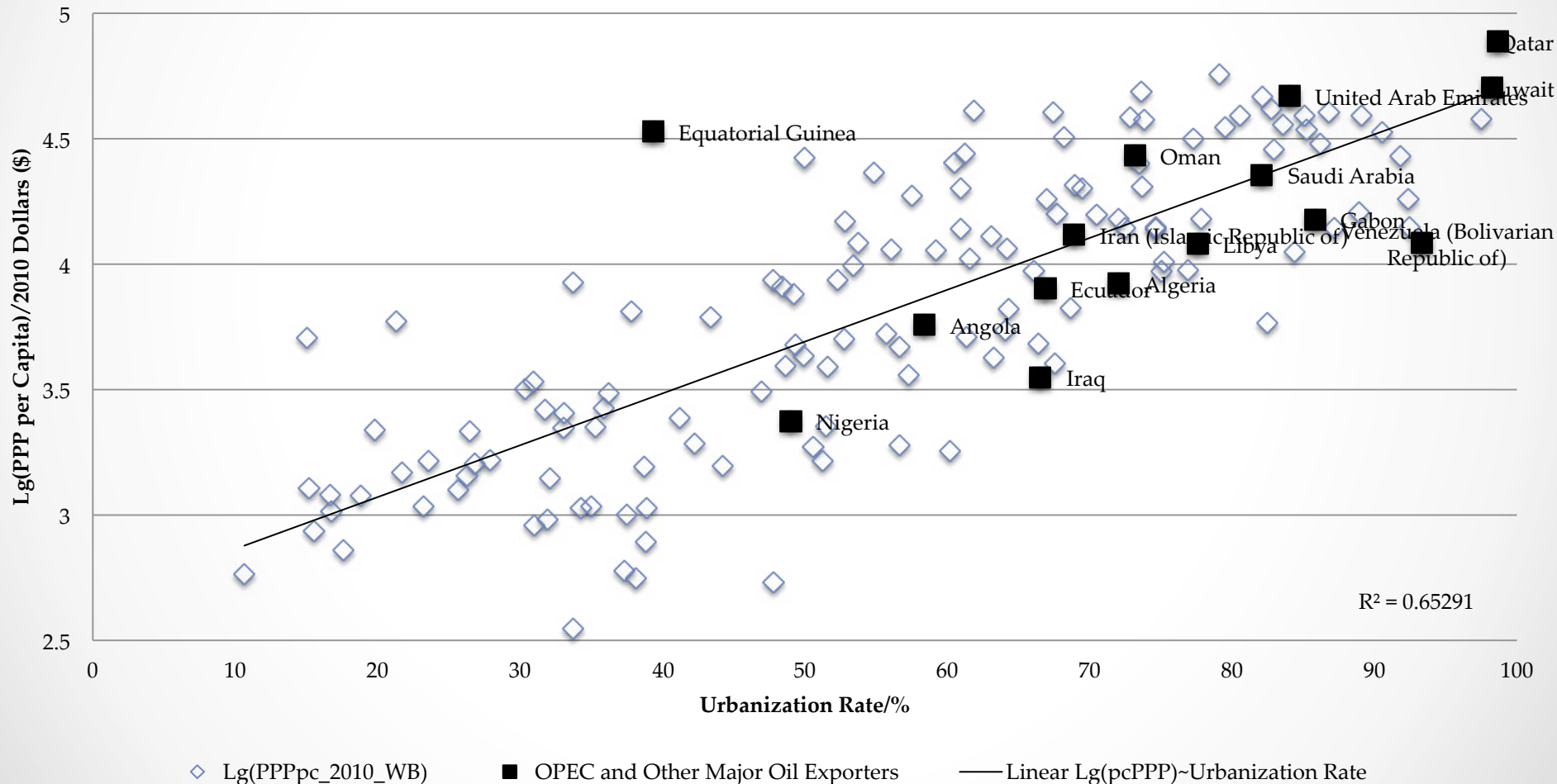
Map data ©2009 Google, DigitalGlobe, GeoEye. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <http://ocw.mit.edu/help/faq-fair-use/>.



Photograph courtesy of [dany13](#) on Flickr. Under CC-BY.

Countries with Dutch Diseases

Urbanization Rate vs. Lg(PPP per Capita), World + OPEC and Other Major Oil Exporters, 2010



Countries with Dutch Diseases

World map displaying cost of living removed due to copyright restrictions.

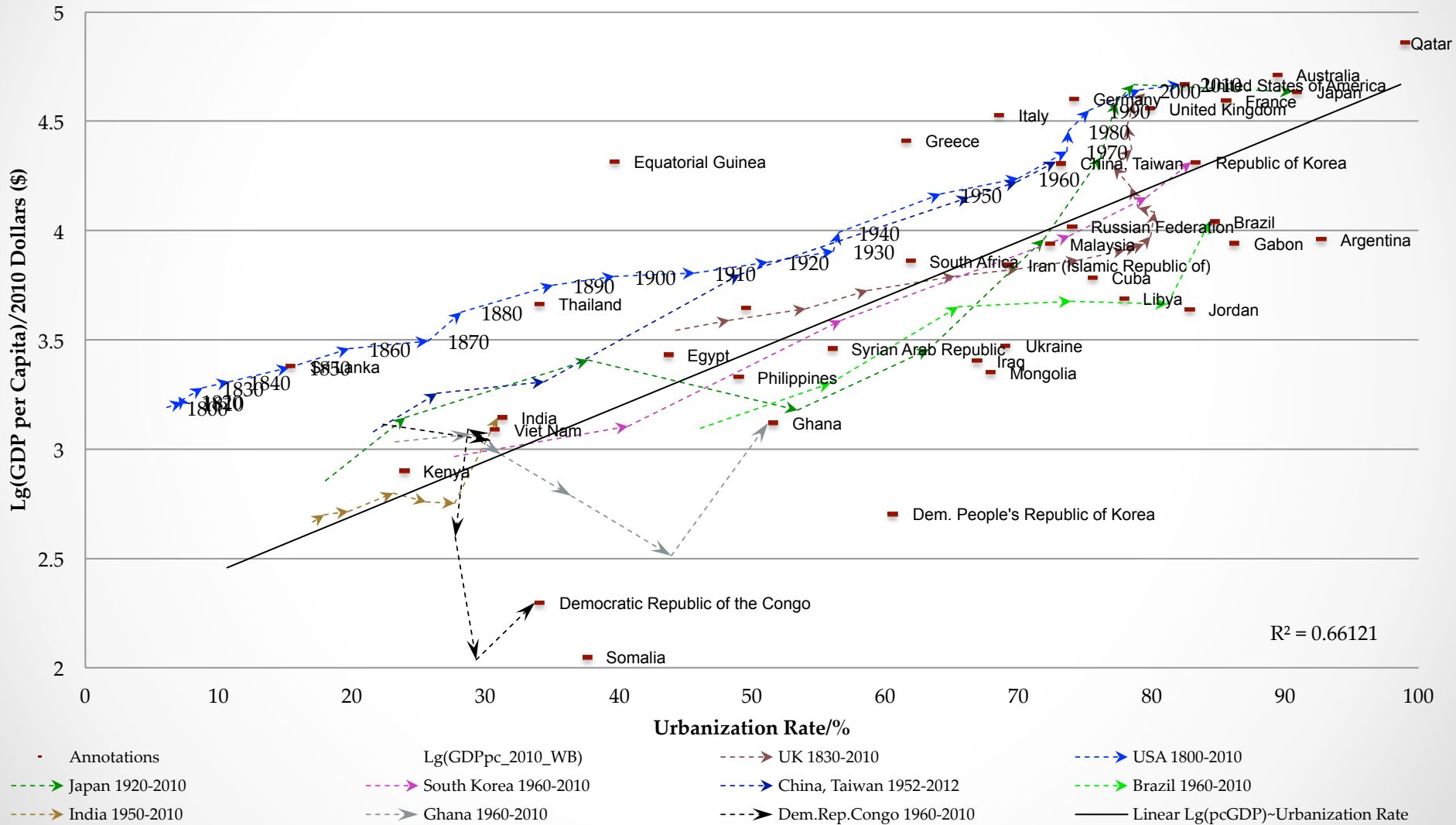
Countries with Dutch Diseases

Article text removed due to copyright restrictions.

Source: Jones, Barbara. "Hamburgers cost £32 and a one-bed flats go for £7,500 a month... this boy lives in the most expensive city in the world (sadly for him, he's on the wrong side of the tracks)." *DailyMail*, Aug. 04, 2012.

Country Trajectories

Urbanization Rate vs. Lg(GDP per Capita), World, 2010 with Urbanization Trajectories of Various Countries



Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012.

