

# **APPLIED RESEARCH PROJECTS**

**Highlights of 2015**



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# Summary

Presentation .....	3
A system to detect dengue more rapidly .....	4
To unravel the “fiscal” ball of thread .....	6
Agility in calculating the impact of environmental projects.....	8
The ideal fiscal policy to reduce informality in the Brazilian labor market .....	10
Eyeglass on the Federal Supreme Court .....	12
Analysis and Evaluation of the Institutional Development of the Immigration Policy in Brazil for the 21st Century .....	14
An eye on GDP month by month .....	16
An Evaluation of two decades of regulatory agencies.....	18
Why are real estate prices in large American cities rising?.....	20
Brazilian Internet legislation becomes a world reference .....	22
Favela residents do not only look at the price of loans .....	24
Brazilians have low confidence in the justice system.....	26
The role of the Brazilian Supreme Court chief justice.....	28
Brazil’s energy planning is divorced from reality .....	30
The over-indebtedness of the new middle class.....	32
Public Transparency Program.....	34
A proposal with strong.....	36
A model to optimize the generation of energy in the country.....	38
Alternatives to reduce traffic in the city of São Paulo .....	40
How politics works at the state and municipal levels.....	42
Brazilian dilemmas part I.....	44
Brazilian dilemmas part II.....	46
Reasons for the increasing household income inequality in the USA.....	48
Efficient allocation of resources for school meals in Brazil .....	50
Post-Western World .....	52
Solutions for solid waste in Brazil .....	54
How to delegate prison management to private initiative .....	56
The road to universalization of sanitation services .....	58

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# Presentation

Getulio Vargas Foundation (FGV), founded in 1944 in Rio de Janeiro, has the mission of advancing the frontiers of knowledge in the areas of the social sciences and related fields, by producing and transmitting ideas, data and information, besides preserving and systematizing them. Through these activities, it aims to contribute to the socioeconomic development of Brazil, improve the country's ethical standards, make institutional governance more responsible and shared, and increase the country's insertion in the international scenario. To a great extent FGV acts as a gateway between Brazil and other countries.

Besides being a teaching and research institution with globally recognized quality, FGV acts as a bridge between society and those responsible for formulating public policies, through measurement and assessment of these policies. It also seeks innovative solutions for public and private management. As a result, FGV is considered to be one of the world's top ten think tanks and one of the best 100 institutions of higher learning.

The Network for Applied Research and Knowledge (or just Research Network) was formed in 2014 to encourage the production of knowledge, systematize the management of FGV's research activities, disseminate the results and structure a network of researchers in Brazil and abroad. Besides the Research

Network, the governance structure of FGV's research activities includes the Committee on Ethical Conformity in Research Involving Human Beings (CCE) and the Research and Innovation Committee.

The schools and research centers of FGV are responsible for teaching and producing knowledge in various areas, such as: business competitiveness; culture and society; economic and social development; state, government and efficient public policies; and democracy. Each year, hundreds of articles and other academic texts are produced based on the research conducted by FGV, serving as a base for public debates. Some of the research projects are funded by FGV itself, after being selected in an internal competitive process by the Research and Innovation Committee.

In 2015, the Committee received 140 proposals for applied research projects, which were evaluated for their relevance, methodological rigor and potential social impact. Another criterion was their interdisciplinary character, with greater value given to those that involved participation of researchers from various areas of knowledge and different units of FGV.

In the text that follows, we present a summary of 28 research projects chosen by the Research and Innovation Committee for their potential to contribute to the country's development, in line with FGV's mission.

To learn about the applied research projects, access  
[www.fgv.br/bibliotecadigital/rededepesquisa](http://www.fgv.br/bibliotecadigital/rededepesquisa)

# A system to detect dengue more rapidly

*With data on minimum temperatures, tweets and epidemiological information, the Info Dengue system provides weekly bulletins on the disease to the government and the public.*



**Authorship:** Flavio Codeço Coelho (fccoelho@fgv.br)

**Researchers:** Claudia T. Codeço, Oswaldo G Cruz, Thais I. Riback, Carolin M. Degener, Marcelo F. Gomes, Daniel Villela, Leonardo Bastos, Sabrina Camargo, Valeria Saraceni and Maria Cristina F. Lemos

**Organization:** School of Applied Mathematics (EMAp) in partnership with the Scientific Computing Program from Oswaldo Cruz Foundation

**Support:** Applied Research Fund (FGV), National Health Foundation, CNPq, Faperj



## Objective

*To create and maintain Info Dengue, a system to evaluate the risk of dengue transmission in the state of Rio de Janeiro.*

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### X-ray of the study:

1. Gathering of data on epidemiology, weather (minimum temperatures measured at weather stations) and from social networks (using the “Dengue Observatory” of Minas Gerais Federal University - UFMG).

2. Statistical analysis of the data.

### Results:

1. Based on the minimum temperature data, tweets about dengue and the number of cases notified by the public health system, it is possible to create a risk alert system that ranges from green (low risk) to red (high risk), passing through yellow and orange.

2. Analysis of the system with historical data from 2011 and 2014, and prospective data for 2015, indicates a high level of reliability.

3. Each week the system captures the data and traces out a risk map, which is disclosed to the public at the site [info.dengue.mat.br](http://info.dengue.mat.br), in language similar to that used by weather forecasting sites. For health authorities, the project produces detailed weekly reports.

4. The system started in the city of Rio de Janeiro, and now covers all the 491 municipalities in the state of Rio de Janeiro and Paraná. The idea is that through partnerships, the system can be implemented in the rest of the country.

### What's new:

1. The Info Dengue system has been allowing the government and people of Rio de Janeiro to obtain information about dengue faster, because it: (1) incorporates climatic data that show when conditions are favorable to transmission; and (2) uses data from social networks, which capture changes in reports about dengue symptoms.

2. There are four levels of alert for dengue. At the yellow level, environmental actions are envisioned, such as removal of trash and pools of standing water which act as mosquito breeding sites; at the orange level, these actions are supplemented with use of insecticides and biological controls to reduce the mosquito population; and at the red level, the operation of health infrastructure is intensified. With Info Dengue, society can be better informed and participate more depending on the alert levels.

# To unravel the “fiscal” ball of thread

*The research project on the Brazilian budgetary process shows how the imbalances in the public finances tend to worsen if a - fiscal reform is not carried out to get at the roots that created the “fiscal” ball of thread and start to draw all the strands together.*



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**Organization:** FGV's Brazilian School of Public and Business Administration (EBAPE), Center for Fiscal Studies (CEFIS)

**Support:** Applied Research Fund (FGV)

## Objective:

*Highlight the effects of the budgetary process distortions in Brazil and the importance of a budget reform for the development of the country.*

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### X-ray of the study:

1. Survey and analysis of detailed information about the various records used to hide the real situation of the public accounts and postpone the confrontation of inevitable changes to correct the structural imbalances in the public accounts.
2. Survey and analysis of information about the growing interference from the federal government in state and municipal budgets and the influence that politics exerts in this relationship.
3. Execution of field research to capture the perceptions of the players involved in the management and control of public policies in the sphere of the state governments, with respect to the limitations that the budgetary process distortions create for improving the quality of services provided to the population.

### Results:

1. The escalation of the fiscal crisis in recent years points to the impossibility of correcting the imbalances of public accounts without undertaking an in-depth reform in the process of preparing, approving and implementing the budget.
2. The interference of the federal government in state budgets has

strengthened the centralization of power and has contributed to the weakening of states, creating a hostile environment to the quality of the management of the public services that are under the responsibility of the state governments.

3. The duality of tax regimes established in 1988 to universalize access to welfare, health and care contributed to constrain the budget and the imbalance to comply with the social rights provided for in article 6 of the Constitution, hiding the thread that can unravel the “fiscal” ball. Drawing all the strands together means taking a glimpse at new ways to correct the budgetary imbalances and disparities and comply with social priorities.

### What's new:

1. Fiscal imbalances will not be automatically solved when the Brazilian economy recovers. Recognizing that fact is essential to choosing the path that will sustain the economic growth recovery with new social advances.
2. The facts and analyses presented contain important subsidies to find the best solutions to a crisis detonated by the noncompliance with the rules governing the budgetary process.



# Agility in calculating the impact of environmental projects

*A tool of the Center for Sustainability Studies (GVces) allows the Brazilian Development Bank (BNDES) to quickly evaluate the greenhouse gas emissions avoided before approving financing for projects.*



**Authorship:** Mario Monzoni (mario.monzoni@fgv.br)

**Researcher:** Dafne Oliveira Carlos de Moraes

**Organization:** Business Administration School of Fundação Getulio Vargas (FGV-EAESP), Center for Sustainability Studies (GVces).

**Support:** BNDES, British Embassy and Regional Latin American Regional Climate Initiative (LARCI)

## Objective

*To create a tool to calculate the greenhouse gas emissions that can be avoided by projects financed by BNDES.*

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### X-ray of the study:

1. Based on methodologies that have been recognized and approved by the United Nations Framework Convention on Climate Change (UNFCCC).
2. Development of methodologies to calculate avoided greenhouse gas emissions of financed projects.
3. Capacity building of credit analysts of the BNDES to use the methodology to evaluate projects that are candidates to receive financing from the National Fund on Climate Change.
2. Flowcharts depicting the phases in which emissions occur. For example, there are two flowcharts for a reforestation project: one for the baseline scenario without avoided emissions and the other with the mitigation project, explaining at what step the reduction of emissions occurs.

### What's new:

### Results:

1. The project, under the coordination of GVces, has resulted in the development of 18 methods to quantify the avoided emissions. Some examples are: recycling of plastic packaging; restoration of biomes; construction and operation of plants using solar or wind power; purchase of transformers; implementation of bicycle rental systems; and capture of biogas.
2. It is expected that the results achieved by the BNDES will inspire other banks to use similar tools.
3. The tool will allow international financial institutions to feel more comfortable in funding projects in Brazil, because they will be able to evaluate the effectiveness of their financing for projects which generates avoided emissions.



