

**United Nations Economic Commission for Europe
Road and Rail Financing Conference**

**PPP in Roads and Highways
and Financial Assessment
of PPP Projects**

César Queiroz, Ph.D.

Roads and Transport Infrastructure Consultant

Former World Bank Highways Adviser

Palais des Nations, Geneva, 25 February 2013

Presentation Outline

- **Infrastructure and economic development**
- **A feasible option for certain conditions: Public Private Partnerships (PPP)**
- **The World Bank Toolkit for PPP in Roads and Highways**
- **Risks and forms of private sector participation**
- **Discussions**

Economic Development and Infrastructure

GNI (\$/pop)

100000

10000

1000

100

100

1,000

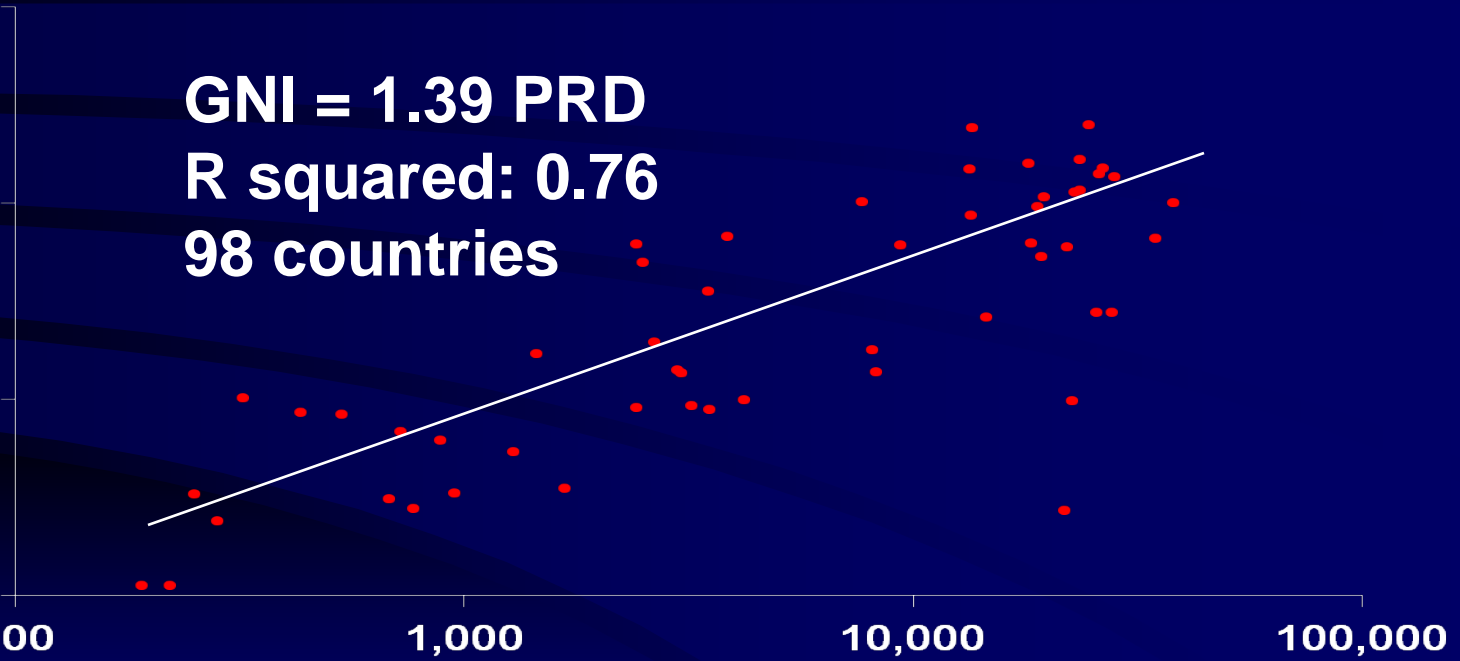
