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# Natural resources through the prism of comparative social studies

*(A presentation for the student society “Demographer”)*

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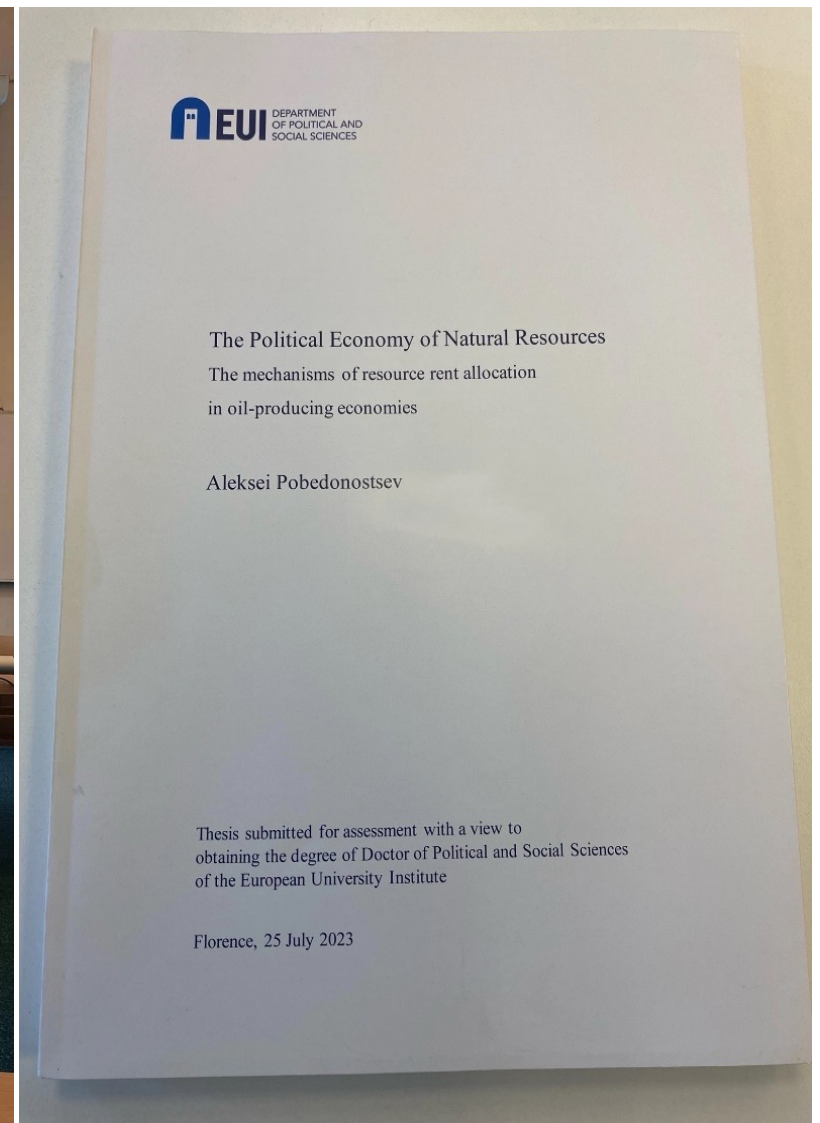
28 October, 2023

# About myself (*немного о себе*)

- Assistant Professor of Sociology (tenure track) at the HSE university since 2023.
- I hold a Ph.D. in Political and Social Sciences from the European University Institute in Florence (Italy).
- The area of academic interests: comparative political economy, comparative-historical sociology, political and economic sociology.
- Methodological preferences: mixed methods.
- Teaching interests: The Political Economy of Development (January – March 2024).
- Job experience: TU Darmstadt, HHU Düsseldorf, University of Helsinki, Babes-Bolyai University.