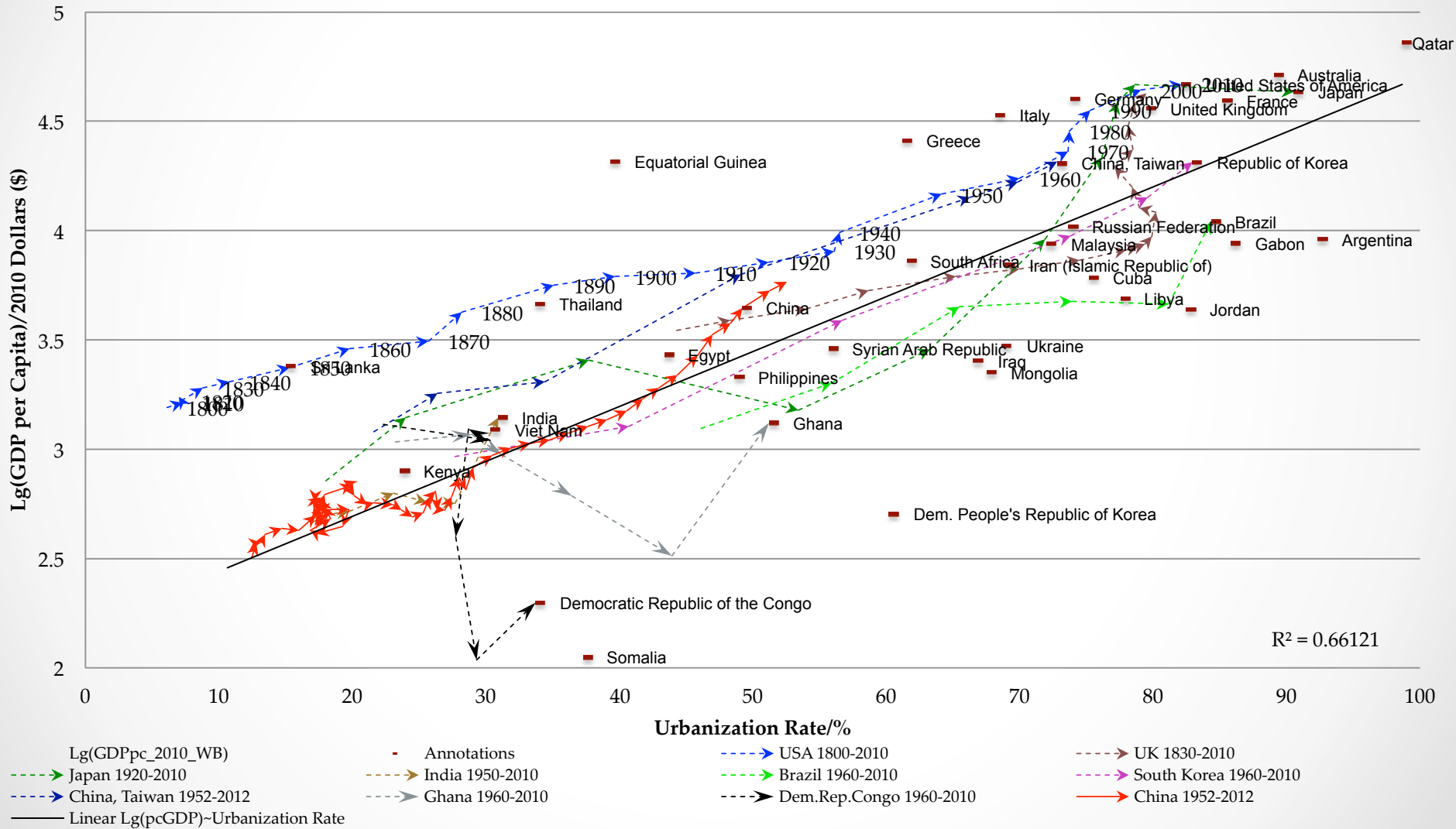
Deriving a Model...

- Happy families are all alike; every unhappy family is unhappy in its own way.

Leo Tolstoy, *Anna Karenina*, Chapter 1

China: the Middle Kingdom

Urbanization Rate vs. Lg(GDP per Capita), World, 2010 with Urbanization Trajectories of Various Countries



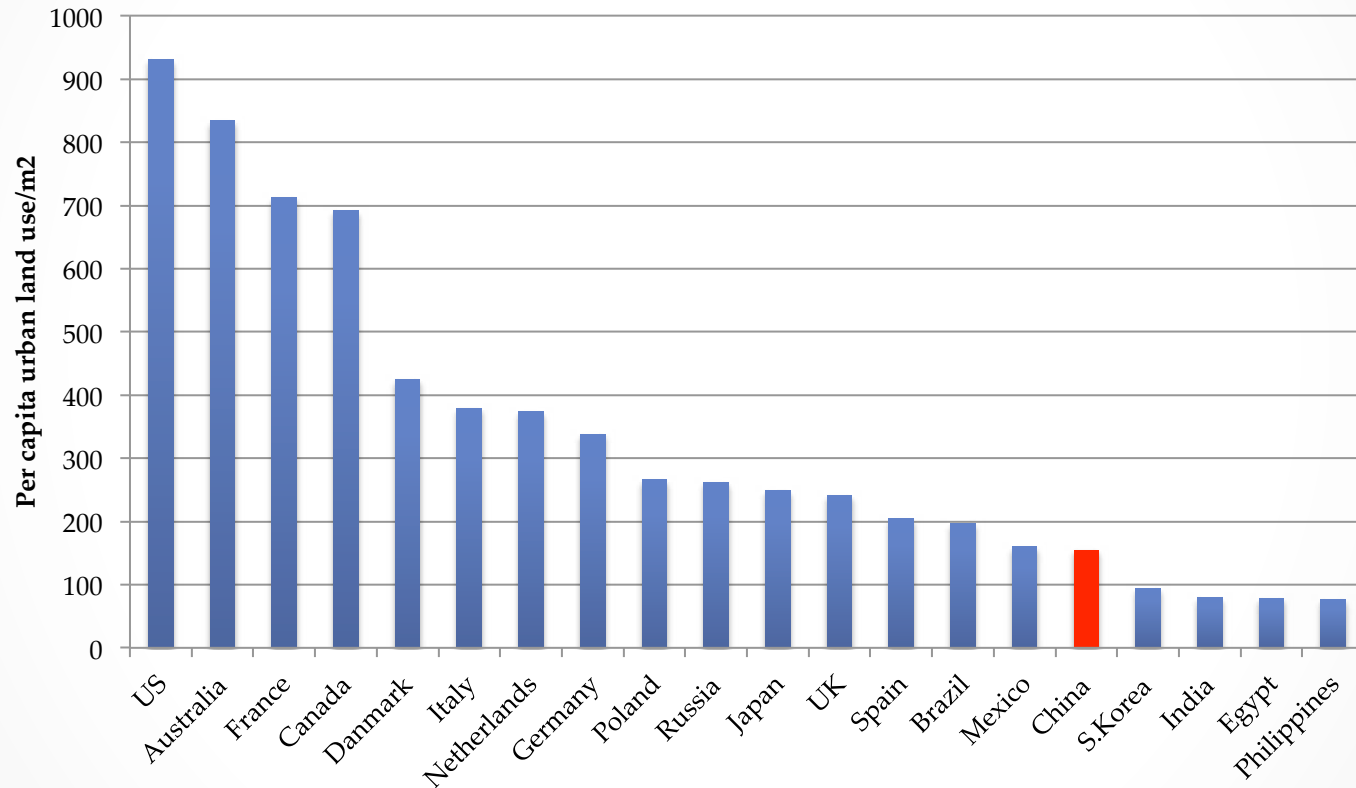
Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012.

Resource/Environment Costs?