# The ideal fiscal policy to reduce informality in the Brazilian labor market

*A model predicts that reducing the payroll tax rates in sectors such as agriculture, clothing, furniture and pulp and paper would help increase formalization.*



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**Researchers:** Breno Albuquerque and Tiago Cavalcanti

**Organization:** Graduate School of Economics (EPGE), Center for Applied Economic Research

**Support:** Applied Research Fund (FGV)

## Objective:

*To propose an improvement in the design of taxing policy in Brazil in light of the high rates of tax evasion and labor market informality.*

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### X-ray of the study:

1. Formulation of a model considering different characteristics of economic sectors in relation to: labor productivity, elasticity of tax evasion to tax rates, elasticity of substitution of production and elasticity of demand.
2. Application of the model in a real rate change situation, which happened from 1998 to 1999, when the COFINS levy was increased from 2% to 3%.
3. The government should lower the payroll tax rates in sectors with high informality and that are sensitive to changes in rates, like agriculture, textile/apparel, hotel and food services, furniture, and pulp and paper.
4. The tax authority can offset the losses by raising taxes in sectors with low informality and little sensitivity of fiscal loss in relation to rate changes, such as the oil and gas, automotive and metallurgy industries.

### Results:

1. The higher the productivity is, the lower informality tends to be. For example, the oil and gas refining sector (with 2.1% informality) has productivity more than 100-fold greater than the agricultural sector (with 78.6% informality).
2. A sector with large companies and high capital-labor ratio, such as oil and gas, is more visible to the tax authority and less subject to evasion. In turn, a sector like wearing apparel, formed by many small companies and with low output-labor ratio, is more sensitive to variation in the tax rate.

### What's new:

1. Brazil is one of the countries with the highest levels of informality in the world. The study shows that it is possible to reduce the payroll tax rates in certain sectors to stimulate formalization of productive activities – with minimal fiscal losses (up to 0.5% of GDP).
2. On the other hand, the tax authority can increase the rates in sectors with lower informality to offset the loss due to the drop in revenues – at a level that does not harm these sectors, which are more productive.



# Eyeglass on the Federal Supreme Court

*The Supreme Court in Numbers project analyzes tens of millions of data points to show how the highest court acts to protect Brazilian democracy.*



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**Organization:** FGV Direito Rio, Center for Justice and Society (CJUS)

**Support:** Applied Research Fund - FGV, School of Applied Mathematics (EMAp)



## Objective

*To carry out quantitative studies that produce novel knowledge about the Brazilian Supreme Court (STF), allowing discussion in academia and civil society about its nature and role in Brazilian democracy.*

### X-ray of the study:

1. Statistical analysis of roughly 1.7 million cases, over 2 million decisions, 20 million docket entries, involving thousands of lawyers and nearly 2 million parties, between 1988 and 2016.
2. Studies on the strategic behavior of Justices, success rate of various actors, the duration of different cases, the Court's workload, the topics and origins of cases.
3. Four theme reports published and more than ten academic articles released since 2011.

### Results:

1. The first "Supreme Court in Numbers" report revealed that between 1988 and 2010, the Court acted as a constitutional court in only 0.5% of the cases – and that the executive branch was the main user of the STF, responsible for 90% of the cases.
2. The second report showed that between 2010 and 2012, the states of São Paulo, Minas Gerais, Rio de Janeiro and Rio Grande do Sul dominated the STF's docket, accounting for 60% of new cases. The main subject of new cases in 2012 was public servants, amounting to roughly 1 in every 5 cases. The greatest increase in new cases was in the area of consumer rights.
3. The third report evidenced the Court's sluggishness by creating indices of the duration of different phases and

of the timing performance of different Justices. When it was published, the report was downloaded 10 thousand times in one week.

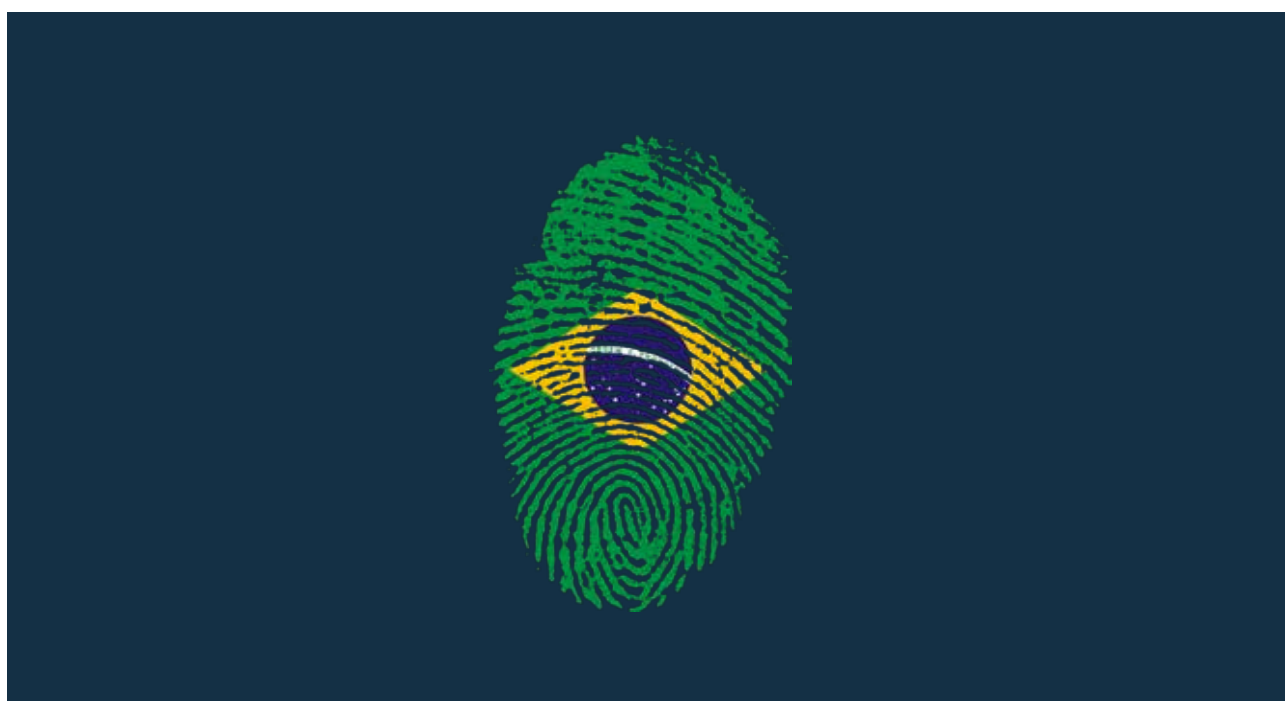
4. The fourth report, in 2015, evaluated the activities of the state and federal prosecution offices arguing cases before the STF. The São Paulo office had the largest volume of cases (more than 3 thousand between 2009 and 2013), followed by Minas Gerais and Rio Grande do Sul. The prosecution has consistently increased its success rate in appeals at the Court. In 2013 a defendant convicted by the Appeals Court of the 4th Circuit, which rules on Lava Jato cases, had a 1% chance of having the STF overturn the conviction on appeal.
5. Academic articles have used data from the project to uncover practices by the Justices that were previously concealed from civil society. One of them showed that they use requests to view the case as a means of unilaterally vetoing the trial of important cases – sometimes delaying them for over a dozen years. Another paper proved that Justices copy and paste their opinions: roughly a third of rulings, causing 20% of an opinion to be identical to another by the same Justice.

### What's new:

1. The Supreme Court in Numbers employs cutting-edge technology developed and managed by a multidisciplinary team, producing reports, articles and software that contribute to the debate on the Judiciary in an effort that is one of a kind in Brazil and the world. ■

# Analysis and Evaluation of the Institutional Development of the Immigration Policy in Brazil for the 21st Century

*The study recommends policies, processes, and organization of information that can help to attract skilled immigrants to Brazil.*



**Authorship:** Marco Aurélio Ruediger (marco.ruediger@fgv.br)

**Researchers:** Margareth da Luz, Wagner Oliveira, Bárbara Barbosa, Janaina Fernandes, Luís Felipe da Graça, Marcelo Rotenberg and Pablo Azevedo

**Organization:** FGV's Department of Public Policy Analysis (DAPP)

**Support:** Ministry of Labor (MTb)<sup>1</sup>, National Immigration Council (CNIg), Federal Police (PF), Migration Observatory of the University of Brasília (OBMigra/UnB), Expatriate Management Group (GADEX) and the Ministry of Employment and Social Security of Spain.

<sup>1</sup>By the time the research was complete, Ministries of Labor and Social Security had been merged, forming the "Ministério do Trabalho e Previdência Social".

## Objective

*Propose solutions to attract skilled immigrants to Brazil.*

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### X-ray of the study:

1. Study on best practices of skilled immigration policies in the world.
  2. Analysis of the immigrants' profile in the country.
  3. Research on the immigrants', employers' and trade union representatives' perceptions of immigration in Brazil.
  4. Analysis of the immigration policy and management in Brazil.
  5. Proposal for policies, processes and information system integration.
3. The study recommends actions for the systematization of information such as: (1) creating an interactive platform for immigration data from three sources (Ministry of Foreign Affairs, Ministry of Labor and Federal Police); (2) conducting systematic surveys on the needs of the job market; (3) developing a multilingual portal about immigration processes and job opportunities for immigrants; (4) publishing immigration processes' guides in several languages; (5) creating and keeping a database of companies interested in hiring immigrants.

### Results:

1. The study recommends policies such as: (1) creating a work visa for professionals specialized in areas with a skills shortage; (2) adopting a points system that issues visas according to a list of desirable characteristics; (3) allowing student visa to change to work visa; (4) allowing visas tied to a region or state in the country; (5) creating a visa for talents who wish to open technological and/or innovative businesses; (6) integrating the immigrant's family effectively.
  2. The study recommends processes such as: (1) allowing visa scheduling at Brazilian consulates through the internet; (2) creating centers based on the Poupatempo model; (3) not requiring National Foreigner Registry (RNE) for work visas of up to 180 days; (4) facilitate validation of diplomas obtained abroad.
1. The study is innovative since it is based on an integrated, multidisciplinary diagnosis of immigration in Brazil, resulting in detailed recommendations on policies, processes and systematization of information.
  2. The impact generated by the study on the improvement of public policy was significant. Besides CNIG having created a working group focused on discussing how to implement the study's proposals, a decree by President Dilma Rousseff has amended a number of provisions on immigration, which converged with the said recommendations.
  3. In addition, the debate has been extended to other protagonists of civil society, through the publication of a reference book about the conducted research, containing the summary of the main recommendations. ■

# An eye on GDP

## month by month

*The FGV GDP Monitor allows anticipating trends in gross domestic product and helps society have a detailed understanding of its components.*



**Organization:** Brazilian Institute of Economics (IBRE)

**Support:** Brazilian Institute of Geography and Statistics (IBGE)

## Objective:

*To provide society with a monthly indicator of GDP.*

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### X-ray of the study:

1. Monthly estimate of Brazilian GDP according to volume and at current prices and at 1995 prices (with series dating to 2000).
  2. Utilization of the same method as employed to calculate the national accounts by the IBGE.
  3. Adjustment to the quarterly GDP (PIB-Tri) of the IBGE, any time methodological changes occur and at each quarterly disclosure.
3. The FGV GDP Monitor makes the following disaggregated demand components available: (1) household consumption (durables, semi-durables, non-durables, also classified as domestic and imported); (2) gross fixed capital formation (machinery and equipment, construction and others); and (3) exports and imports (agricultural products, mineral extraction products, manufactured consumer goods, manufactured intermediate goods, capital goods and services).