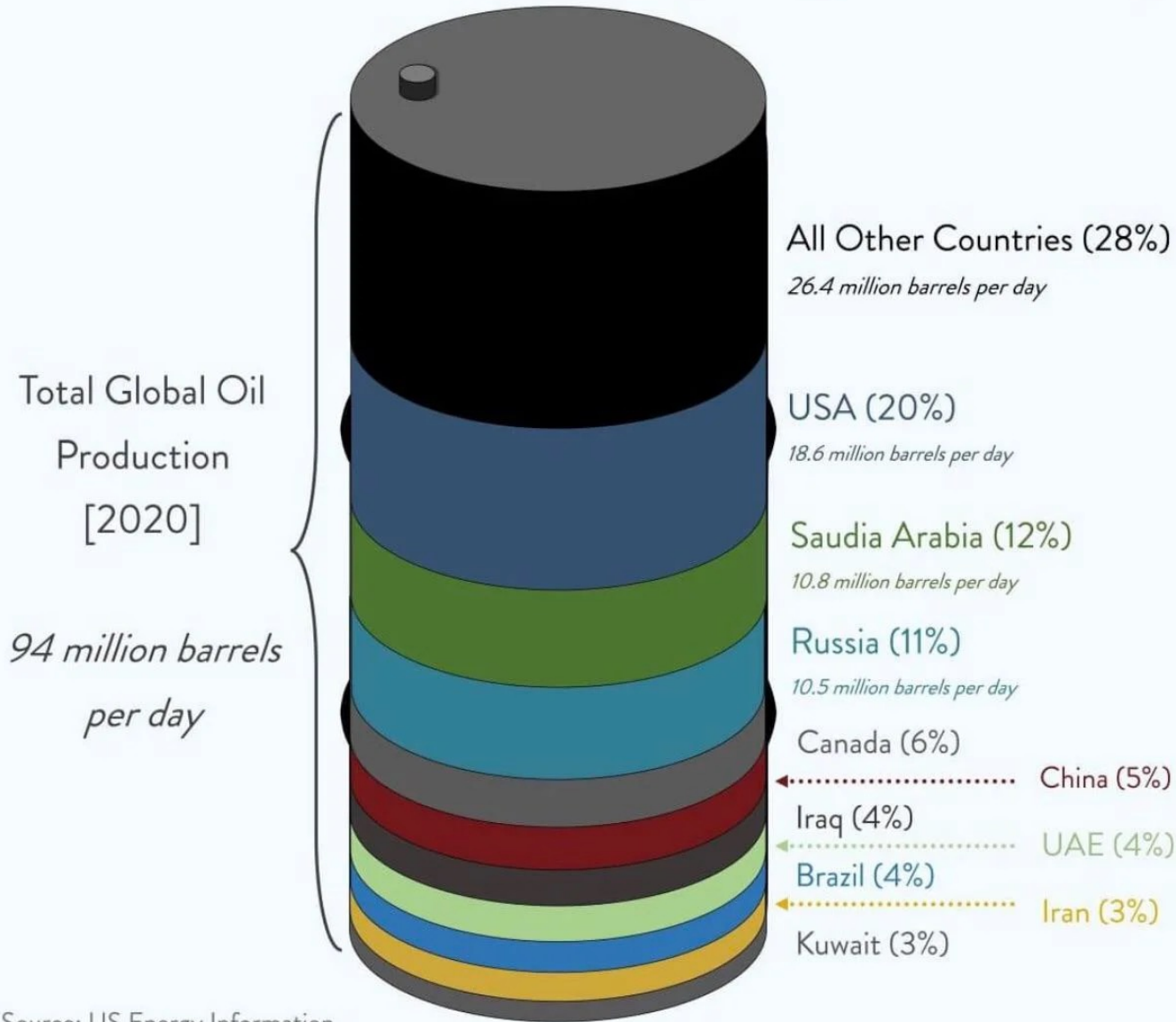
# My PhD defense at the EUI (25 July 2023)



# The role of natural resources in comparative studies

- When we compare different countries and their economics, it is important to analyze the structure of Gross Domestic Product (GDP or “*BBIT*”). Natural resources are one of the factors of production for the economy, which include: forest, soil, minerals, water, tidal energy. We will consider oil and gas as one of the powerful source of income in GDP.
- The possession of natural wealth can serve a different role for the country: to become a “resource curse” or to give development to the economy.
- The timing of the discovery of natural wealth can divide the history of the country by before and after, so it is important to take this as a starting point when analyzing economic, social, political and demographic processes (e.g. Saudi Arabia, UAE, Norway etc.)
- The possession of natural resources goes hand in hand with political decisions about the allocation of resources from oil or gas production.