- Land Resources
- Energy
- Pollution

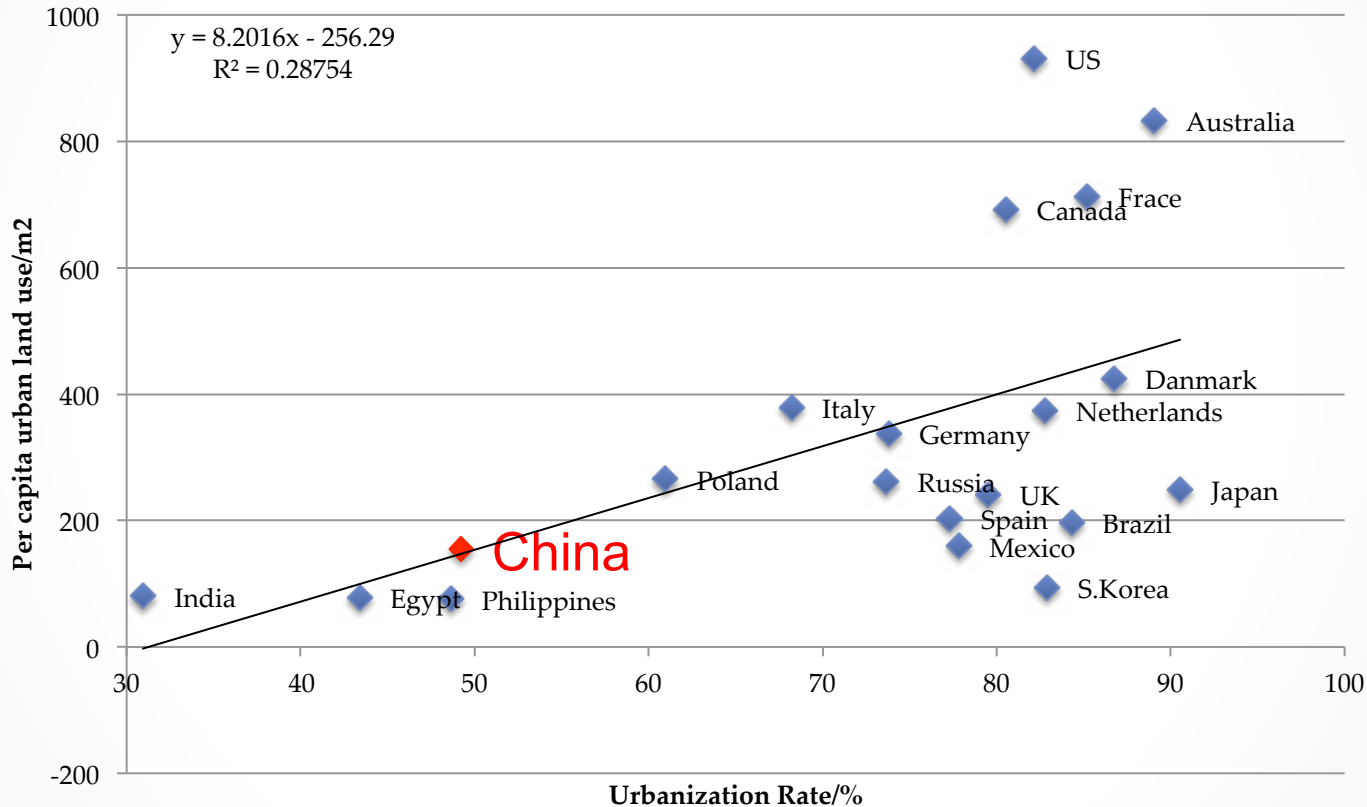
Land Resources Consumption

Per capita urban land use 2010



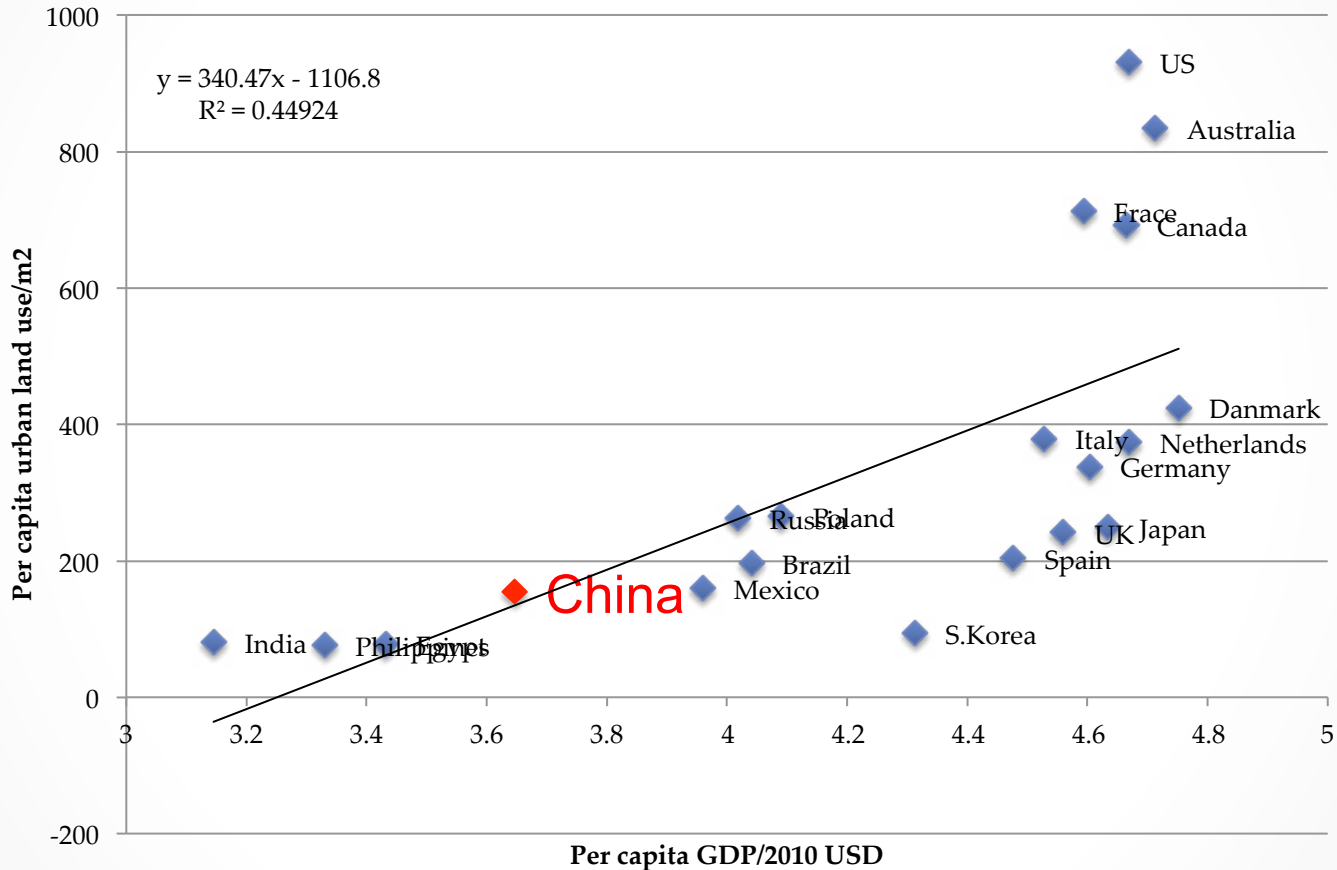
Land Resources Consumption

Urbanization Rate vs. Per capita urban land use 2010



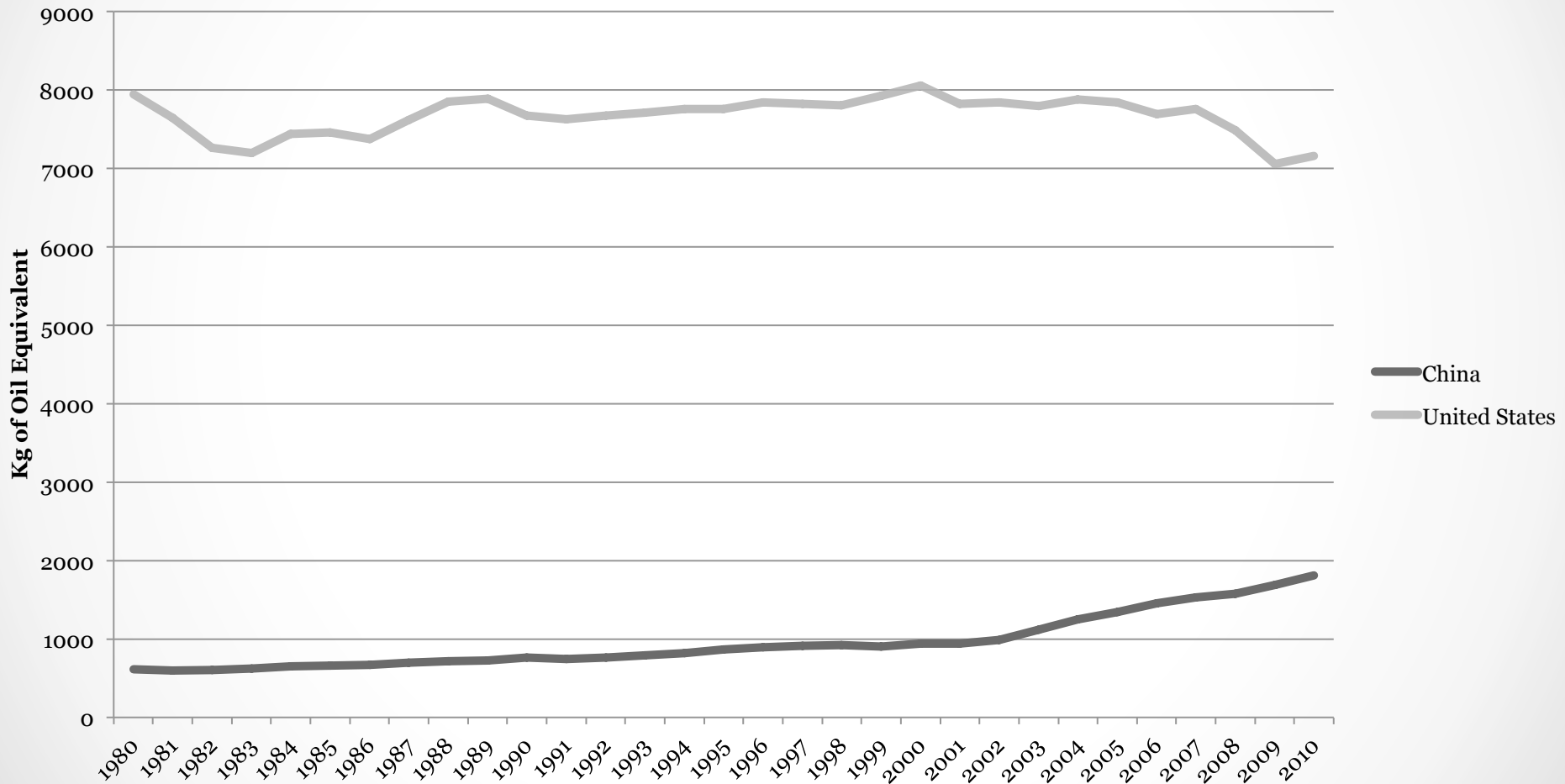
Land Resources Consumption