### Results:

1. The FGV GDP Monitor offers a report with illustrative graphs and an Excel table with information on the 12 economic activity supply categories that, when grouped, compose the three sectors of the economy (agriculture, industry and services).
  2. The report presents the value added at basic prices, the taxes on output and the GDP, as well as the components of GDP from the standpoint of demand.
1. The estimates of the FGV GDP Monitor precede the IBGE's quarterly GDP in the months the latter is disclosed, and in the months it is not, the Monitor provides a good way to anticipate the trends of GDP and its components.
  2. The disaggregation of the components of GDP is relevant for a better understanding of domestic absorption and external demand.





# An Evaluation of two decades of regulatory agencies

*The main deficit is the low participation of the users of public services and consumer defense organizations in public hearings and consultations.*



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**Organization:** Center for Studies of Regulation and Infrastructure (CERI)

## Objective:

*To analyze the configuration of the directorates of Brazilian regulatory agencies and citizens' participation in public hearings and consultations.*

---

### X-ray of the study:

1. Analysis of the composition of the directorates of all federal regulatory agencies since their creation: educational level of the members, the previous professional position and whether the members have interim or permanent status.
2. Analysis of the participative procedures in the electric power sector and the levels of participation of the different regulatory actors.

the agencies were created, with the National Telecommunications Agency (ANATEL) having the highest percentage (57%). The National Electric Energy Agency (ANEEL) is the agency with the highest percentage of academics. The National Waterway Transport Agency and ANP have had the largest percentage of directors drawn from the private sector. ANATEL is the agency with the largest percentage of interim directors (21%), all of them superintendents of the agency itself.

### Results:

1. The directorates of the agencies have a reasonable professional level, since all the directors have had at least bachelor's degrees, as required by law. Agencies with more complex technical demands tend to have directors with higher or more specialized academic training, as is the case of the National Petroleum Agency (ANP) and National Civil Aviation Agency (ANAC).
2. Professionals with different backgrounds have served as directors. Former heads of federal ministries and secretariats have been more numerous with the ANP, ANAC and National Water Agency (ANA). Former superintendents, former ombudspersons and former directors of each agency have occupied 22% of the positions since

3. In relation to participation of society, it is growing but still dominated by that of the regulated service provision companies, which discuss questions of rates in public hearings and regulatory changes in public consultations.

### What's new:

1. The agencies are staffed by people with various origins. The position held before becoming a director of an agency depends on the sector.
2. In the roughly 20 years after the creation of the first regulatory agency, ANEEL, the main deficit noted regarding participation is the need to encourage users to take part in the regulatory discussions. Their participation is substantially lower in relation to other actors, as is that of consumer defense organizations.

# Why are real estate prices in large American cities rising?

*The study shows that the main factor responsible for the appreciation of real estate prices is demand from high-income workers who want more leisure time and do not have patience to spend long periods commuting.*



**Authorship:** Cecília Machado (cecilia.machado@fgv.br)

**Organization:** Brazilian School of Economics and Finance (EPGE)

**Support:** National Bureau of Economic Research (NBER), Columbia University, Fund for Applied Research (FPA-FGV)

## Objective:

*To investigate the reasons for the sharp rise in real estate prices in the central regions of American cities.*

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### X-ray of the study:

1. Examination of detailed census data from the USA for the 1980-2010 period, covering the 27 most populous cities (both in 1970 and in 2010).
2. Statistical analysis involving cross-referencing information on the population characteristics, property prices and distance to the center of cities.
5. The increased presence of more qualified workers in central regions increased property values.
6. Between 1980 and 2010, the price of real estate increased by an average of 30% in the largest American cities, while the average price more than doubled in the central regions (from 0 to 4.8 kilometers from the downtown business district).

### Results:

1. The proportion of adults (25 to 55 years) with college degrees who work full time grew in the three decades analyzed – a tendency led by women.
  2. Workers with higher qualifications are now more concentrated in the central city areas.
  3. The time spent commuting grew 15% in the period analyzed. The farther workers live from their jobs (especially the most qualified ones), the greater was the increase in the time spent commuting.
  4. More qualified people with full-time jobs migrated to the central regions of large cities in the 1980-2010 period while less qualified workers remained more dispersed.
- 
1. In 1980, the average price of real estate in the suburbs of large American cities was 50% higher than in center city regions. In 2010 this relation had reversed. The price in central regions was 40% higher than in peripheral areas. The study shows that demand for housing by more qualified workers, with higher income, who want more leisure time and do not have patience to spend long periods commuting is the main factor for the relative appreciation of property prices in central city regions.
  2. On the other hand, demographic indications exist of less disposable income among suburban residents. For example, during the period studied, there was a sharp drop in enrollments in private schools located more than 16 kilometers from the central region of large cities.



# Brazilian Internet legislation becomes a world reference

*The Center for Technology and Society (CTS) of FGV Direito Rio (Rio de Janeiro School of Law) helped the federal government to update the rules that govern the digital environment.*



**Organization:** Rio de Janeiro School of Law (FGV Direito Rio) and Center for Technology and Society (CTS)

**Support:** Ministry of Justice and Citizenship (MJ)



## Objective

*To contribute to the development of rules and institutions to regulate the functioning of the Internet in Brazil.*

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### X-ray of the study:

1. Support to the Ministry of Justice to systematize the contributions in the online public consultation process and in drafting the bill that became the Internet Civil Framework Law.
2. Monitoring and technical contribution to the processes of Internet legislation and regulation, with focus on formulating the follow-on regulations to the Internet Civil Framework Law and discussion of a draft bill for a Personal Data Protection Law.
3. Monitoring and participation in discussions about Internet governance in national and international forums.
4. Research into the technical aspects of the Internet, international market practices and regulations (related to freedom of expression, net neutrality, privacy and protection of data).

### Results:

1. The partnership with the Ministry of Justice led to the execution of the first online public consultation and formulation of legislation regarding the Internet.
2. The initiative's success prompted the government to adopt the

practice in the debates about protection of personal data and regulation of the Internet Civil Framework Law.

3. The CTS has a fundamental role in defeating problematic legislative proposals and impelling proposals to protect freedom of expression and privacy of users.
4. In the phase of regulating the Internet Civil Framework Law, the CTS presented suggestions to improve the transparency of the actions of authorities regarding access to personal data of Internet users and definition of the concepts of net neutrality, which aims to preserve competition and the free and open nature of the Internet.

### What's new:

1. Brazil today has legislation that is considered a global reference. The Internet Civil Framework Law has been praised by specialists all over the world, including the Special Rapporteur on Freedom of Expression of the United Nations.
2. The executive branch sent a modern bill to Congress for protection of personal data. The enactment of this bill can place Brazil alongside the more than 100 countries that now have this type of legislation.

# Favela residents do not only look at the price of loans

*A study by the Center for Behavioral Research (CBR) shows that consumers of Favela da Maré are willing to pay higher interest rates on loans in exchange for better service.*



**Authorship:** Jorge Jacob ([jorge.jacob@fgv.br](mailto:jorge.jacob@fgv.br)), Eduardo Andrade ([eduardo.b.andrade@fgv.br](mailto:eduardo.b.andrade@fgv.br)) and Rafael Goldszmidt ([rafael.goldszmidt@fgv.br](mailto:rafael.goldszmidt@fgv.br))

**Organization:** Brazilian School, of Public and Business Administration (EBAPE), Center for Behavioral Research (CBR)

**Support:** Rio de Janeiro State Research Support Foundation (FAPERJ)

## Objective:

*To understand the price sensitivity of stigmatized consumers (e.g., favela/shantytown dwellers), in social identity threatening commercial settings (e.g., banks).*

---

## X-ray of the study:

1. Conduction of behavioral experiments with residents of Complexo da Maré in Rio de Janeiro.
2. Experiments were conducted with 950 participants to compare the price sensitivity of residents of Complexo da Maré with that of residents of non-stigmatized areas of the city. In a hypothetical situation, the participants were asked to choose between two alternatives offered by two bank branches: in one the interest rate was higher and the staff was friendlier, while in the other the rate was lower but the staff was not friendly at all.

they preferred to pay more for a loan when the bank manager was more sympathetic, when compared to non-favela dwellers and to other favela dwellers with more positive perceptions of their group reputation.

3. The discomfort of being viewed as a member of a negatively stereotyped social group in a setting where his group is traditionally stereotyped (i.e., banks), can explain the lower price sensitivity (even controlled for any possible arbitrary decision power by the bank staff).

## What's new:

## Results:

1. Among the favela dwellers, the choice for the loan from the bank offering friendlier service (at a higher interest rate) was more frequent than among residents of other regions of the city.
2. The more negative the image the favela dwellers believed that others had of them, the higher the probability they would prefer the more expensive loan associated with friendlier service. In other words,

1. In contrast to extant literature and previous studies that usually indicate consumers with lower income levels as more price sensitive due to their budget constraints, the results show that residents of favelas are less sensitive to price when under social identity threat, revealing preference for a friendlier service.
2. Even a commercial experience can pose a psychological threat to members of stigmatized groups, and the implications of this pattern can make it even harder for these people to escape from poverty.



# Brazilians have low confidence in the justice system

*Indicators reveal that citizens have a low opinion of judicial services and the efficacy of laws. The most trusted institutions are the Armed Forces and Catholic Church.*



**Authorship:** Luciana Gross Cunha (luciana.cunha@fgv.br)

**Organization:** São Paulo School of Law (FGV Direito SP) and Center for Applied Legal Research (CPJA)

**Support:** Fundação Getulio Vargas (FGV)

## Objective:

*To understand the perceived quality of Brazilian public institutions, in particular institutions of the justice system.*

---

## X-ray of the study:

1. Formulation of the ICJBrasil – Index of Confidence in Brazilian Justice, which systematically measures the population's opinion about the country's justice system and identifies people's propensity to use the courts to resolve disputes.
2. Formulation of the IPCLBrasil – Index of Perception of Law Abidance, which reflects popular sentiment regarding compliance with legal rules.
3. Systematic survey of citizens' confidence in institutions.
3. In general, the respondents believe the courts are very slow, expensive and difficult to use. Conflicts involving consumers' rights are the most frequent ones taken to court.
4. The latest data from the IPCLBrasil (2015) reveal that 80% of the respondents agree with the statement "It's easy to break the law in Brazil" and 81% with the statement "Anytime possible I try to get around instead of obeying the law". For 56% of the respondents, there are few reasons to following the law in Brazil, but 78% say that scofflaws are seen negatively by others.