# Global Oil Supply By Country

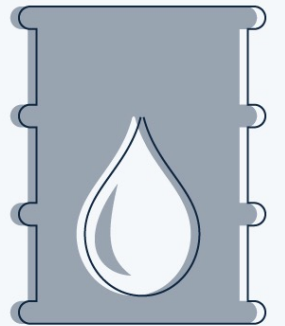
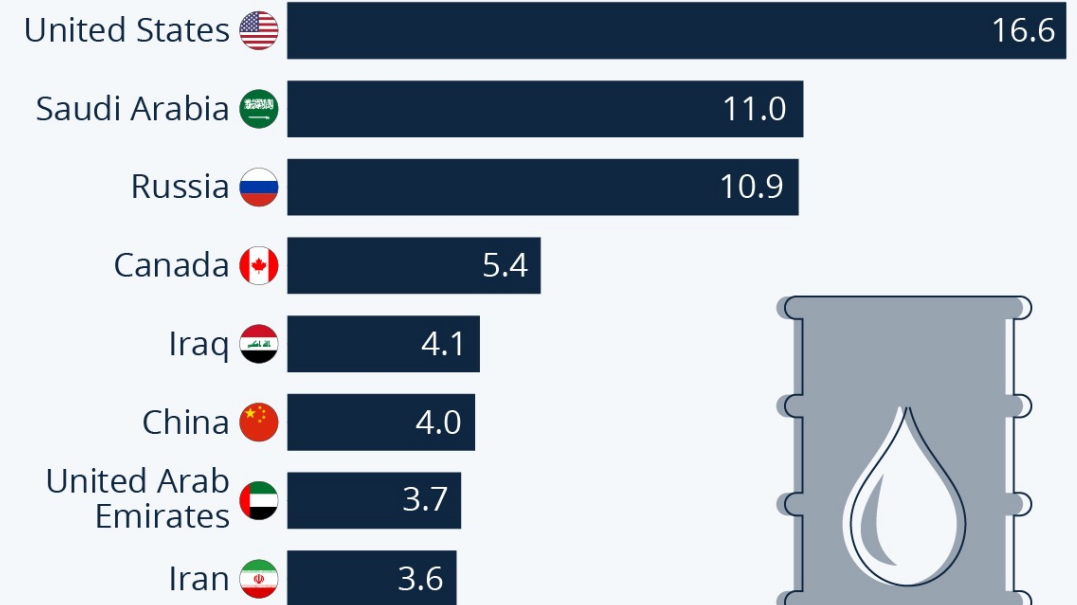


Source: US Energy Information Administration (EIA), 2020

charttr

## The World's Biggest Oil Producers

Oil production by country in 2021 (in million barrels per day)



Includes crude oil, shale oil, oil sands, condensates and natural gas liquids.  
Source: BP