Per capita GDP vs. Per capita urban land use 2010



Energy Consumption

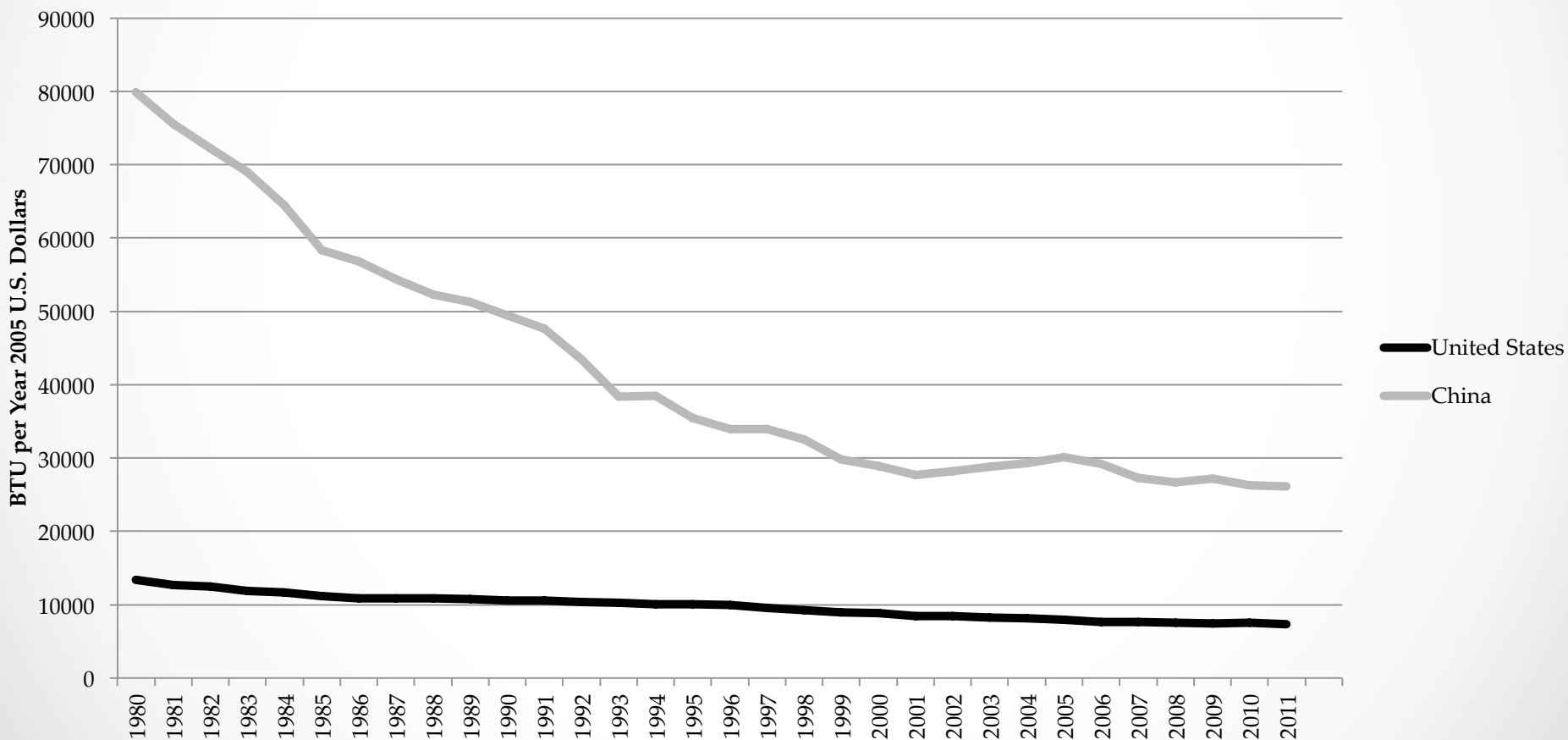
Energy Use Per Capita



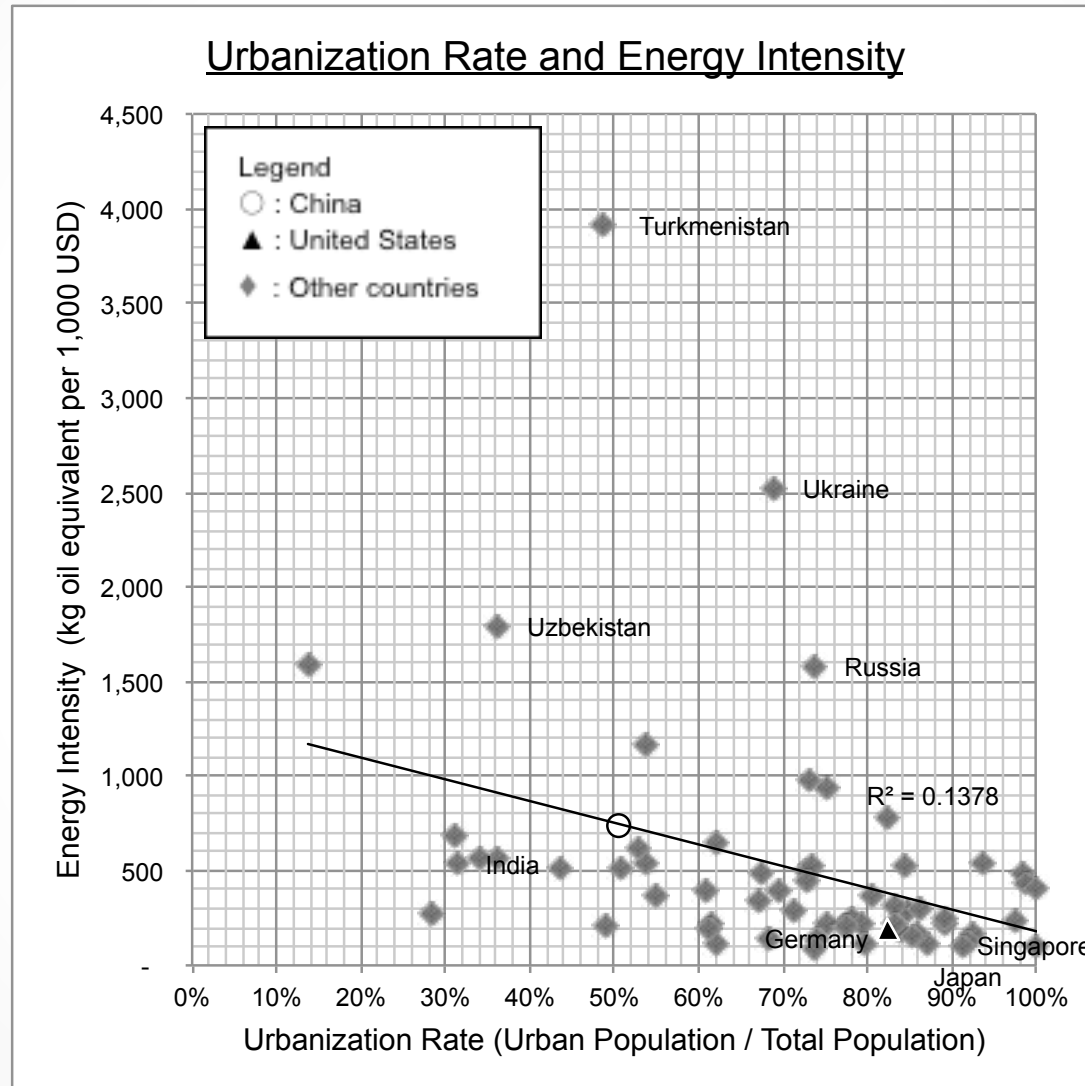
Energy Consumption

Energy Intensity - Total Primary Energy Consumption per Dollar of GDP

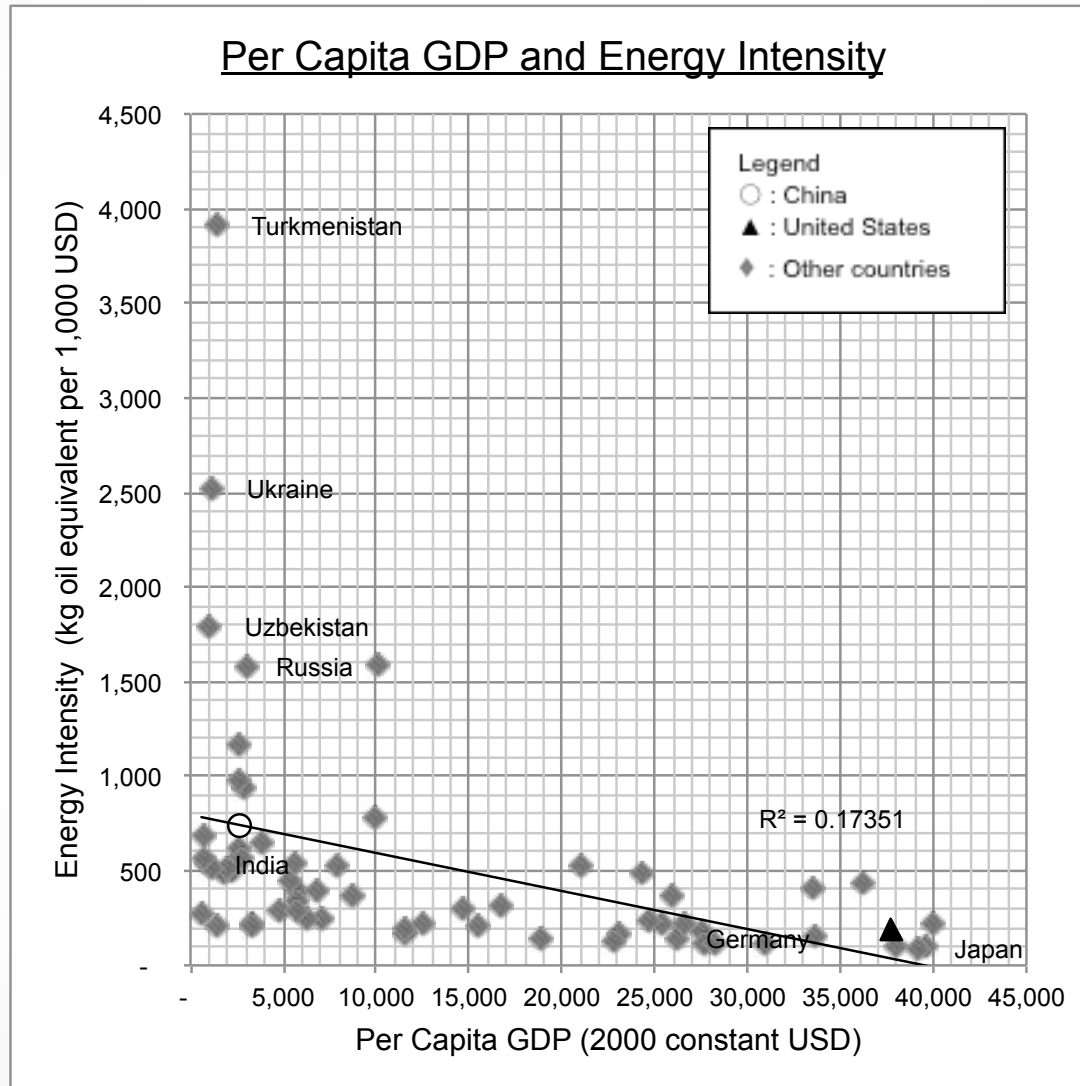
(Btu per Year 2005 U.S. Dollars (Market Exchange Rates))