10,000

100,000

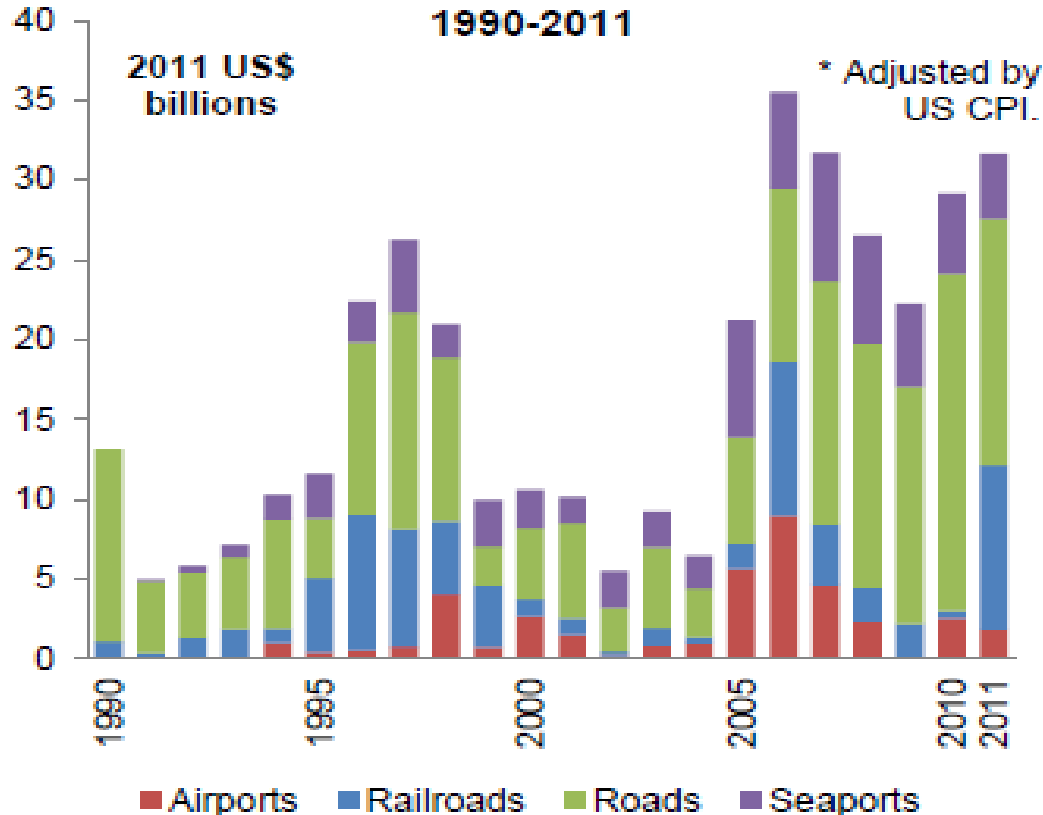
GNI = 1.39 PRD
R squared: 0.76
98 countries

Paved Road Density (km/mil pop)

Source: Queiroz and Gautam



PPP in Transport Projects, 1990-2011: \$310 billion



Roads	51.7%
Ports	19.5%
Railways	17.9%
Airports	10.9%

Source: World Bank and PPIAF, PPI Project Database.

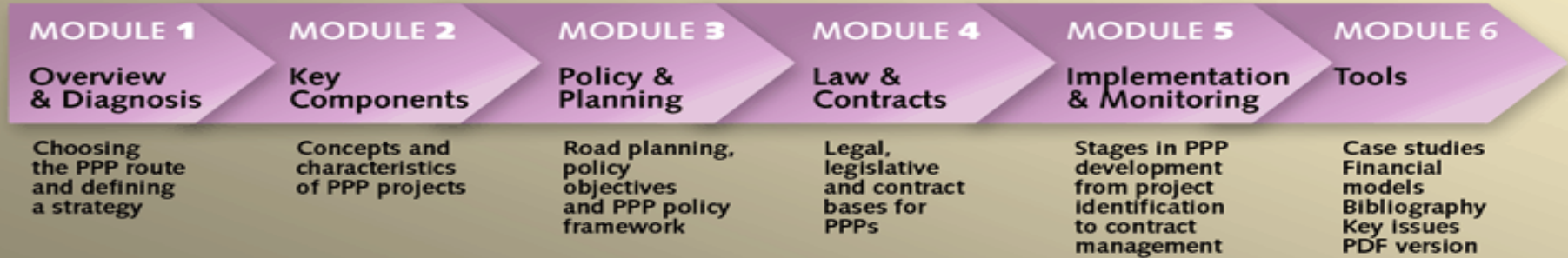
<http://ppi.worldbank.org>

Toolkit for PPP in Roads and Highways

- To assist transport sector policy makers in implementing procedures to promote private sector participation and financing in roads
- Can serve as a manual for the public and private sectors
- Available in English and Russian at:
<http://go.worldbank.org/P2XMGNYLD0>