statista

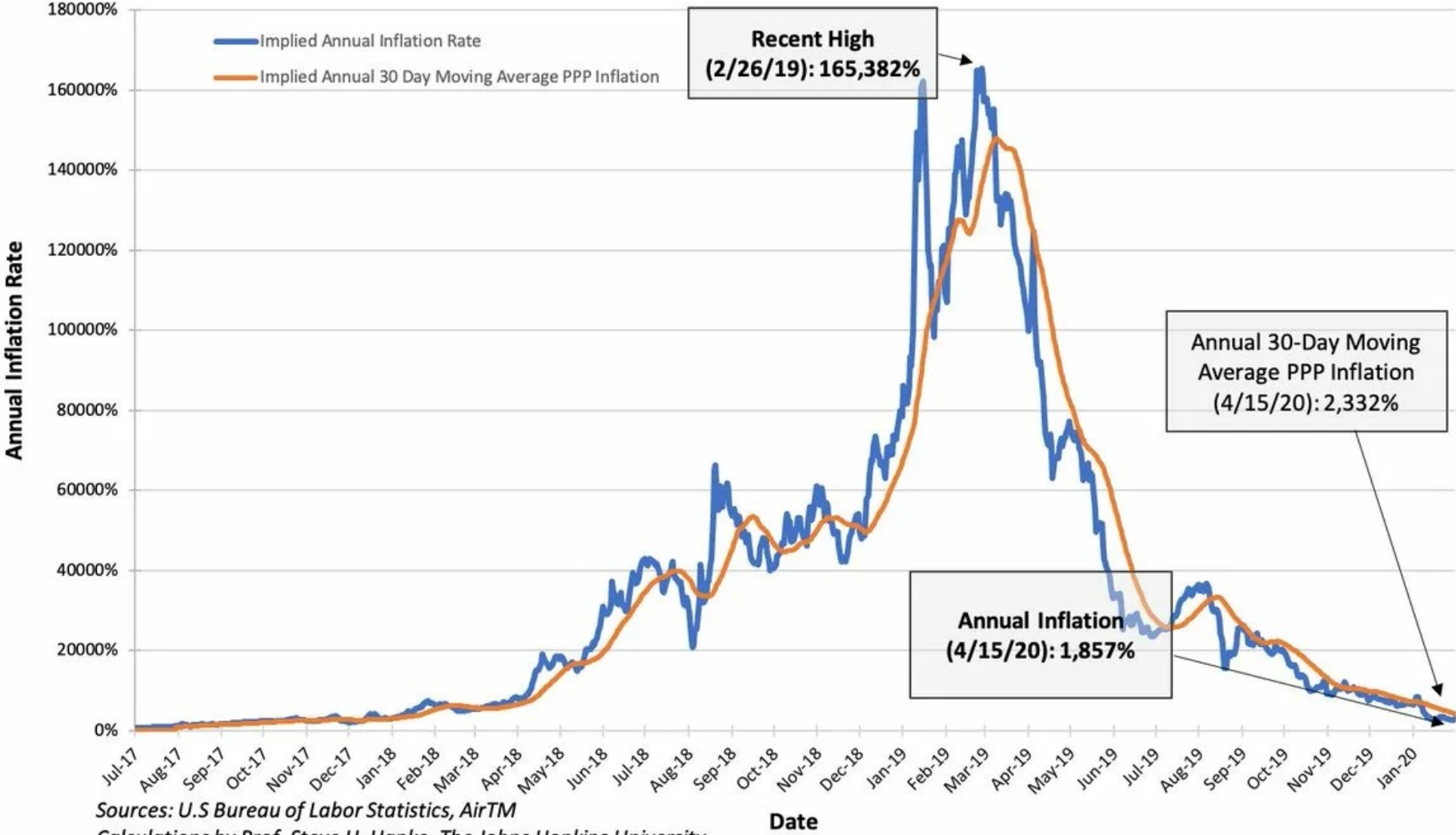
# The “resource curse” (*ресурсное проклятие*)

- Analytically, the ‘resource curse’ is not a unified theory (*окончательная теория*), but rather a set of different hypotheses related to the negative consequences of the extraction of natural resources (*добычи природных ресурсов*).
- Some studies indicate that in resource-rich nations around the world the revenues (*доходы*) received from oil exports tend to be the fundamental cause (*фундаментальной причиной*) of problems such as:
  - 1) the deceleration of economic growth (*замедление экономического роста*) (Sachs & Warner, 2001);
  - 2) the weakness of political institutions (*слабость политических институтов*) (Karl, 1997; Smith, 2007);
  - 3) higher levels of corruption (*коррупция*) (Bhattacharyya & Hodler, 2010);
  - 4) persisting gender inequality (*сохраняющееся гендерное неравенство*) (Ross, 2008);
  - 5) and unending civil wars (*непрекращающиеся гражданские войны*) (Collier & Hoeffler, 2004) <...>