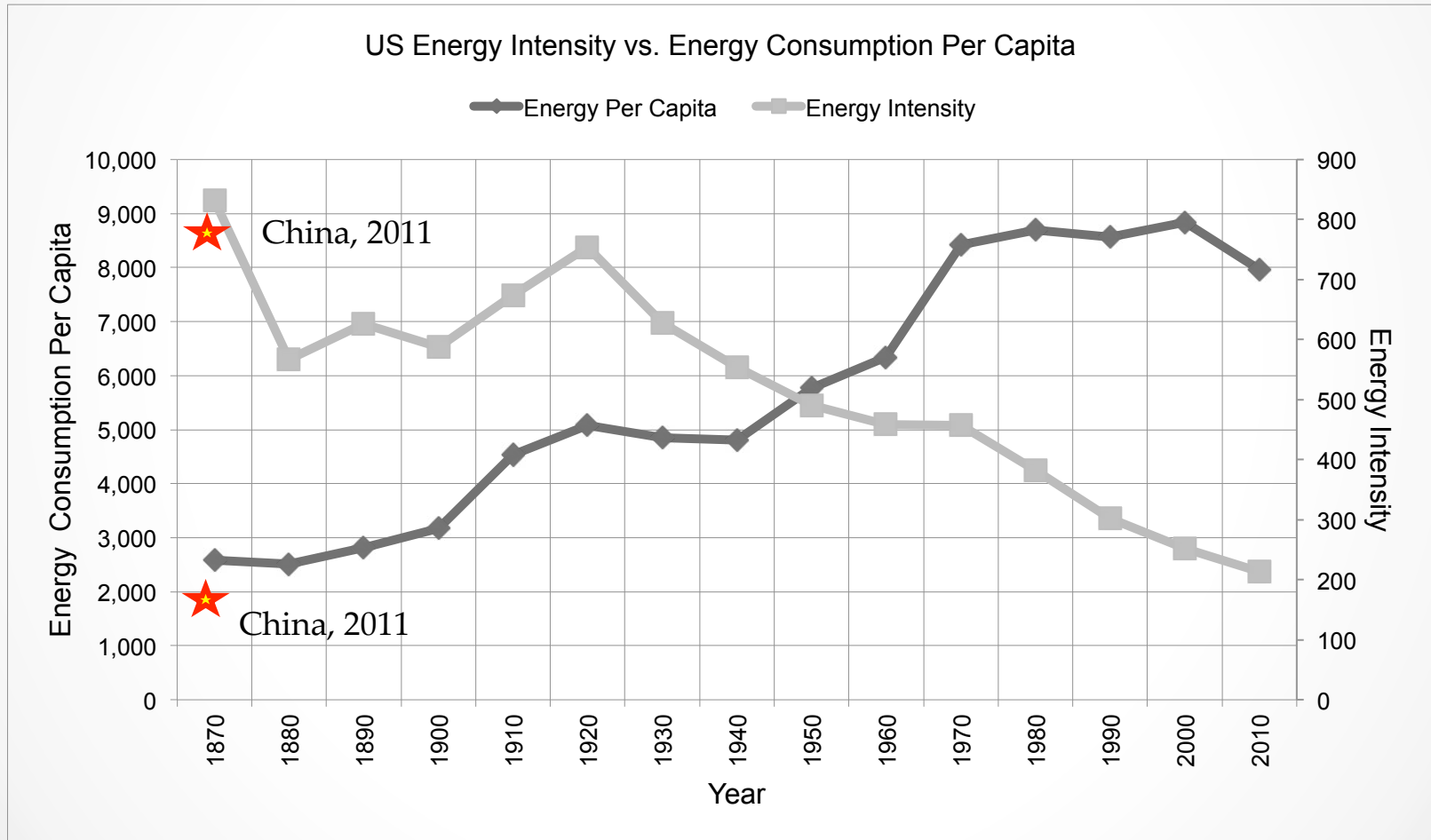
Energy Consumption



Energy Consumption



Energy Consumption



Pollution

Photograph of person surrounded by smog removed due to copyright restrictions.

Pollution

Photograph of person surrounded by smog removed due to copyright restrictions.

China's Urbanization: What's So Special?

- Then, what's so special about China?
- Is China really an outlier?

Concluding Remarks

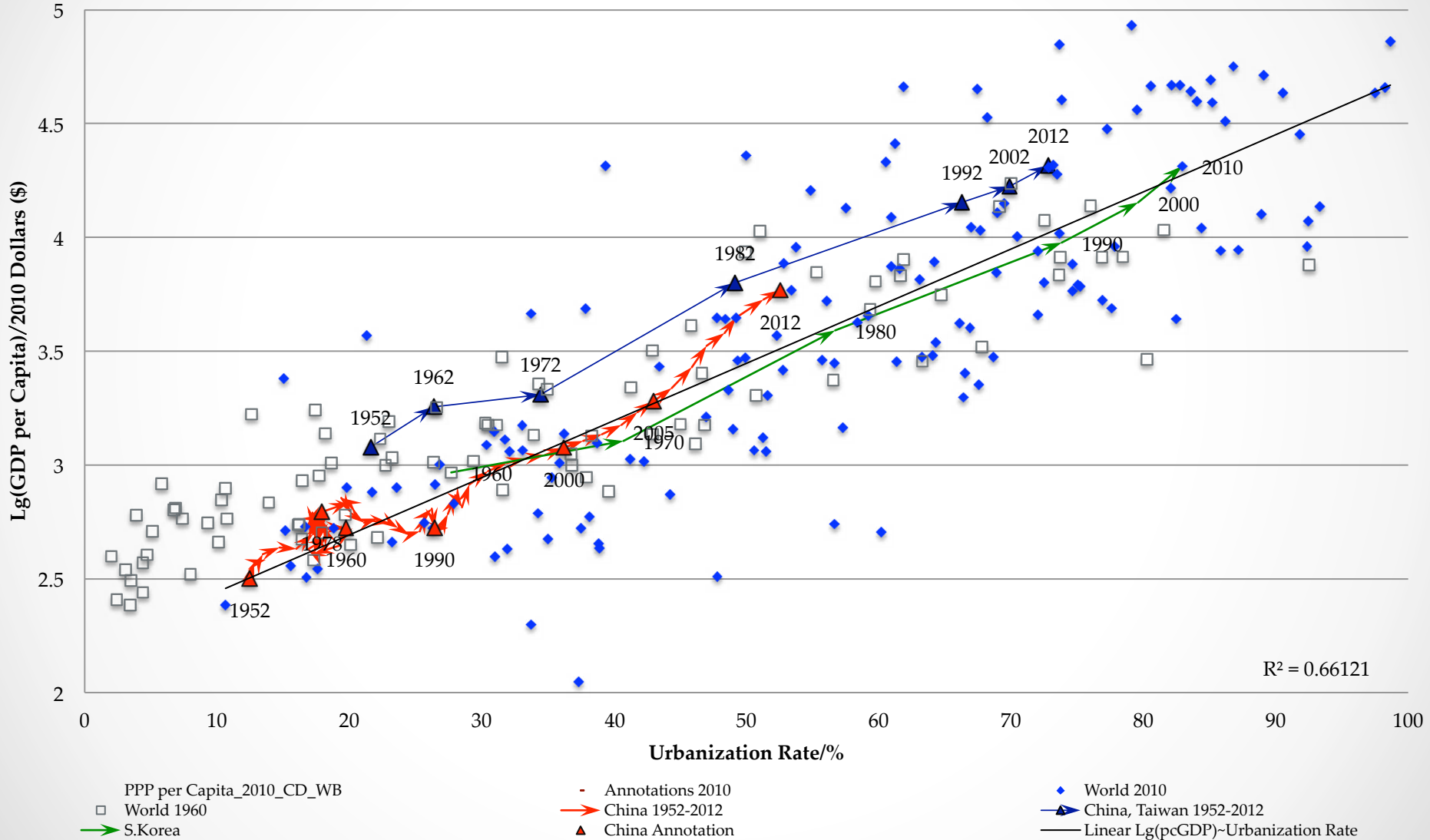
- China is unique
 - Normative vs. Positive Standards
- Why?
 - Scale matters
 - Internal complexities are unprecedented

Normative vs. Positive Standards

- To be good doesn't necessarily mean to be normal
 - Despite the "norm" given by the fitting line (in terms of the relationship between urbanization and economic development), most countries have failed to adhere to the norm.
 - China is among the few developing countries/economies where urbanization is relatively healthy.
 - Even among these few countries/economies, China is probably the one with the worst beginning conditions, which makes China's achievements even more valuable.