The Six Modules of the Toolkit

THE MODULAR STRUCTURE OF THE TOOLKIT



Additional Tools: Glossary, Site Map

Link to the Toolkit: [Toolkit](#)

Toolkit Financial Models

- **Purpose**

- Better understanding of key input parameters which affect the financial viability of a PPP project
- Facilitate the computation of indicators of the financial feasibility of a PPP project, such as FIRR, ROE, ADSCR (thus demystifying such calculations)

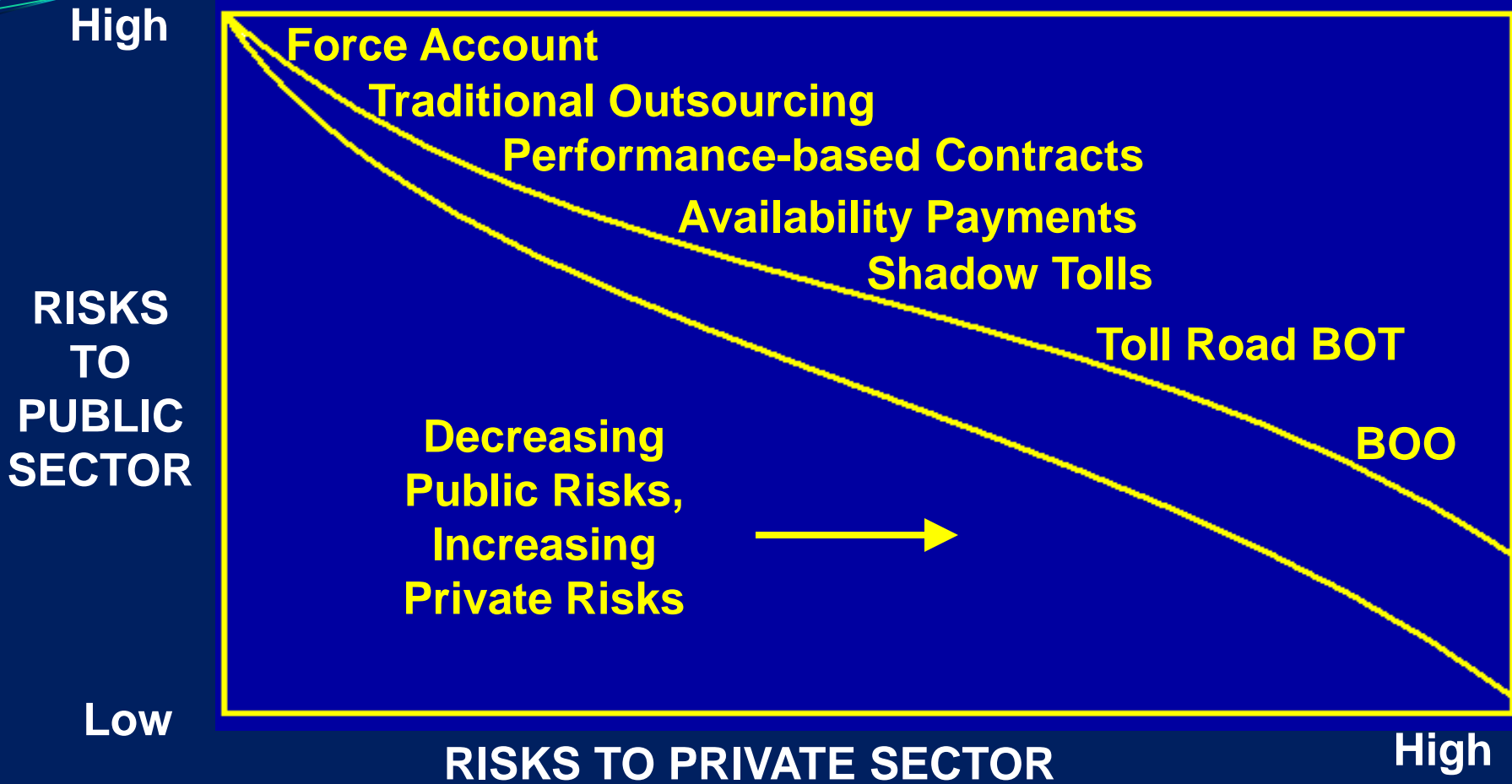
- **Limits**

- Simplified financial models