# Economic and Social Crisis in Venezuela



# Venezuela's Annual Inflation Rate

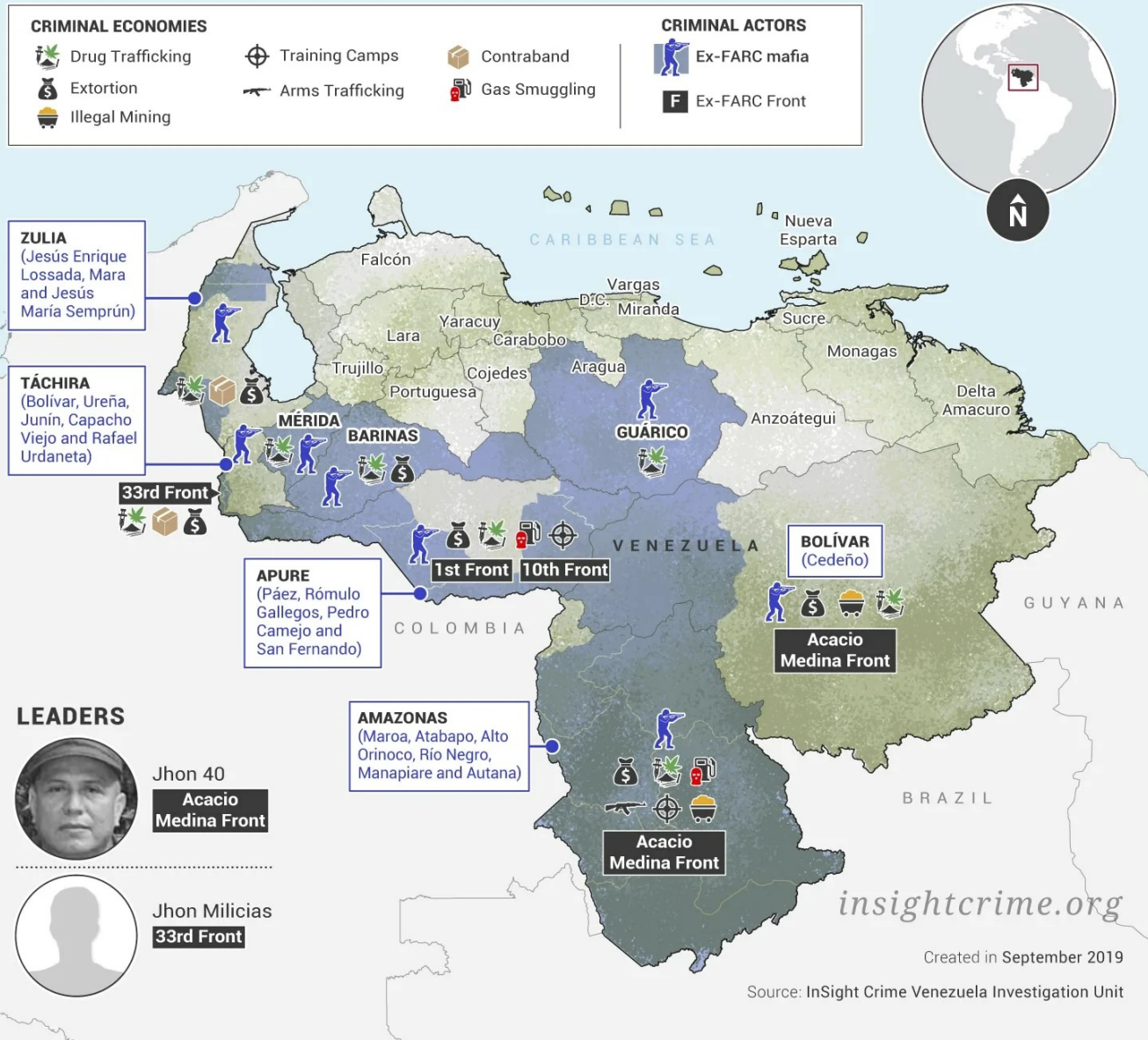


Sources: U.S Bureau of Labor Statistics, AirTM  
 Calculations by Prof. Steve H. Hanke, The Johns Hopkins University.  
 Note A: These inflation rates are implied by the movements in the black-market VES/USD exchange rate.