Winners

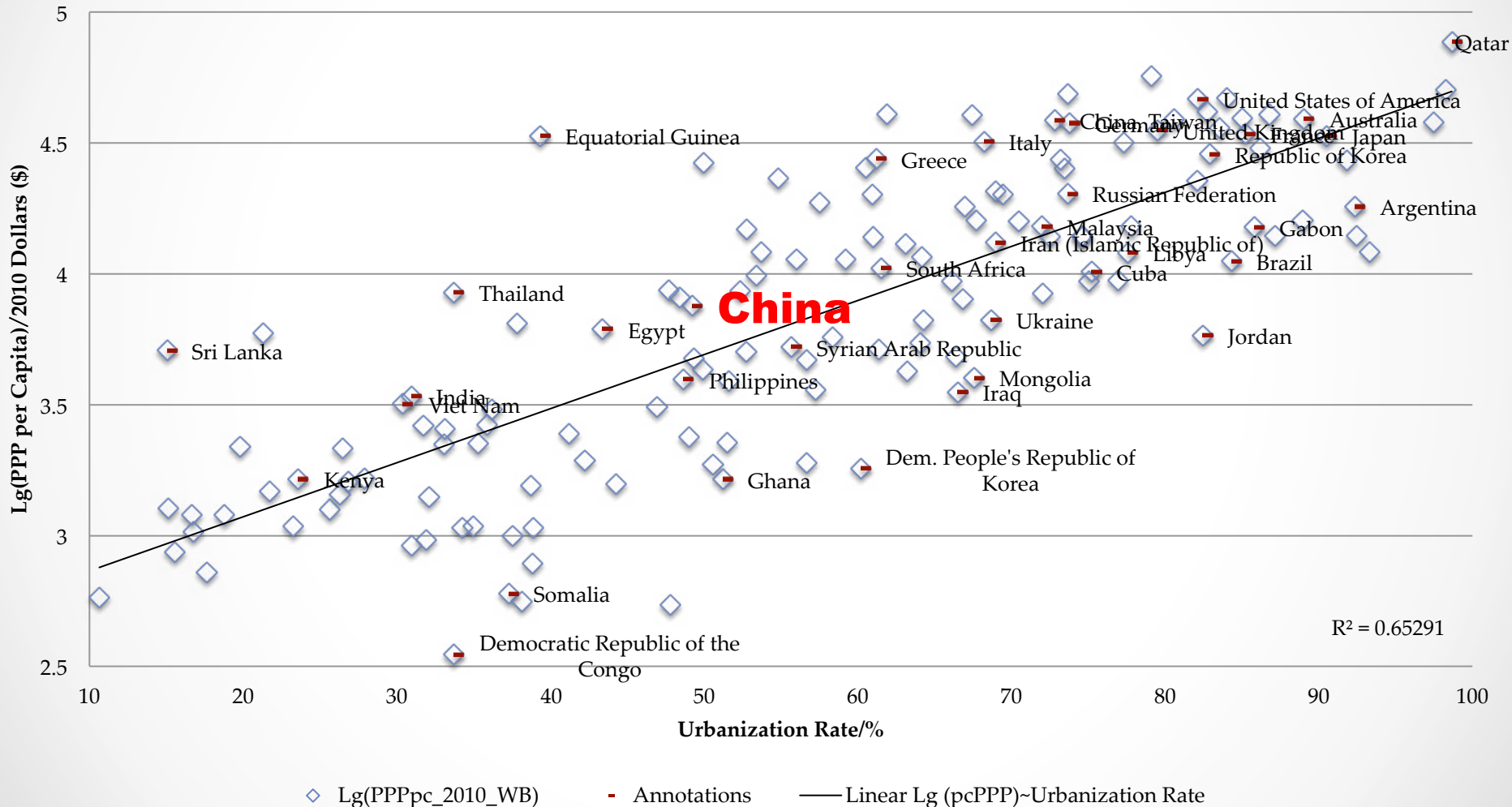
Urbanization Rate vs. Lg(GDP per Capita), World, 1960 - 2010; China, 1952-2012



Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012, and on *China Compendium of Statistics 1949-2008*,

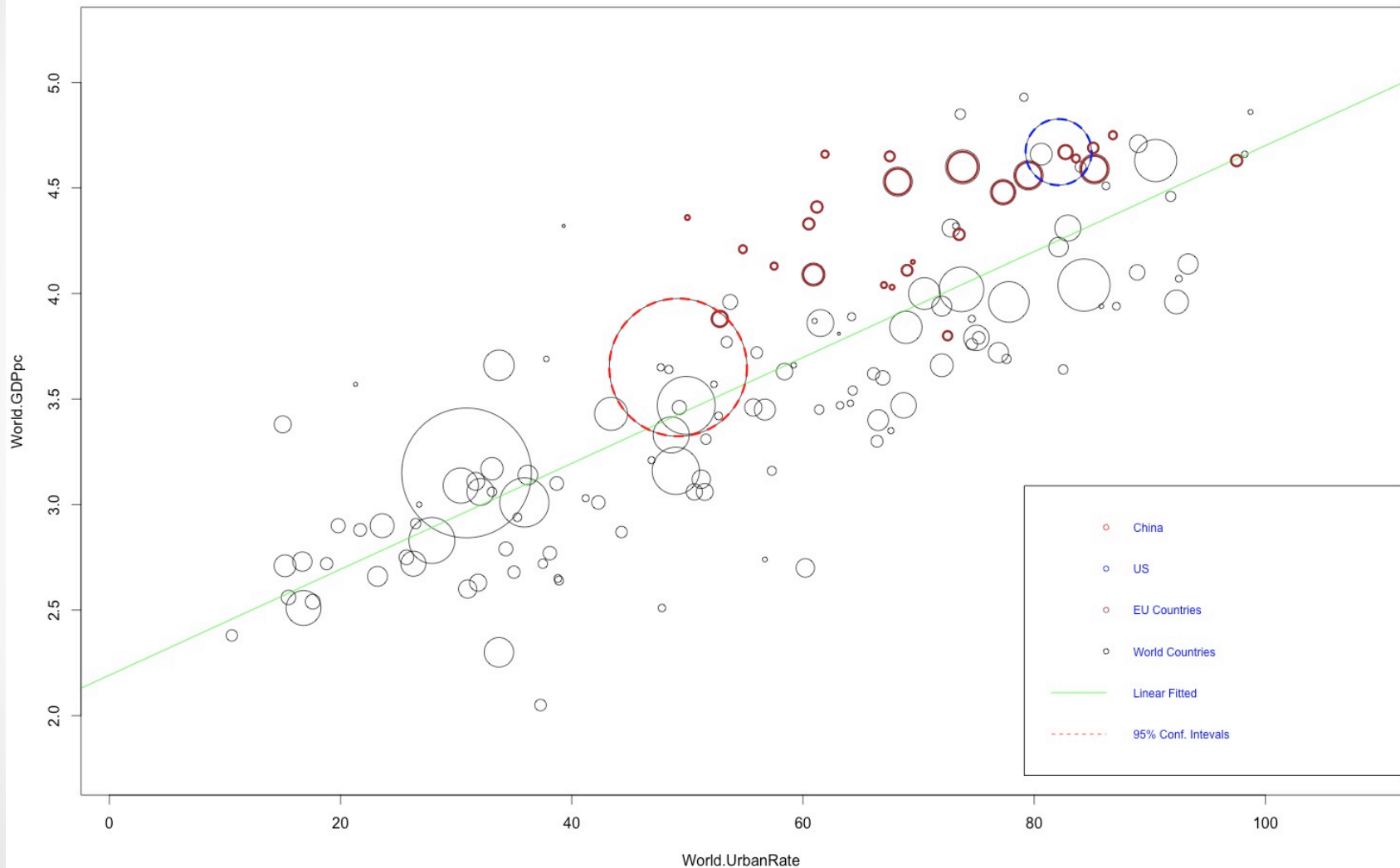
Scale Matters

Urbanization Rate vs. Lg(PPP per Capita), World, 2010



Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012.