- Specific project assessment requires detailed financial models prepared by experienced financial practitioners

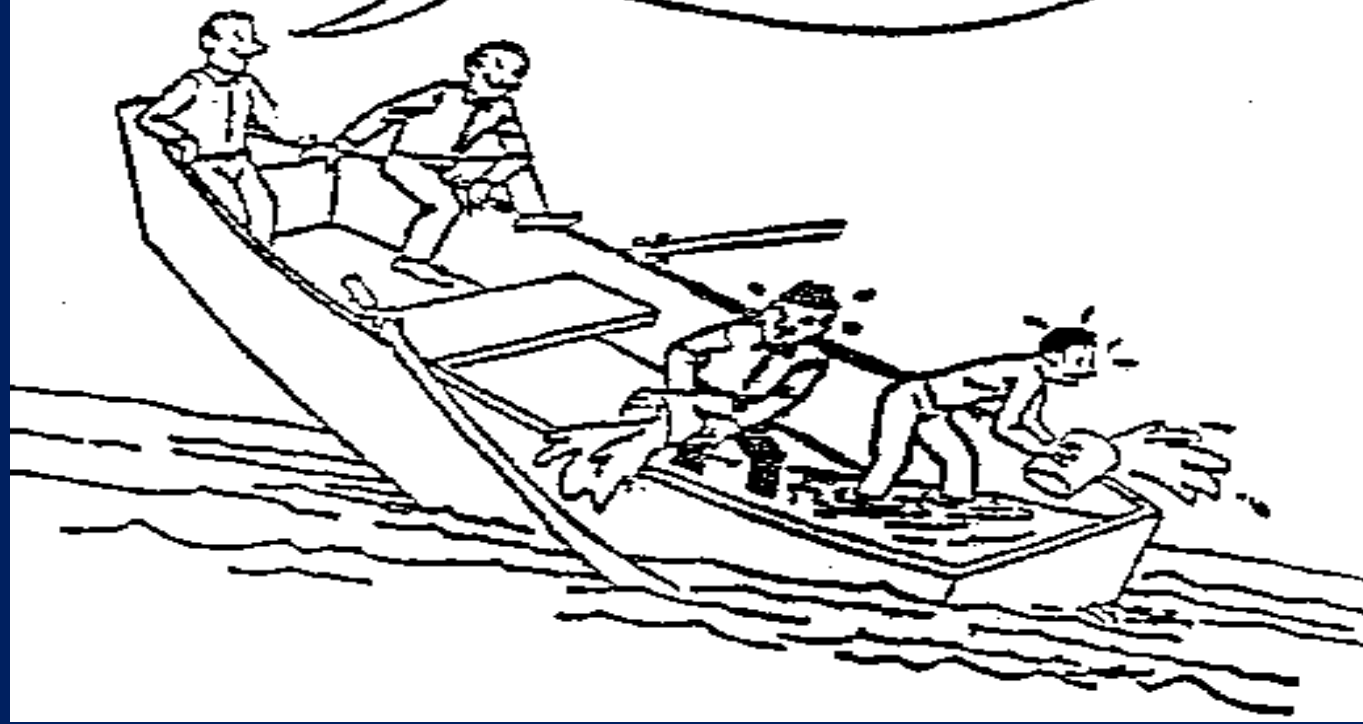
Road Concession Options and the Distribution of Risks

Option	Construction	Demand	Performance
- Traditional Outsourcing	Public	Public	Public
- PBC	Public	Public	Private
- Tolls	Private	Private	Private
- Shadow Tolls	Private	Private	Private
- Availability Fees	Private	Public	Private
- Hybrid	Private	Pri/Pub	Private

Allocation of risks



I'm sure glad the hole isn't in our end...