## Results:

1. The most recent data from the ICJBrasil (2014) reveal that younger respondents (between 18 and 34 years old), those with higher incomes (more than 8 times the minimum monthly wage) and with higher schooling have more trust and better evaluation of the Brazilian judiciary.
2. The younger respondents also professed greater propensity to seek justice in the courts, but in relation to income, those earning between 4 and 8 times the minimum monthly wage demonstrated greater predisposition to use the courts (and with respect to education, the leading group was those with high school diplomas).
5. The institutions evaluated the best by the population are the Armed Forces, Catholic Church and public prosecution services. In contrast, the institutions seen as least trustworthy are the Federal Government, Congress and political parties in general.

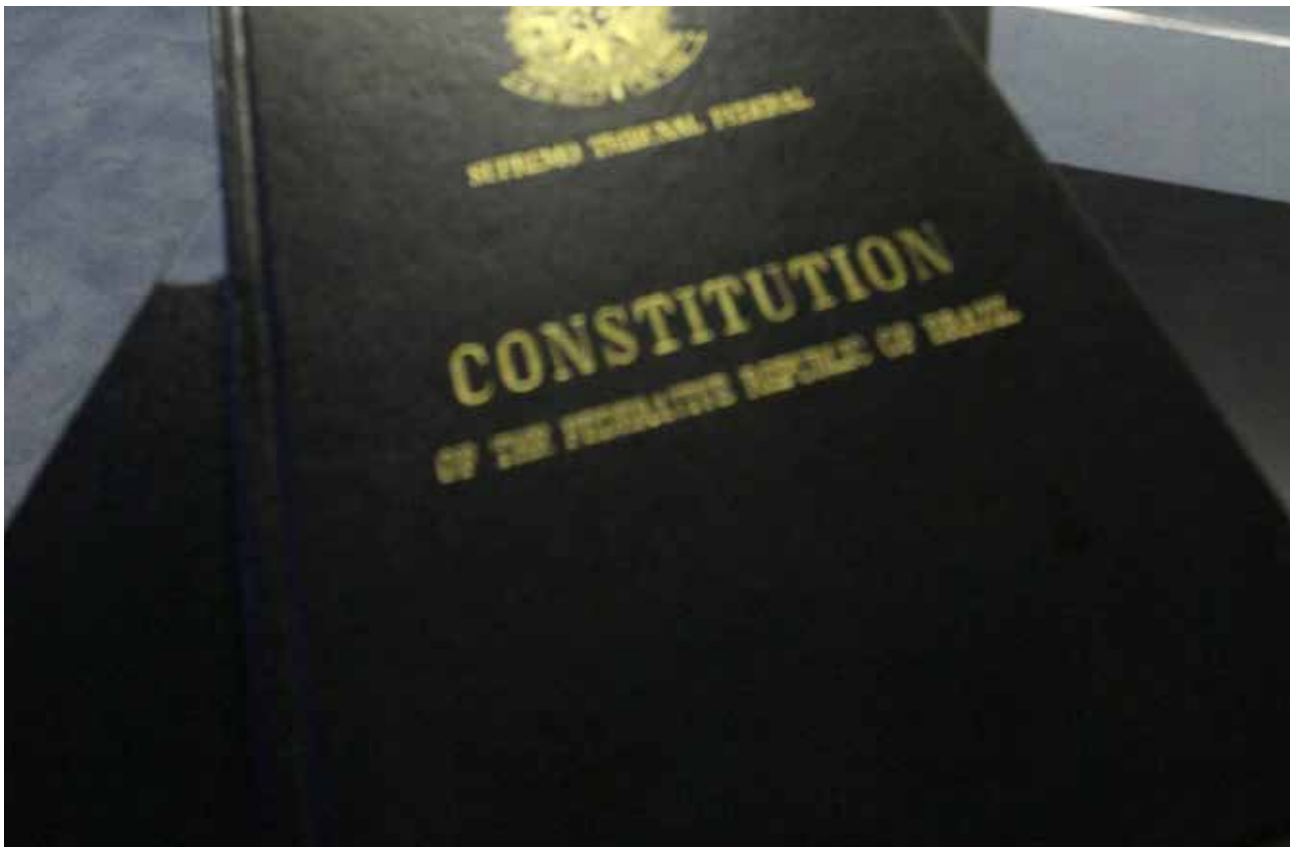
## What's new:

1. The systematic survey to collect the data for the indicators produced by the CPJA shows the low esteem for the judiciary as a provider of public service and the contradictory relation of Brazilians with laws.
2. Brazilians tend to obey the law only when there is a high likelihood of being punished or socially disparaged for breaking the law.



# The role of the Brazilian Supreme Court chief justice

*Analysis of the case docket and judgment sessions of the Brazilian Supreme Court (Supremo Tribunal Federal - STF) allows to verify what kind of legal and political choices are behind its management.*



**Authorship:** Eloísa Machado de Almeida (eloisa.machado@fgv.br) and Rubens Glezer (rubens.glezer@fgv.br)

**Organization:** São Paulo School of Law (FGV Direito SP)

**Support:** *O Estado de São Paulo* newspaper and Bloomberg

## Objective:

*To contribute to public debate on how cases are docketed for judgment in the Brazilian Supreme Court (STF).*

---

## X-ray of the study:

1. Research on how the Chief Justice chooses cases to be judged by the full bench of the Brazilian Supreme Court among thousands of options available (all of them released by the justice rapporteur), considering the docket between 2005 and 2016, taking into account factors such as: cases themes, relevant actors, repetition of analogous cases and interruptions in judgment.
2. Comparison between the cases ruled by the full bench and those available for judgment that nevertheless are held back for indeterminate period. This research enables a better understanding of the rationale and efficiency of the docket construction in the past decade.
3. Besides the docket research, since the authors follow all the Brazilian Supreme Court full bench ruling sessions, the team engages actively in the public debate through the media, by television, radio and newspaper analysis and interviews.

## Results:

1. The full bench docket research enabled the creation of a database organizing more than 13 thousand cases that were selected (or could be selected) for full bench judgment sessions, containing variables that are rarely or never used at all in Brazilian court's legal research. Such database gives a privileged overview on the rationale

and efficiency of the Brazilian Supreme Courts docket control.

2. So far, the results show that only 30% of the cases allocated for judgment in the period studied were definitively judged, revealing low efficiency of the Court.
3. In 2017, a report of difficulties and suggestions for better management is intended to be delivered to the STF Justices.

## What's new:

1. To deepen the knowledge on the Brazilian Supreme Court docket control is to have a better grasp on how the choices are made regarding what is to be ruled up on and what is left to be ruled after several years, or even not ruled at all. This unveils the political rationale of docket control during the past decade and gives insight on the accountability process therein.
2. The project brought about severe impact on the public debate regarding the general population knowledge of the Court during a time of acute political crisis, with more than 100 media interventions in the mainstream media such as *O Estado de São Paulo*, *Folha de São Paulo*, *Gazeta de Curitiba*, *O Tempo* (newspapers), *UOL*, *Jornal Nexo*, *Jota*, *Infomoney* (wide range websites), *BandNews*, *CBN*, *Jovem Pan* (radio stations), *GloboNews*, *Rede Globo*, *SBT*, *Gazeta* and *Cultura* (TV stations). ■

# Brazil's energy planning is divorced from reality

*The Brazilian Strategic Energy Planning (PNE 2050) makes overoptimistic economic estimates, while disregarding the full potential of alternative energy sources.*



**Authorship:** Lavinia Hollanda

**Organization:** FGV Energia

## Objective

*To discuss long-range energy planning in Brazil, mainly the PNE 2050.*

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### X-ray of the study:

1. Realization of a debate in 2015 with participation of executives of the Energy Planning Company (EPE, an entity of the Ministry of Mines and Energy) and specialists from academia, companies, environmental entities and think tanks.
2. Based on the debate, a white paper was published called "Contribution to Energy Planning for 2050".

### Results:

1. The premises of EPE's long-range energy planning appear to be divorced from Brazilian economic trends. The projection for investment in infrastructure of between 20% and 21% of GDP is too high, considering that since 1996, Brazil only managed to attain this investment level between 2010 and 2013. It is also hard to imagine Brazil reaching the 89% urbanization rate projected for 2050, because it already has one of the world's highest rates.
2. A sectorial analysis of the PNE 2050 reveals that the estimates for civil construction, chemicals and steelmaking are too optimistic.
3. The PNE 2050 does not consider difficulties related to exploration

and production from the subsalt hydrocarbon reserves or the reduction of investments by Petrobras.

4. The EPE makes relatively meek estimates of the Brazil's ability to stay abreast of international trends in the matter of energy efficiency, which winds up limiting the potential for efficiency gains in the country.

### What's new:

1. The optimistic energy planning scenario for Brazil obfuscates the need for emergency measures to restructure the country's industrial competitiveness. It is fundamental for planning to address the limitations imposed by structural questions in the country.
2. The PNE 2050 does not indicate important energy efficiency measures in the country and does not pay proper attention to the potential impact of renewable sources, which in 35 years can rise from being supporting players to star status.
3. During the debates about the PNE 2050, the planners showed willingness to engage in dialog, indicating it is possible to build a path to energy planning that is more in line with the real perspectives of the Brazilian energy sector.

# The over-indebtedness of the new middle class

*People forming the new middle class often lose control of their debts, especially when faced with unexpected events.*



**Authorship:** Antônio José Maristrello Porto ([antonio.maristrello@fgv.br](mailto:antonio.maristrello@fgv.br))

**Organization:** Rio de Janeiro School of Law (FGV Direito Rio) e Center for Research in Law and Economics (CPDE)

**Support:** Rio de Janeiro State Public Defender's Office (Consumer Defense Unit)



## Objective:

*To understand the phenomenon of personal over-indebtedness in Brazil.*

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### X-ray of the study:

1. Conduction of empirical studies at the regional (RJ) and national level.
2. Formulation of a theoretical framework for the notion of over-indebtedness in Brazil.
3. Publication of studies in the form of articles and books.
4. The majority of over-indebted people are between 25 and 44 years old and have more or less fixed monthly income (especially those earning between one and three times the minimum monthly wage, but also those earning from three to six times the minimum).