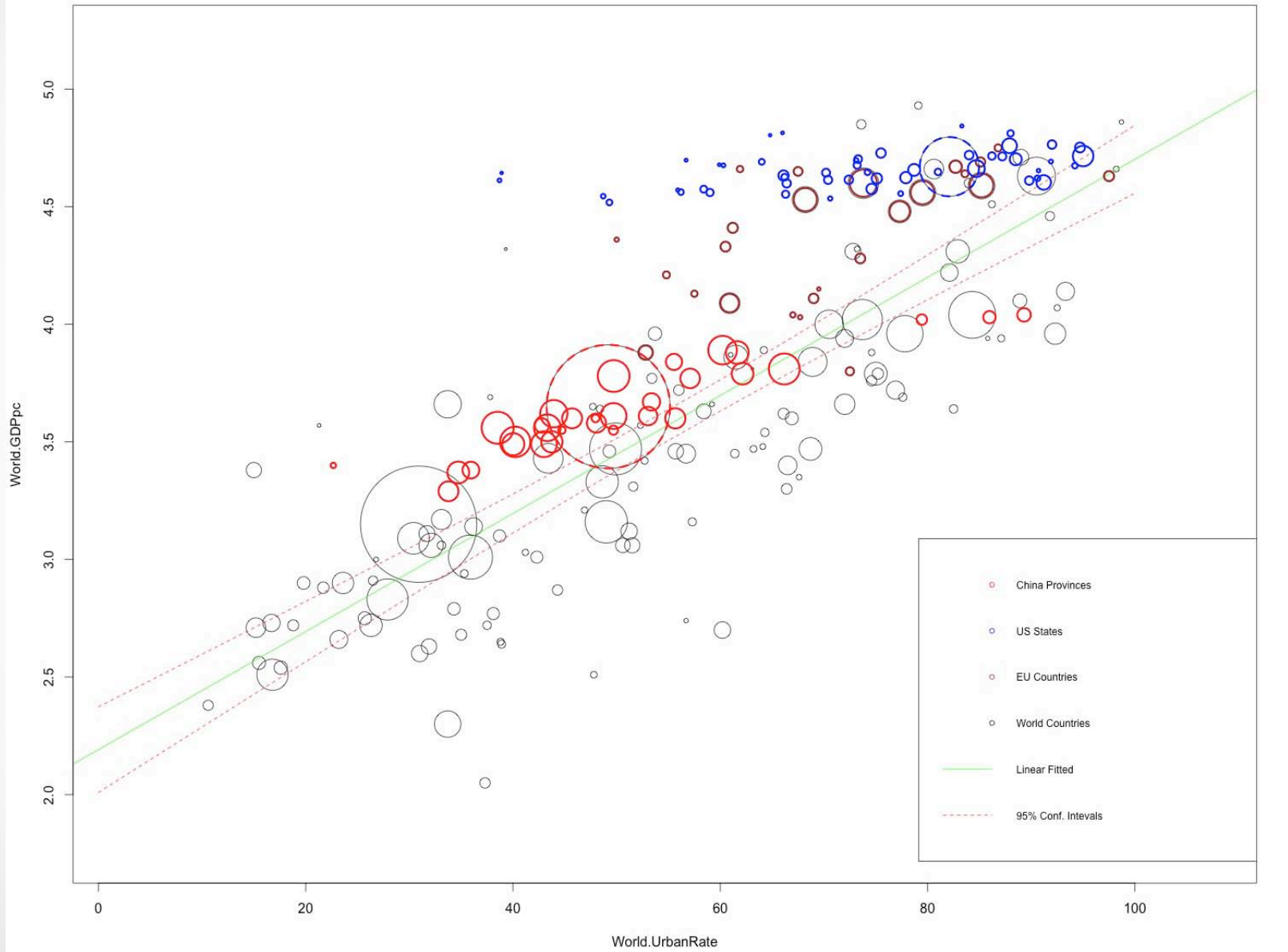
Scale Matters



Scale Matters

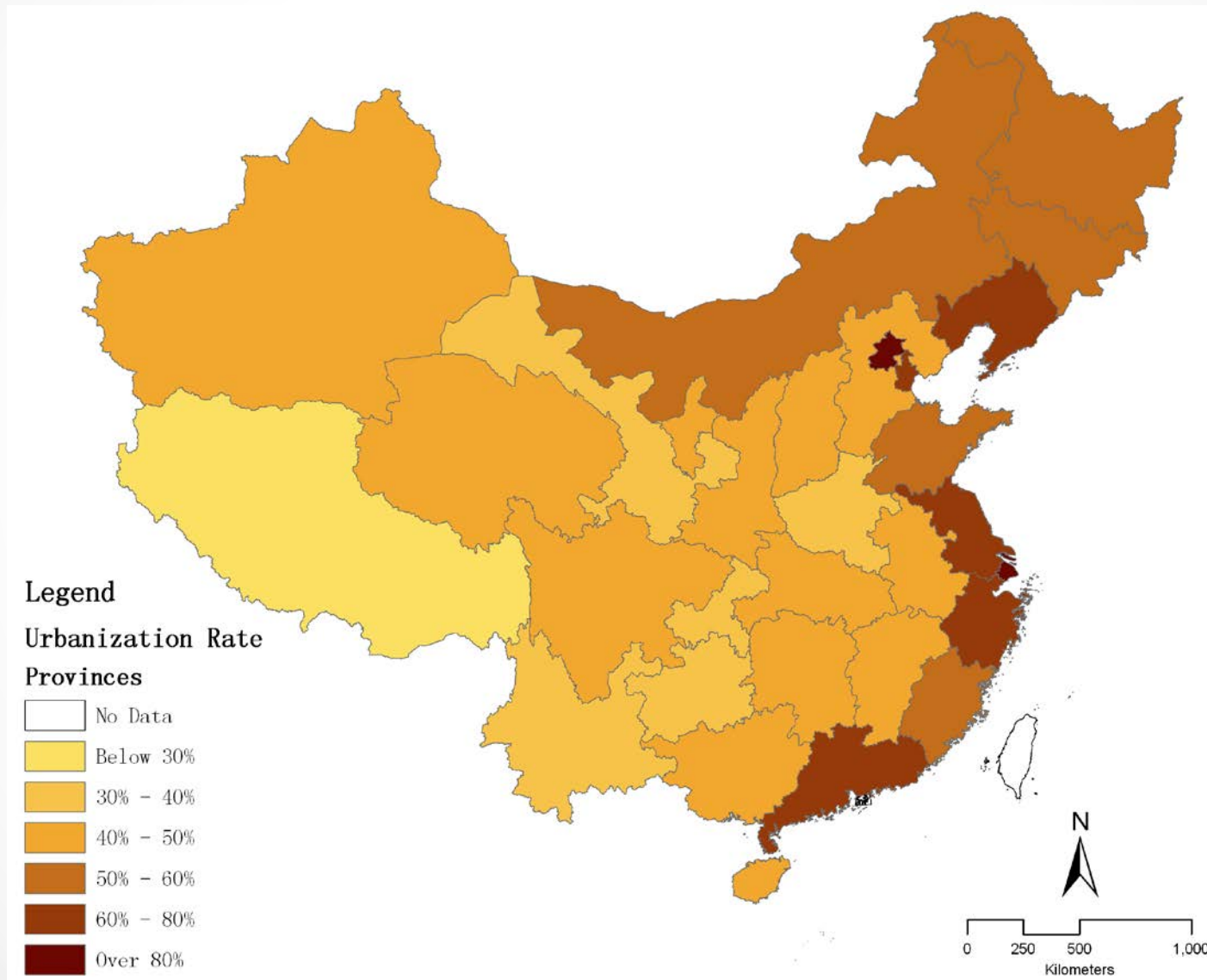
- Fast speed and fair economy outcomes may not be unique, but these achievements become valuable when considering the huge scale of the country.
- Why scale matters?
 - Huge scale may change the basic settings of the stage.
 - Partial equilibrium -> general equilibrium
 - Absolute amount usually matters when it comes to public goods, or public “bads”, negative externalities such as air pollution or GHG emission

Internal Complexities



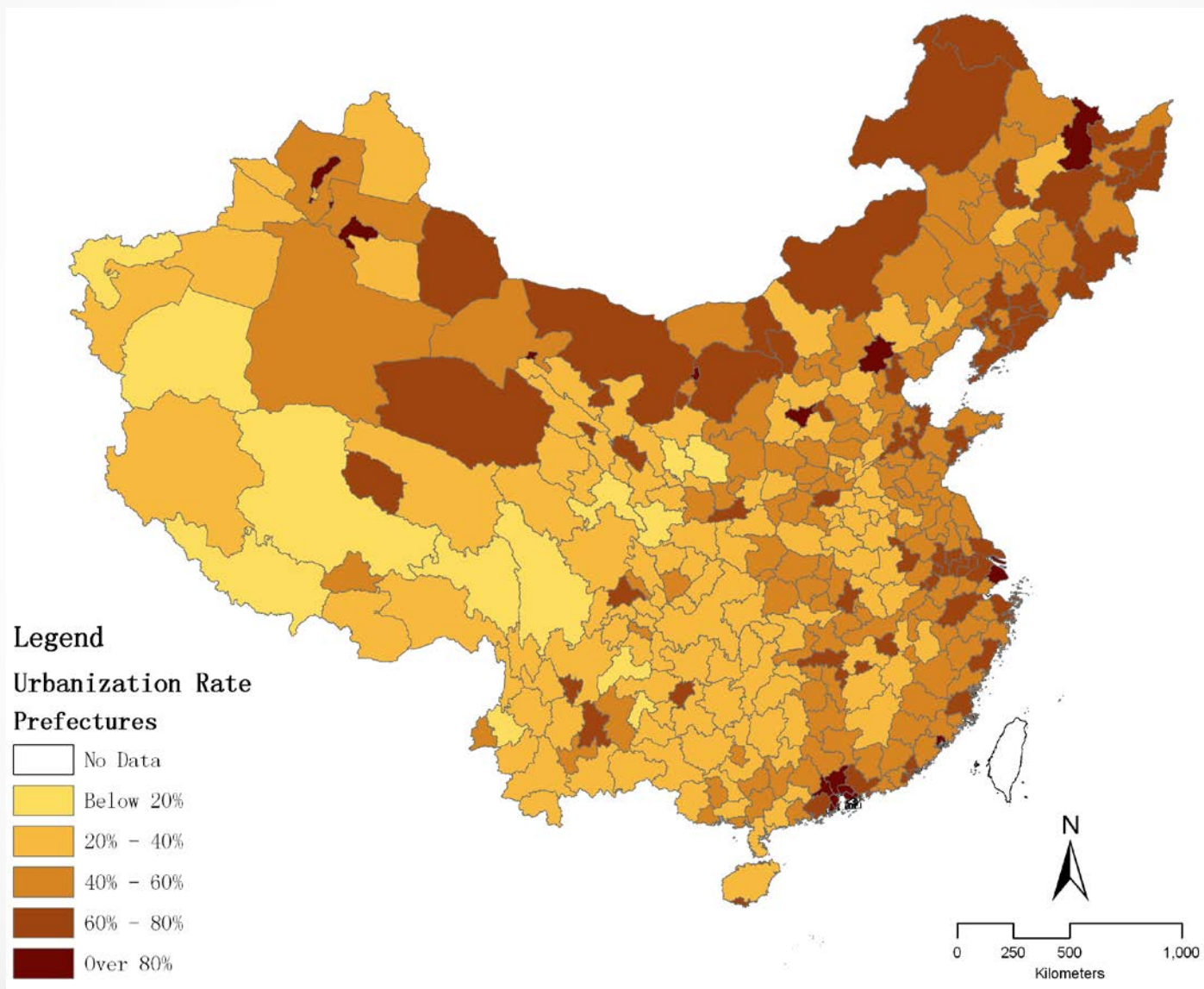
Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012.