Cesar Queiroz

Roads and Transport Infrastructure Consultant

Former World Bank Highways Adviser

Tel: +1 301 755 7591

Email: queiroz.cesar@gmail.com

Washington, DC USA

How can the goals of a complex PPP project be achieved?

- Careful selection of the project
- Due consideration of economic, financial, social, and environment aspects
- Realistic expectations, including deadlines
- A dedicated and well prepared team
- PPP agreement satisfactory to stakeholders, including a fair distribution of risks
- Transparent, competitive selection of the concessionaire

Main stages to launch a PPP project

- **Stage 1: Identification, Prioritization and Selection of the PPP Project**
- **Stage 2: Due Diligence and Feasibility Studies: includes activities and studies to ensure the selected project is well designed and can be successfully tendered and implemented**
- **Stage 3: Procurement: includes prequalification of bidders and the bidding and bid evaluation processes, and a section on Unsolicited Bids**

Main stages to launch a PPP project

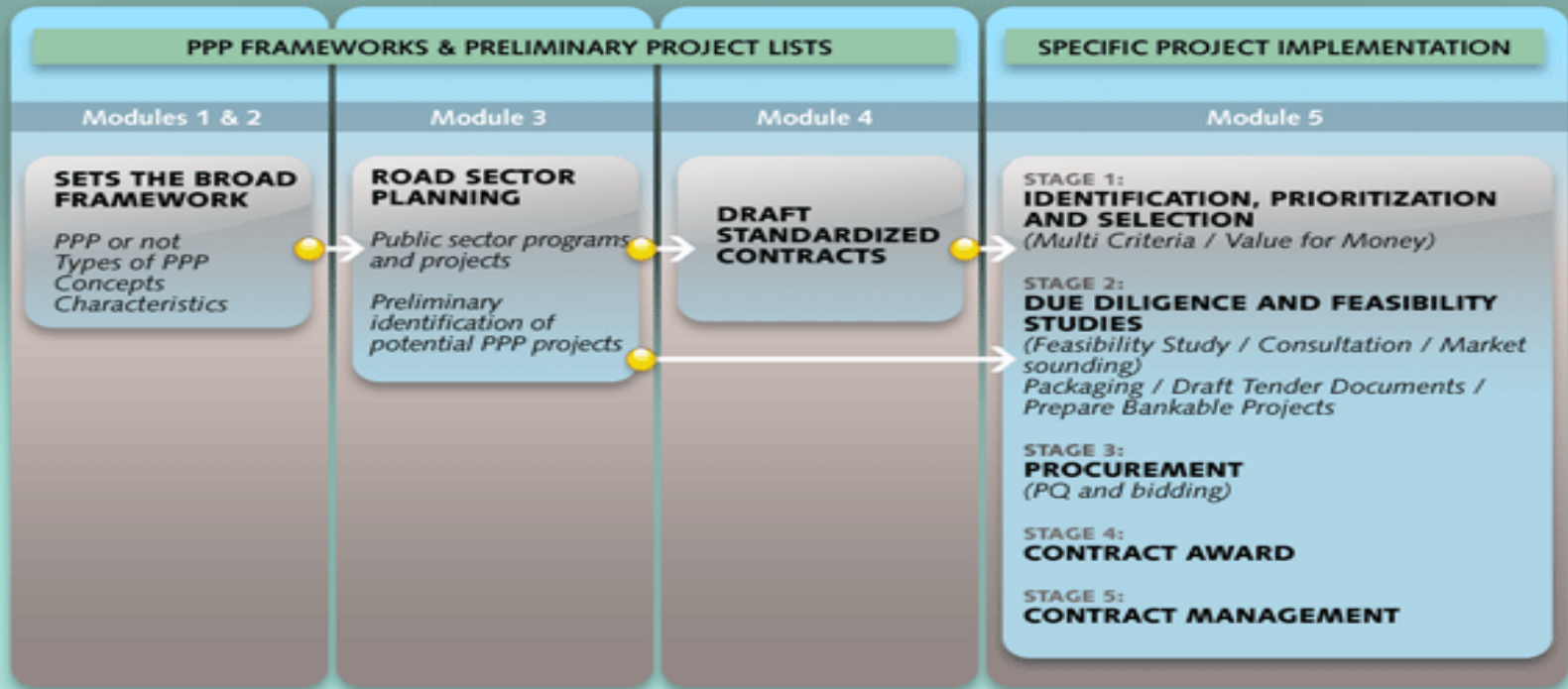
- Stage 4: Contract Award: gives advice on dealing with the preferred bidder(s)
- Stage 5: Contract Management: deals with the construction and operation periods of a project including transfer back if relevant – BOT, but not BOO