### Results:

1. Over-indebtedness is generally associated with unexpected events in people's economic lives (marriage, birth of children, death of relatives, divorce, job loss, disease), which cause temporary inability to manage the household budget.
  2. An increase has occurred of debts related to credit cards, store purchase cards and "consigned" loans (payroll loans with repayment through automatic deduction from pay or pension benefits).
  3. Credit transactions to pay off previous debts have been increasing.
1. The proportion of debt to household income increased from 18% in 2005 to more than 45% in 2015. The project of the Center for Research in Law and Economics (CPDE) clarifies the problem and enriches reflections on the phenomenon, connected to the notion of the "new middle class" in Brazil.
  2. Over-indebtedness is currently most prevalent among workers (self-employed people and workers in the formal sector) who are in economic ascension.
  3. The project shows the trend for expansion of credit as a product of ordinary consumption in the everyday spending of Brazilian households.





# Public Transparency Program

*The Public Transparency Program reveals distortions in the application of the law on public access to information and suggests solutions.*



**Authorship:** Gregory Michener ([gregory.michener@fgv.br](mailto:gregory.michener@fgv.br)), Luiz Fernando Marrey Moncau ([luiz.moncau@fgv.br](mailto:luiz.moncau@fgv.br)) and Rafael Velasco ([rafael.velasco@fgv.br](mailto:rafael.velasco@fgv.br))

**Organization:** Rio de Janeiro School of Law (FGV Direito Rio) and Brazilian School of Public and Business Administration (EBAPE)

## Objective:

*To evaluate the extent to which public entities are complying with Brazil's new Access to Information Law (12.527/11), which gives Brazilians the right to ask and receive public information at all levels and across all branches of government.*

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## X-ray of the study:

1. Sending of 700 information requests to over 170 public entities, representing the three branches of government, at the federal, state and municipal levels.
2. Application of three metrics to assess responses: (1) response rate (proportion of requests receiving an answer from the target entity); (2) accuracy rate (proportion of responses received containing information pertinent to the request); and (3) average response time (number of days between the request and response).

was, on average, 10% lower and took 8 more days than for people that, through a routine internet search, demonstrated an institutional affiliation. These data signal that public officials may be systematically 'Googling' requesters and assigning them varying levels of priority in association with 'who' they are.

3. The results show various cases where the requests were rejected by public agencies based on an expansive and illegitimate interpretation of legal exceptions. In other situations, the courts hampered access by creating bureaucratic hurdles not specified in Law 12.527/11.

## Results:

1. The study reveals a low level of compliance with governmental transparency obligations, although the results did vary among the three levels of government and different jurisdictions. The data suggest that state and municipal entities only respond to one-third of requests, and just over half of the responses contain minimally precise information.
2. The study also provides suggestive evidence for the existence of discriminatory practices regarding access to information. The response rate for people without an institutional 'identity' (connection)

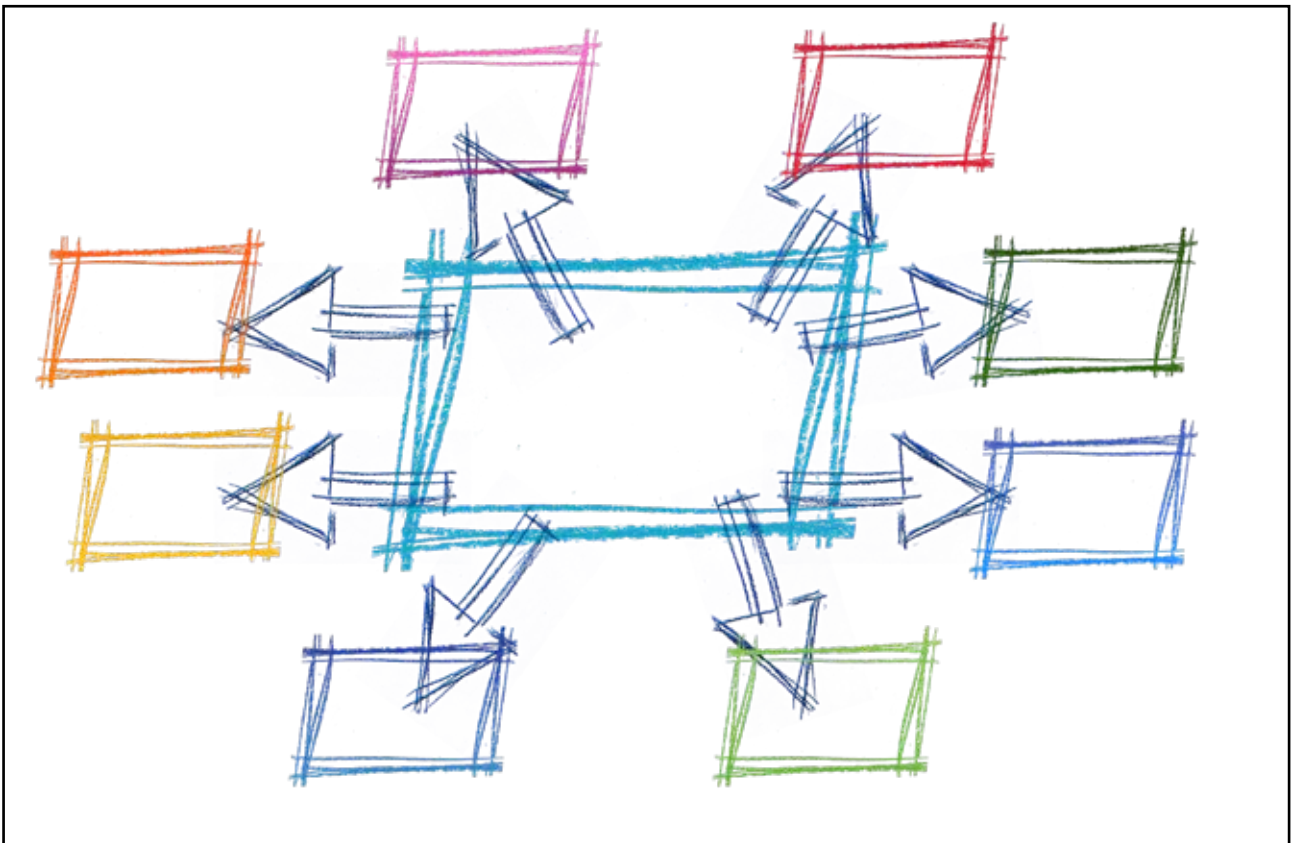
## What's new:

1. The study shows that the public's right to information faces significant challenges in terms of compliance and administrative professionalism. Requesters without institutional connection – often from more humble sectors of society – may be likely to receive inferior service.
2. The study makes recommendations, such as: (1) ending the requirement for citizens to present their identity numbers to submit requests for information; (2) limiting vague exceptions to the right to access information; and (3) establishing specific platforms for information requests.



# A proposal with strong impact on the poorest

*FGV Social helped to design social policies that integrate the different levels of government and make a difference in the lives of the neediest Brazilians.*



**Authorship:** Marcelo Cortes Neri (marcelo.neri@fgv.br)

**Organization:** FGV Social

**Support:** Rio de Janeiro Municipal Government, Rio de Janeiro State Government, Federal Government (MDS, MPAS) and international organisms (UNDP and World Bank)

## Objective

*To design, implement and evaluate programs to combat poverty and inequality.*

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### X-ray of the study:

1. Launch by FGV Social of a set of studies with annual updating, such as “The Map of the End of Hunger” and “The New Middle Class”, and publication of academic articles.
2. Participation of Marcelo Neri at various international and national seminars and as a founder of the knowledge hub called World Without Poverty (WWP).

### Results:

1. FGV Social helped to design federal income policies, proposed the implementation of a system of state minimum wage levels and higher yearly adjustments for social security beneficiaries receiving the floor pension. It also suggested improvements in the “Bolsa Escola” (“School Stipend”) and “Bolsa Família” (“Family Stipend”) programs, such as the inclusion of actions for early childhood and the possibility of using the program’s magnetic cards as debit and saving account devices.
2. FGV Social designed and implemented subnational conditional income transfer programs, in particular “Família Carioca” (“Carioca Family”) and “Renda Melhor” (“Better Income”), respectively for the city and state of Rio de Janeiro. In these programs, the payments to households are individualized and based on the poverty gap. Also, the Millennium Development Goals of the United

Nations were used as a mechanism for coordination among the levels of government, an initiative that was recognized by the Global Development Network (GDN). Both characteristics were subsequently adopted in the federal “Bolsa Família” program through the “Brasil Sem Miséria” (“Brazil Without Misery”) program.

3. FGV Social developed a method to evaluate the assets and permanent income of people, which allows the targeting of benefits to people who really are poor rather than those who just say they are poor. Proposed a series of new conditionalities and created exit doors out of the programmes.

### What’s new:

1. The studies identified at first hand all the main inflection points observed in the statistical series on Brazilian poverty and inequality over the past 15 years.
2. The innovations of FGV Social have enhanced the effectiveness of conditional income transfer programs at the national, state and municipal levels and enabled an income growth of more than 5% by the poorest Brazilians.
3. The methodology of FGV Social has allowed the integration of the social payment systems at all three levels of government: Rio de Janeiro city and state governments and federal government. ■

# A model to optimize the generation of energy in the country

*Software allows integrated management of water resources in Brazil and helps avoid severe energy crises.*



**Authorship:** Vincent Guigues (vincent.guigues@fgv.br) and Mario Veiga

**Organization:** School of Applied Mathematics (EMAp)

**Support:** PSR Soluções e Consultoria em Energia



## Objective:

*Help improving the integrated management of water resources in Brazil.*

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### X-ray of the study:

1. Collecting data and analysis of institutional and technical problems regarding water resource management in the country.
2. Analysis of the software used today to manage water resources in some Brazilian watersheds.
3. Proposal of a new methodology and software based on statistical analyses and optimization for integrated management of water resources in Brazil.

### Results:

1. A computer program was developed that considers the interaction between multiple uses of water (irrigation, supply to cities, navigation, tourism/recreation, flood control and energy generation).

2. The project has been analyzing institutional and technical questions and proposing detailed solutions encompassing the regulatory, institutional and legal aspects.