Urbanization Rate at the Province Level



Source: Own calculation based on China's 6th National Census data

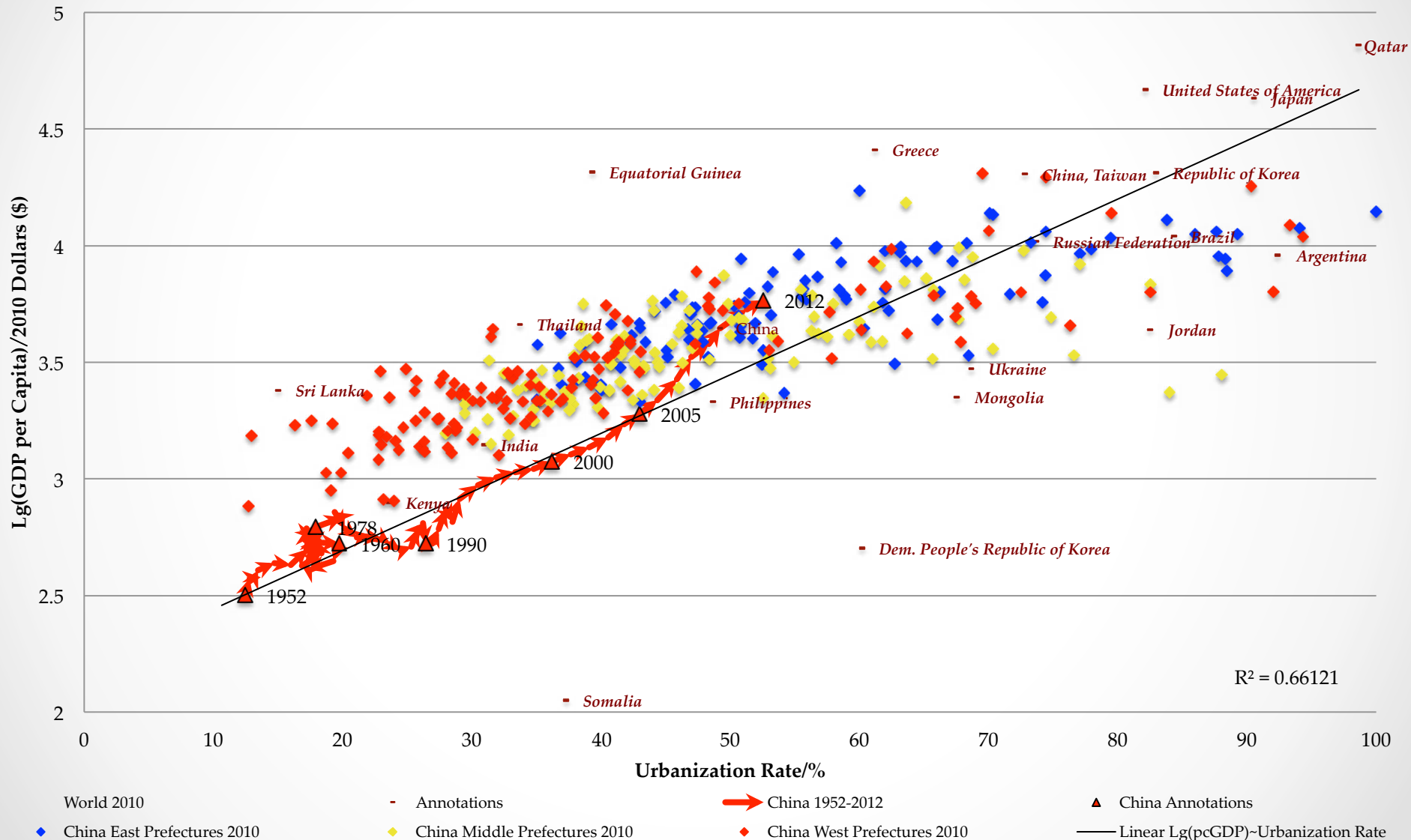
Urbanization Rate at the Prefecture Level



Source: Own calculation based on China's 6th National Census data

Unbalanced Urbanization

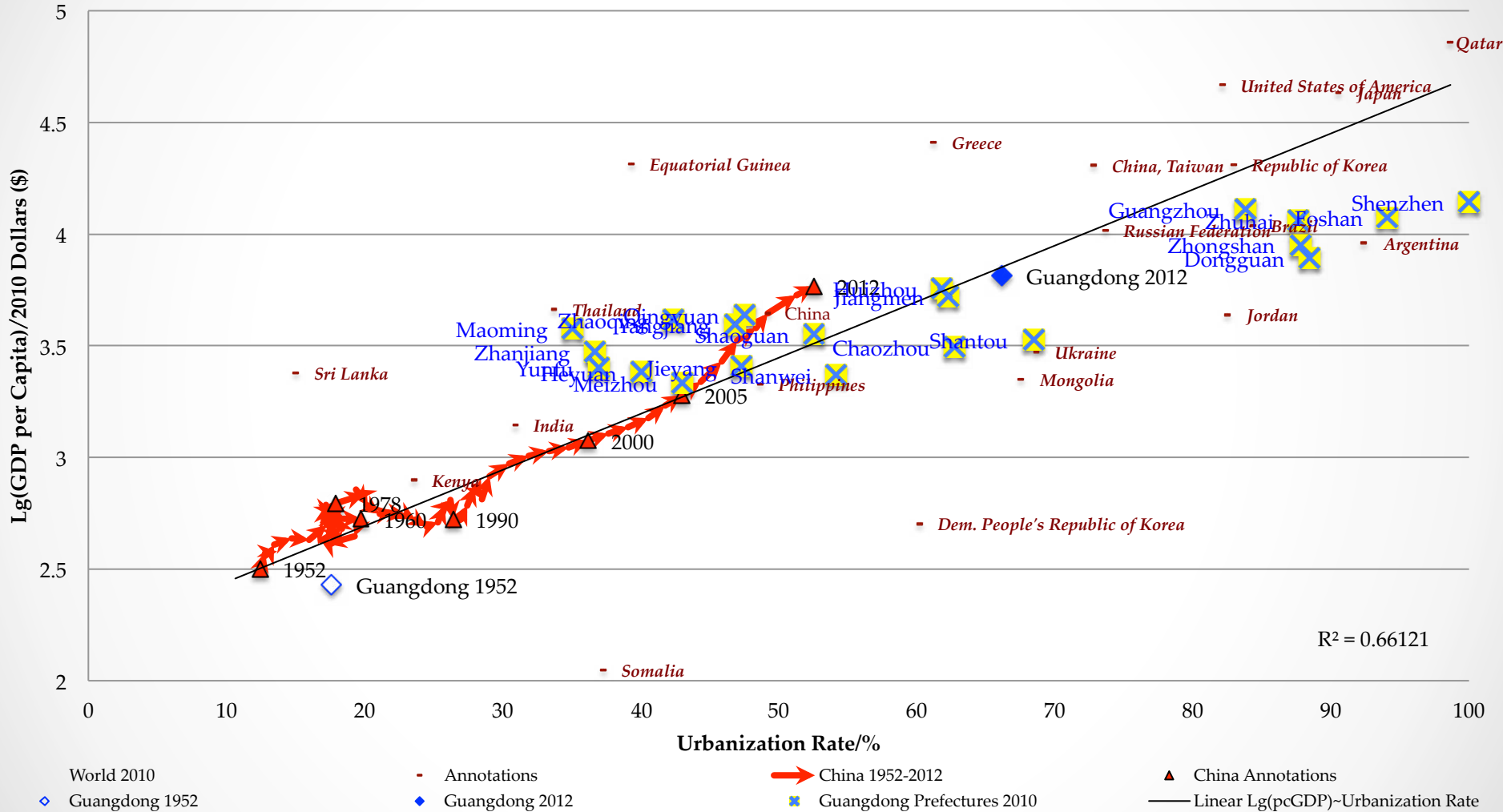
Urbanization Rate vs. Lg(GDP per Capita), China 1952-2012, with China Prefectures 2010; Background: World, 2010



Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012, and China's 6th National Census data

Unbalanced Urbanization

Urbanization Rate vs. Lg(GDP per Capita), China Provinces 1952-2012; with Guangdong Prefectures 2010; Background: World, 2010



Source: Own calculation based on the UN *World Urbanization Perspective 2012*, World Bank PPP per capita data 2012, and China's 6th National Census data

Unbalanced Urbanization



Photograph courtesy of [kenner116](#) and [sterlingcollege](#) on Flickr. Under CC-BY.

- Despite similar urbanization level, rural Vermont(right) is different from rural Guizhou(left).
- In the developed countries, the countryside and the city imply different styles of life; however in developing countries, they mean different qualities of life.
- The two differ in terms of infrastructure accessibility, consumption level,
- educational quality, or even life expectancy.

Unbalanced Urbanization

- Therefore, China's urbanization (and the developing world's in general) can be viewed as a process of "voting with feet".
- Putting another way, the developed world is in a state of urban-rural equilibrium, but the developing world isn't.
- In China, the mobility is further facilitated by characteristics of regional economy (rather than international economy, as seen in the Europe): perfect factor mobility, same currency, etc.
- Challenges: natural tendency toward over-urbanization (Harris and Todaro. 1970)
- Corrective policy tools: Hukou?

Thank you!

MIT OpenCourseWare
<http://ocw.mit.edu>

11.S945 Urbanizing China: A Reflective Dialogue
Fall 2013

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.