Reference: Toolkit Module 5

<http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/5/index.html>Reference

Development of PPP projects

PPP PROJECT DEVELOPMENT THROUGH TOOLKIT MODULES



World Bank Partial Risk Guarantees

- PRGs cover private lenders against the risk of a government failing to perform its contractual obligations with respect to a PPP project
- Such risks may include: currency inconvertibility/ non-transferability, expropriation, war and civil disturbance, minimum revenue guarantees, change of law and regulations, non-allowance for agreed tariff adjustment formula
- Details available at: www.worldbank.org/guarantees

References

- **Toll Roads and Concessions**
http://www.worldbank.org/transport/roads/toll_rds.htm
- **How to Hire Expert Advice on PPP**
http://rru.worldbank.org/Toolkits/Documents/Advisors/Full_Toolkit.pdf
- **Labor Issues in Infrastructure Reform**
www.ppiaf.org/Reports/LaborToolkit/toolkit.html
- **Toolkit for PPP in Roads and Highways**
<http://ppiaf.org/documents/toolkits/highwaystoolkit/>
- **Concession Law Reform – EBRD**
<http://www.ebrd.com/country/sector/law/concess/>
- **European Commission Communication on Public Private Partnerships**
<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/509&format=HTML&aged=0&language=EN&guiLanguage=en>

References (cont'd)

- **Road Infrastructure and Economic Development: Some Diagnostic Indicators** <http://go.worldbank.org/T6Q3BII430>
- **Workshops on the Toolkit for PPP in Roads and Highways: New Delhi, Brasilia, Kiev, Moscow** <http://go.worldbank.org/AWEUWI4CN0>
<http://go.worldbank.org/MK2FZ3NQL0>
- **Worldwide Trends in Private Participation in Roads**
http://www.ppiaf.org/documents/gridlines/37trends_private_participation_in_road.pdf
- **Seminar on Legal, Economic, and Implementation Issues in PPP Projects, Warsaw, June 17-18, 2008** <http://go.worldbank.org/FII0BYIDP0>
- **Competitive Selection of Private Partners and Use of Standard Bidding Documents, June 2008**
http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/6/bibliography/pdf/poland_comp_selec_conces_cqueiroz_pbaquero_final.pdf

Cesar Queiroz, former World Bank Highways Adviser, is an international consultant on roads and transport infrastructure. His main expertise is in public-private partnerships, road management and development, performance-based contracts, port reform and rehabilitation, improving governance, quality assurance and evaluation, research, teaching and training. Between 1986 and 2006, he held several positions with the World Bank, including Lead Highway Engineer and Principal Highway Engineer. Prior to joining the World Bank, Cesar was the deputy director of the Brazilian Road Research Institute in Rio de Janeiro. He holds a Ph.D. in civil engineering from the University of Texas at Austin, a M.Sc. in production engineering from the Federal University of Rio de Janeiro, and a B.Sc. in civil engineering from the Federal University of Juiz de Fora, Brazil. Cesar has published two books and more than 130 papers and articles. His recent assignments include infrastructure advisory services to Russia, Brazil, Latvia, Lithuania, Poland, Ukraine, Philippines, Uganda, Sri Lanka, India, Egypt, Colombia, Laos, Mozambique, Saudi Arabia, Tunisia, Sweden and Norway. He is currently a visiting professor at the University of Belgrade, Serbia, and has lectured at George Washington University since 1996 on private participation in infrastructure.