### What's new:

1. The new software enables taking preventive measures, to reduce the use of water in months before dry periods and avoid severe interruptions in supply.
2. The proposal of an integrated model for managing water resources that allows significant savings. For example, the loss due to the interruption of navigation on the Tietê waterway was around R\$ 200 million. In turn, the intensive use of thermoelectric plants in 2014 due to low reservoir levels cost around R\$ 30 billion.



# Alternatives to reduce traffic in the city of São Paulo

*While residents of the state of São Paulo outside the capital city's greater metropolitan area are more prone to use private cars instead of public transportation, the inhabitants of the city itself support the alternate-day travel rule, flextime working arrangements and ride sharing initiatives.*



**Authorship:** Carlos Augusto Costa (carlos.augusto.costa@fgv.br)

**Organization:** FGV Projetos

## Objective:

*To evaluate transportation services in the state of São Paulo.*

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### X-ray of the study:

1. Quantitative survey of 1,000 people in the state of São Paulo, with the following profile: 27% from the capital city, 24% from the periphery of the metropolitan region, and 49% from elsewhere in the state.

### Results:

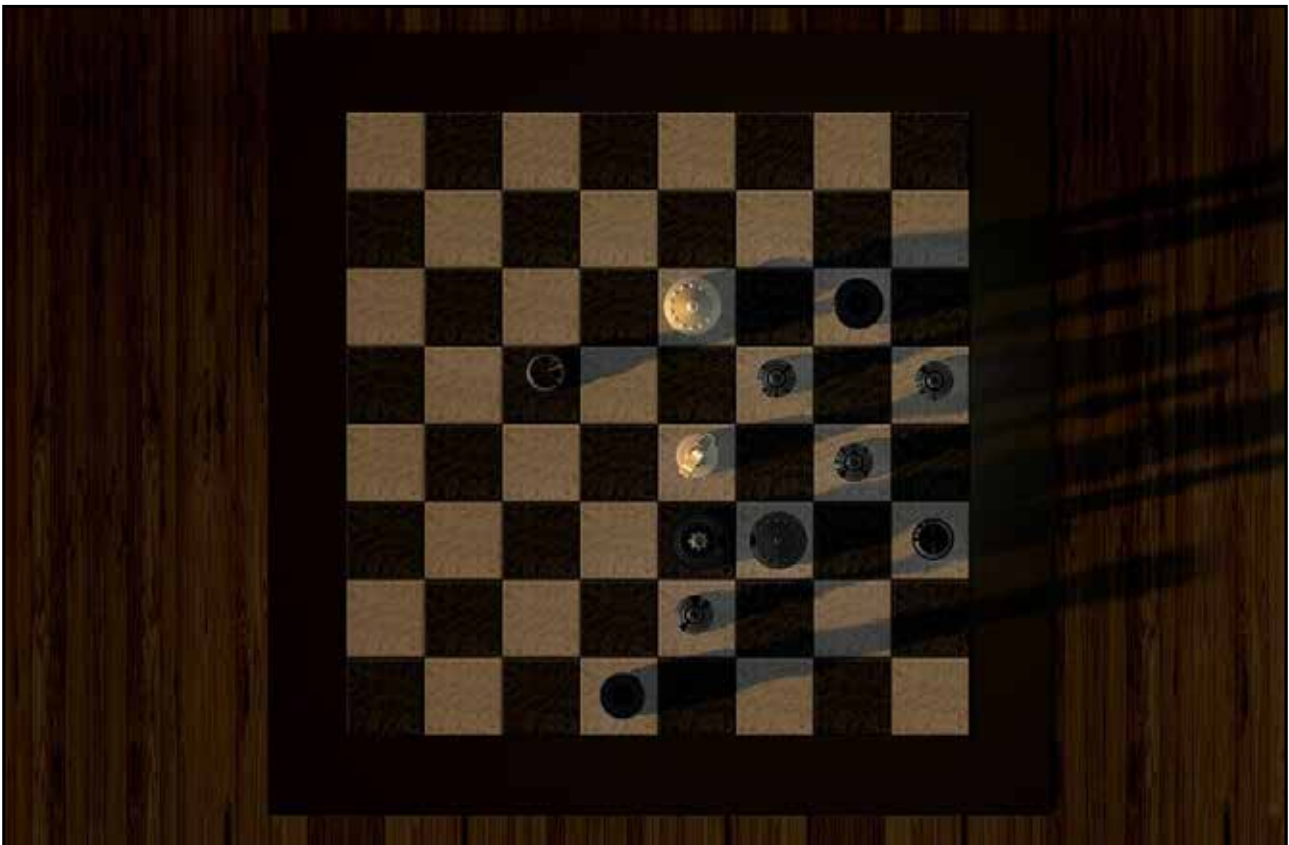
1. 52% of all the respondents stated they use private car as the main means of transportation, followed by bus (47%) and subway (10%). In areas outside the capital city's metropolitan region, 67% said they use cars, against 34% in the capital and 40% in the periphery.
2. 81% of residents in the capital said they use some type of public transportation, against only 35% of the inhabitants of cities outside the metropolitan region.
3. In the previous two years, the majority of respondents (51%) did not alter their habits regarding use private car as means of transportation.
4. In the capital, 50% spend more than 45 minutes each way in commuting to and from work; 29% spend between one and two hours.
5. The percentages calling traffic bad or very bad were 73% in the capital, 45% in the periphery and 27% in the rest of the state.
6. The number of cars is considered the main problem in the capital (59%); the lack of courtesy among drivers stands out in the rest of the state (29%).
7. 82% stated that drivers typically ignore traffic rules and 67% said that enforcement of rules is insufficient.
8. More than half the state's population thinks that the presence of bike paths/lanes helps alleviate traffic congestion. However, in the capital, 46% said the exclusive bike lanes interfere in traffic – versus 27% of residents of the periphery and 11% of those in the rest of the state.
9. 69% of the respondents in the capital stated they think the alternate-day travel rule helps, but 76% stated their opposition to charging an urban toll.
10. The measures most often mentioned to improve mobility were flextime working arrangements, collective transport systems and ride sharing initiatives.

### What's new:

1. In the capital, where more than half the people surveyed said they spend more than 45 minutes commuting each way between home and work, the alternate-day travel rule, flextime working arrangements, systems of private collective transport and ride sharing initiatives are seen by the majority as helping urban mobility.

# How politics works at the state and municipal levels

*The project shows the peculiarities of the game among political actors in state and municipal governments.*



**Authorship:** Carlos Eduardo Pereira Filho, Ciro Biderman ([ciro.biderman@fgv.br](mailto:ciro.biderman@fgv.br)), Fernando Luiz Abrucio ([fernando.abrucio@fgv.br](mailto:fernando.abrucio@fgv.br)) and George Avelino Filho ([george.avelino@fgv.br](mailto:george.avelino@fgv.br))

**Organization:** São Paulo School of Economics (EESP)

**Support:** Superior Electoral Tribunal (TSE), Brazilian Association of Political Science (ABCP).

## Objective:

*To investigate the effects of political variables on the allocation of public resources in the state and municipal spheres in Brazil.*

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## X-ray of the study:

1. Gathering of information on voters, candidates, election results, rendering of accounts and party affiliation in 13 states and the Federal District, and assembly of a database in partnership with the Superior Electoral Tribunal (TSE).
2. Analysis of electoral strategies of governors and parties.
3. Analysis of state accountability patterns.
4. Analysis of the ways the governor's office interacts and tries to build a majority in the legislative assemblies.

## Results:

1. In state elections, voters tend to reward governors who favor growth of employment.
2. Spending on certain budget items (in the states) – particularly administrative spending – has a positive influence on votes for the governor.
3. There are positive effects of the election of the mayor in a given

municipality on the performance of the mayor's party in the subsequent elections for federal and state legislators.

4. Members of the federal Chamber of Deputies elected from the state of São Paulo appear first to follow a strategy of concentrating on pleasing voters in the city of São Paulo and then expand their efforts to woo voters at the regional level.

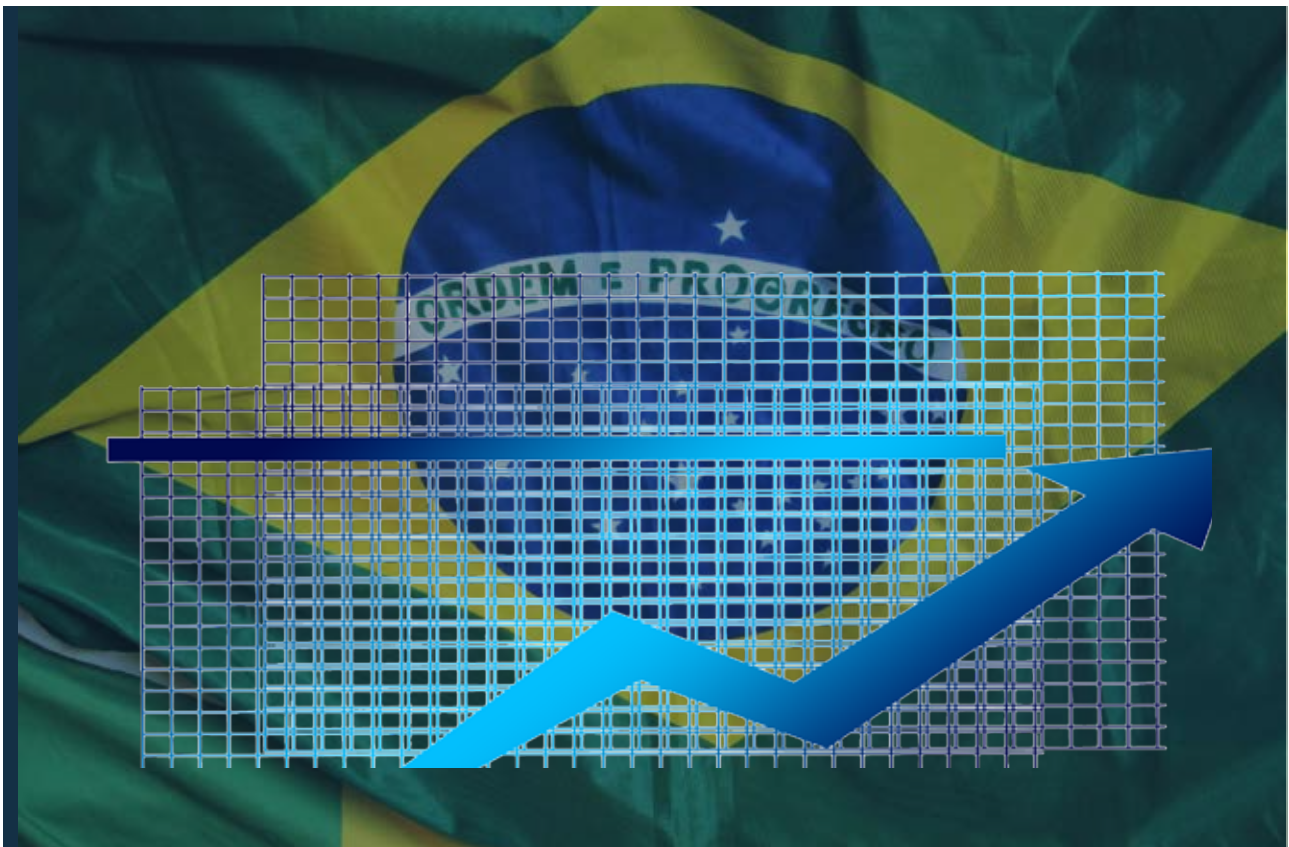
## What's new:

1. The project of the Center for Politics and Economics of the Public Sector of FGV/EESP has been identifying and characterizing how the game works among political actors in the states – by analyzing the effects of institutions and the political modus operandi on the allocation of public resources at the state level.
2. The project has also been investigating the relations between local and statewide party organizations.
3. A system was created in partnership with the TSE (<http://www.tse.jus.br/eleicoes/repositorio-de-dados-eleitorais>) to facilitate access to election data by a wider public.



# Brazilian dilemmas part I

*Analyses to improve urban mobility, industrial development, the minimum wage and monetary policy.*



**Organization:** Brazilian Institute of Economics (IBRE)

**Support:** São Paulo School of Economics (EESP)

## Objective

*To contribute to the discussion of relevant themes for Brazil – part 1.*

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### X-ray of the study:

1. Publication of the book *Mobilidade Urbana* ("Urban Mobility"), with participation of 22 authors.
2. Publication of the book *Indústria e Desenvolvimento Produtivo no Brasil* ("Industry and Productive Development in Brazil"), with participation of 36 authors.
3. Publication of the book *Política de Salário Mínimo para 2015-2018: Avaliações de Impacto Econômico e Social* ("Minimum Wage Policy for 2015-2018: Evaluations of Economic and Social Impact"), with participation of 23 authors.
4. Publication of the book *Essays and Conversations on Monetary Policy*, with essays by José Júlio Senna and conversations with Affonso Celso Pastore, Laurence Ball, Charles Goodhart and Paul Volcker.

### Results:

1. Urban mobility: The model of separating cities into residential, commercial, services and leisure areas is exhausted. In contemporary society, citizens are increasingly in motion, not only for work, but also for health and leisure – networks of different transport modes need to be valued.
2. Industry and development: The transformation industry continues to

be the locomotive of the Brazilian development process.

3. Minimum wage: In the book, the authors analyze the policy from the standpoints of the labor market, inflation, income distribution and public accounts.
4. Monetary policy: If the world is facing permanent stagnation and it is necessary to keep interest rates low to stimulate the economy, it will not be possible to meet two monetary policy objectives at the same time: macroeconomic and financial stability.

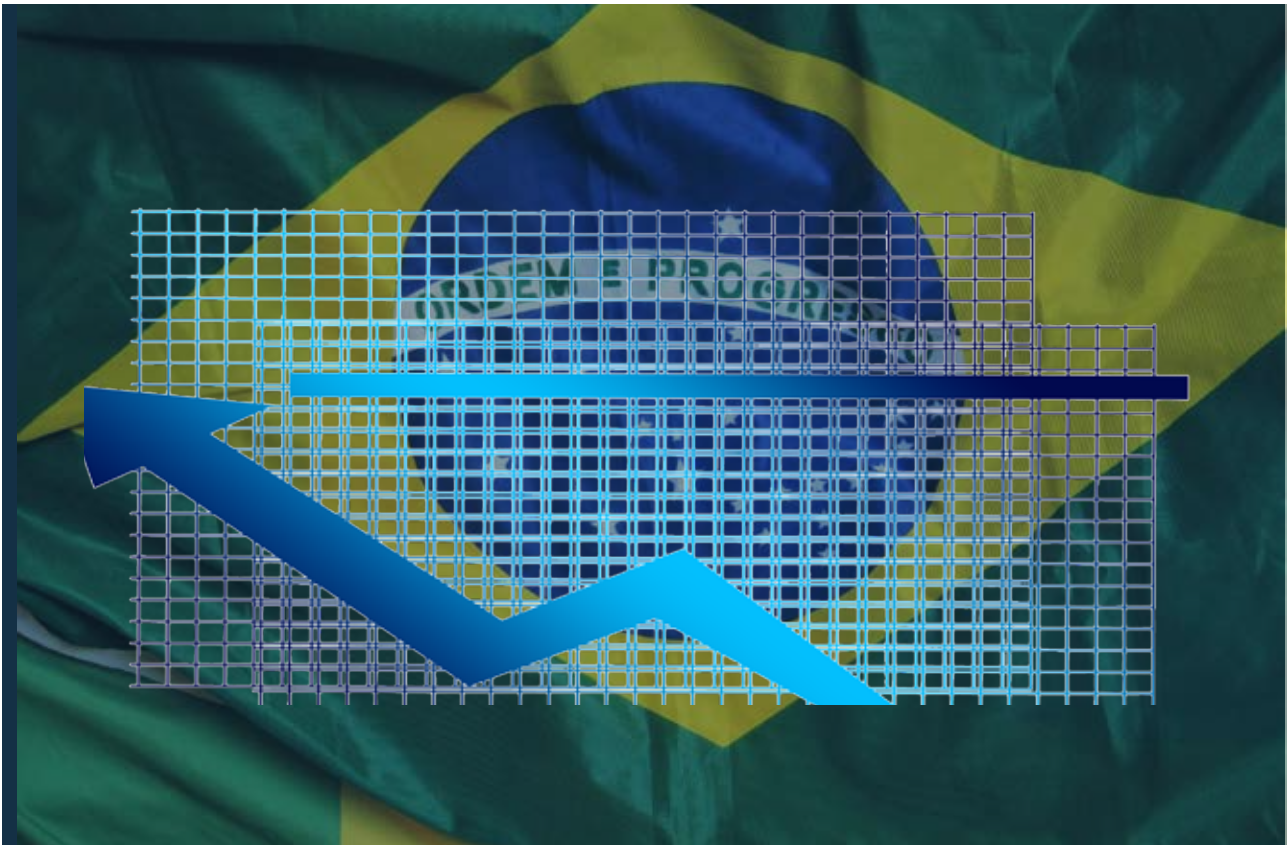
### What's new:

1. Urban mobility: The solutions should consider the interrelationship of mobility, land use, spatial distribution and density of the population, and the solutions should be formulated and implemented continuously and comprehensively.
2. Minimum wage: The book analyzes, without taboos, the minimum wage, which directly affects more than one-fifth of voters.
3. Industry and development: Only with an increase of the participation of the transformation industry in GDP can Brazil start growing again.
4. Monetary policy: The book allows the reader to understand the most critical aspects of the current monetary policy paths. ■

# Brazilian dilemmas

## part II

*Analyses to improve infrastructure, informality and competitiveness.*



**Organization:** Brazilian Institute of Economics (IBRE)

**Support:** Center for BRICS Studies of Fudan University (Infrastructure)

## Objective

*To contribute to the discussion of relevant themes for Brazil – part II.*

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### X-ray of the study:

1. Publication of the book *Infraestrutura: Perspectivas do Brasil e da China* (“Infrastructure: Perspectives for Brazil and China”), with participation of 18 authors from the two countries.
2. Publication of the book *Causas e Consequências da Informalidade no Brasil* (“Causes and Consequences of Informality in Brazil”), with participation of 22 authors.
3. Publication of the book *A Agenda de Competitividade do Brasil* (“The Agenda for Competitiveness of Brazil”), with participation of 17 authors.
4. The first consists of agriculture and mining, based on the country’s natural resources, with high competitiveness. The second includes products with technological differentials, such as midsize airplane, but are treated with less relevance in the commercial agenda. The third consists of products and services that face bottlenecks of infrastructure, workforce productivity and high tax burden.

### What’s new:

### Results:

1. Infrastructure – Brazil and China: Detailed analyses permit understanding planning, regulation and financing of infrastructure in China and Brazil.
2. Informality: Despite the reduction of informality in Brazil, the percentages are still high (66.7% of businesses and 38% of workers are still informal). With growth of real wages faster than labor productivity growth, there are doubts about whether this process can continue sustainably.
3. Competitiveness: Brazil’s competitiveness is not only restricted to the exchange rate. The country has “three spokes” of competitiveness.
1. Infrastructure – Brazil and China: The book’s articles show what lessons Brazil and China can learn from one another on the infrastructure area and therefore to strengthen the partnership in the New Development Bank (NDB), the first large project managed jointly by the BRICS countries.
2. Informality: The reduction of informality is due to various macroeconomic and structural factors along with changes in legislation and oversight. But it does not appear likely that an environment of slow economic growth and sharp appreciation of the Real and the minimum wage will continue.
3. Competitiveness: It is simplistic to believe that if the exchange rate remained at a more competitive level, all Brazil’s problems of international competitiveness would be resolved.



# Reasons for the increasing household income inequality in the USA

*Changes in the structure of families, such as marriage between people with equal educational level and higher income, has been increasing social differences in the United States.*



**Authorship:** Cezar Santos (cezar.santos@fgv.br)

**Researchers:** Jeremy Greenwood, Nezih Guner and Georgi Kocharkov

**Organization:** Brazilian School of Economics and Finance (EPGE)

**Support:** Institute for the Study of Labor (IZA) of the University of Bonn



## Objective:

*To explain the change in the profile of American households, resulting in an increase of income inequality in the country.*

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## X-ray of the study:

1. Formulation of a quantitative economic model that considers aspects of marriage/divorce; study/not study; married women working or not; and skilled/unskilled labor. The model takes into account factors like technological changes that facilitate working from the home and the difference in compensation of men and women.
2. Testing of the model with data from the USA from 1960 and 2005.
3. Changes in wage structures help explain decisions regarding educational goals and the increase of marriages between people with the same educational level.
4. While the growth of earnings by workers with higher skills is at the root of the increase of income inequality, changes in the family structure amplify this mechanism. Women with lower educational level – and smaller earnings – tend to marry men in the same situation. The increased participation of married women in the labor force also aggravates this income inequality between households.

## Results:

1. Technological progress in residences was responsible for most of the growth in labor force participation of married women. The reduction of income inequality between men and women played a secondary role in this process.
2. The technological advances in residences also explain the decline in the number of marriages and the increase in the number of divorces.

## What's new:

1. In the United States, people these days are more likely than in the past to marry others from the same socioeconomic class. At the same time, the number of women with higher educational level and the number of divorces have climbed. All these factors are linked to heightened income inequality of households. The study has led to development of a model to explain how this happens.

# Efficient allocation of resources for school meals in Brazil

*Calculations that differentiate regions, socioeconomic profiles and school sizes indicate that the cost of school meals is higher in the South and Southeast and lower in the North and Northeast.*



**Authorship:** André Portela ([andre.portela.souza@fgv.br](mailto:andre.portela.souza@fgv.br))

**Organization:** São Paulo School of Economics (EESP), Center for Applied Microeconomics Studies (C-Micro)

**Support:** World Food Program (WFP) and Centers for Learning on Evaluation and Results (Clear)

## Objective:

*To create a method to calculate the cost and improve the National School Meal Program (PNAE).*

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### X-ray of the study:

1. Decomposition of the costs directly associated with the supply of meals at public primary schools into three categories: number of meals served, costs of meals and costs of infrastructure to serve meals.
2. Division of schools into 45 profiles, according to: the five regions of Brazil; within each region, three socioeconomic profiles for municipalities; and, for each profile, three school sizes.
3. Statistical analysis of the data using two calculations: the first considering basic and regional variables and the second considering basic and infrastructure variables.
2. The Northeastern and Northern regions have the lowest meal costs: US\$ 0.89 in the Northeast, according to the first calculation, and US\$ 0.90 in the North, according to the second calculation.
3. Meals in schools from municipalities with mid-range socioeconomic conditions are more expensive than those found in municipalities with high and low socioeconomic conditions.

### What's new:

### Results:

1. The Southern and Southeastern regions have the highest meal costs: US\$ 1.55 in the Southeast, according to the first calculation (which emphasizes regional variables), and R\$ 1.30 in the South, according to the second calculation (which considers infrastructure variables).
2. The study by FGV/EESP's Applied Microeconomics Center shows that, because of Brazil's regional heterogeneity in terms of socioeconomic conditions, caution is necessary when establishing transfers for school meals, as well as respecting regional differences, local socioeconomic profiles and school sizes.
1. PNAE is the world's second largest school meal program, and the largest among universal public programs. The method developed allows for a better understanding of this program and its transmission mechanisms, which can serve as a parameter for the implementation or expansion of similar programs in other developing countries.

# Post-Western World

*How are emerging powers remaking global order?*



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**Organization:** Center for Research and Documentation of Contemporary History (CPDOC)

**Support:** Carnegie Endowment for International Peace, the Konrad Adenauer Foundation and the Robert Bosch Foundation

## Objective

*To study the impact of the emerging countries on the contemporary global order, with an emphasis on institutions created by non-Western powers.*

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### X-ray of the study:

1. Debates with scholars and policy makers from around the world about rising powers and the future of global governance.
2. Publication of a book in English.
3. Publication of the translated version in Portuguese and Chinese.
4. Presentations of the book draft and the finished book across Latin America, North America, Europe, Africa and Asia.
3. It is necessary to analyze the perspective of each actor. While China is the country with the greatest economic weight, in peacekeeping operations its role is less significant than other rising actors, such as India.
4. The emerging powers do not have a common anti-hegemonic vision. On the contrary, they disagree regarding normative questions (such as sovereignty), narrative questions (such as laissez-faire capitalism) and practical questions (such as climate change).

### Results:

1. Rather than directly confronting existing institutions, rising powers – led by China – are quietly building the initial building blocks of a so-called “parallel order” which will initially complement, and later possibly challenge today’s international institutions. There is no common definition about which countries belong to the group of emerging powers. Besides this, those powers do not act homogeneously and coherently.
2. These structures do not emerge because China and others have fundamentally new ideas about how to address global challenges or because they seek to change global rules and norms – rather, they create them to better project their power, just like Western actors have done before them.

### What’s new:

1. The trend toward multi-polarity is inexorable, meaning it poses a challenge to the status quo. The group of countries that make a difference in international relations tends to be less occidental, with fewer common interests and more ideological diversity.
2. The economic rise of the rest, particularly China, will allow it to enhance its military capacity and eventually its international influence and soft power.
3. We are currently facing a phase of deconcentration and delegitimation of the power of hegemony, and we may be near a phase of the formation of alliances.



# Solutions for solid waste in Brazil

*Current plans are for R\$ 10.3 billion to be spent by 2031 on waste collection and treatment systems, considering particularities and heterogeneity of the country.*



**Authorship:** Gesner José de Oliveira Filho (gesner.oliveira@fgv.br)

**Organization:** Group for Economics of Infrastructure and Environmental Solutions

**Support:** Brazilian Association of Public Cleaning and Special Waste Collection Companies (Abrelpe)

## Objective:

*To estimate the investments necessary to universalize services for environmentally adequate solid waste treatment and disposal in Brazil.*

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## X-ray of the study:

1. Analysis of the current situation of solid waste treatment in Brazil.
2. Study of the main technologies to treat municipal solid waste, in compliance with the guidelines of the National Solid Waste Policy (PNRS).
3. Estimation of the investments necessary to achieve correct treatment and disposal of solid wastes in the country.

## Results:

1. Of the 5,570 municipalities in the country, waste is inadequately disposed in 3,344 of them, in controlled landfills and dumps.
2. The universalization of solid waste collection will take longer than stipulated by the government. In the North region, there was even a decline in the waste collected, from 88% in 2002 to 80% in 2013.
3. With the current annual growth of 2.2% in the number of municipalities that have selective waste collection programs, the universalization of this service will only happen in 2044 or thereabouts.
4. According to plans, by 2031 R\$ 10.3 billion should be invested to implement suitable infrastructure to receive and treat all the wastes generated in the country. The operational costs would be about R\$14.32 billion a year.

5. Due to the country's characteristics, the best model involves separate collection of dry, wet and other wastes (contaminated, for instance). The suitable moist waste material should be used for composting and the rest sent to sanitary landfills; the dry waste will go to sorting centers for recycling or incineration to generate energy or to sanitary landfills; other types should also be sent for thermal treatment or to sanitary landfills. At landfills, the biogas from decomposition should be collected.

6. A weak correlation exists between the wealth of the population and the supply of adequate services. For example, in Brasília, despite the relatively high per capita GDP, the solid waste treatment is deficient. On the other hand, there are poor states that do not need substantial investments because they do not generate large quantities of wastes, such as Acre. Other states are poor but generate large amounts of wastes, like Alagoas, where local governments can only improve services by banding together in consortiums.

## What's new:

1. The majority of Brazilian municipalities are not yet fully compliant with the law regarding final disposal of solid wastes.
2. The study defines suitable alternatives to Brazilian reality. ■

# How to delegate prison management to private initiative

*A study about the first public-private partnership (PPP) to build and operate a prison complex in Brazil, in the state of Minas Gerais, shows that this model offers more rigorous control mechanisms than pure outsourcing.*



**Authorship:** Fernando S. Marcato (fernando.marcato@fgv.br)

**Organization:** Group on Economics of Infrastructure and Environmental Solutions

## Objective:

*To evaluate the public-private partnership (PPP) model applied to Ribeirão das Neves Prison Complex in Minas Gerais*

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### X-ray of the study:

1. Overview of Ribeirão das Neves Prison Complex.
2. Interviews with representatives of the government of Minas Gerais, the private operator and experts on the subject.
3. Conduction of debate and production of an article on the experience.

### Results:

1. The PPP model differs from other models of outsourcing prison services, commonly criticized by civil society entities, because the time frames are longer, the performance indicators are more rigid and there are contractual clauses encouraging improvements in the services.
2. In the Brazilian model, unlike the American one, the private concessionaire cannot profit from the work of inmates. It can only

identify other companies that can contract prison labor.

### What's new:

1. The study carried out an independent and empirical analysis of the functioning of the first PPP in the prison sector in the country, indicating some limits and possibilities of the model.
2. Caution is necessary in the way of assessing the concessionaire's performance. In this respect, the study recommends that the indicators be monitored by an independent auditor.
3. The PPP instrument cannot resolve all the problems of the penitentiary system. It is not suitable, for instance, in the case of maximum security prisons. But it is an instrument that can improve various steps in serving sentences (such as transition to life on the outside) and apply alternative punishment methods to incarceration.





# The road to universalization of sanitation services

*A new tax incentive law has potential to increase investments, but better planning, regulation and management of concessionaires are necessary.*



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**Organization:** Group on Economics of Infrastructure and Environmental Solutions



## Objective:

*To evaluate the bill of law contemplating tax incentives to increase sanitation investments in Brazil.*

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### X-ray of the study:

1. Analysis of Bill of Law 95/2015.
2. Study of the history of investments by sanitation companies in the public and private sectors.
3. Analysis of the projections for investment of the National Basic Sanitation Plan, which envisions universalization of services by 2033.

implementation is still waiting for the issuance of follow-on regulations regarding the tax benefit, because of the contentious matter of calculating the cost of the lost revenue from the tax credits versus the direct and indirect benefits.

### Results:

1. At present, annual investments in sanitation nationwide amount to R\$ 12 billion, but R\$ 19 billion will be necessary to meet the targets of the National Plan.
2. Bill of Law 95 contemplated that investments in basic sanitation can be used as credits to offset two fiscal contributions (PIS/Pasep and Cofins) by concessionaires (70% controlled by state governments 20% by municipal governments and 10% private). With this incentive it will be possible to increase yearly investments in the sector by R\$ 2 billion.

2. These benefits involve lower spending on health (for example, universalization of sanitation can reduce the cases of diarrhea by 46 thousand per year in low-income families in the state of São Paulo alone), higher real estate values (by 18% for houses previously without water and sewer service), generation of jobs (each R\$ 120 thousand invested in sanitation creates a job position) and increased revenue from service charges (due to increased coverage of the sanitation system).
3. The new law is insufficient to meet the objectives of the National Plan, because three aspects still need to be improved: planning (55% of municipal governments do not have local sanitation plans), regulation (the agencies are incipient and the tariffs are relatively low, mainly for high-income consumers) and management (on average the loss of water from supply systems is 37%, and in some states it is over 50%).

### What's new:

1. The bill was enacted in August 2016 (becoming Law 13,329), but