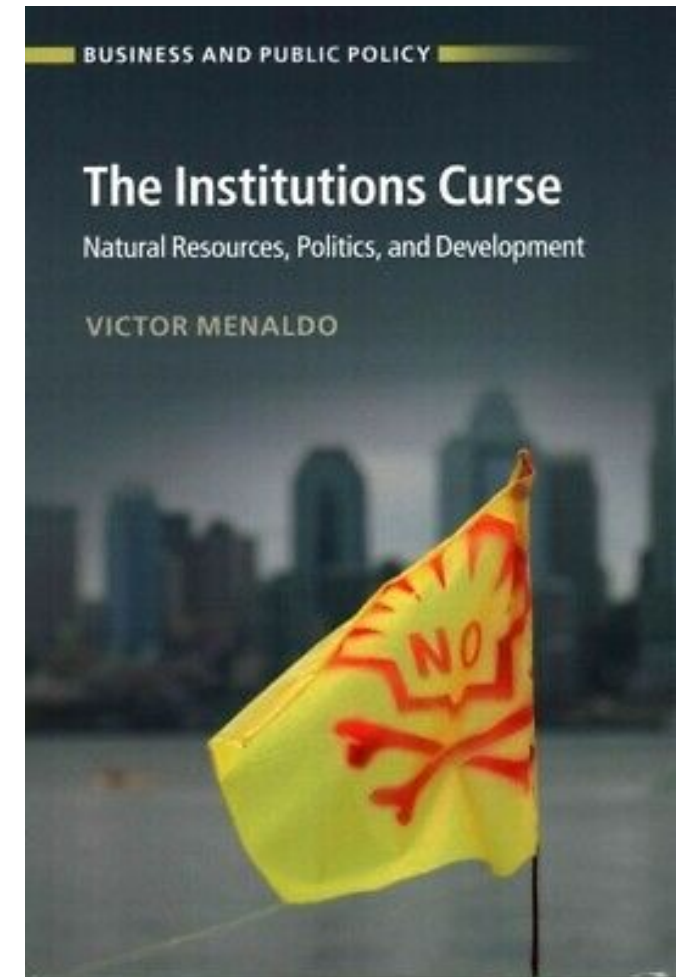


# Presence of the Ex-FARC Mafia in Venezuela



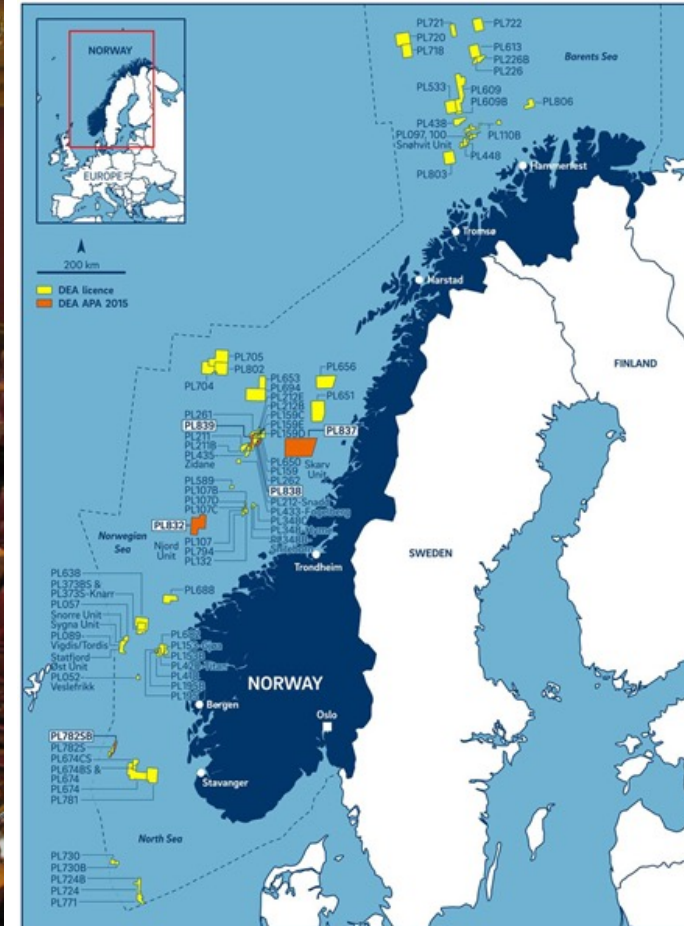
# The “resource curse” versus the “institutions curse” (*ресурсное проклятие или просто плохие институты?*)

- The negative/positive effects of oil rents on political and economic development of resource-rich nations (*нефтедобывающие страны*) can be conditioned by the quality of institutions.
- In countries with strong (inclusive) institutions, the extraction of natural resources stimulates economic growth and social progress (Acemoglu & Robinson, 2012).
- In countries with weak (extractive) institutions, oil-export revenues lead to corruption, authoritarianism, violence, gender inequality, etc.
- However, on the other hand, the wealth of natural resources per se can block the formation of inclusive (“good”) institutions in resource-rich countries.



# How can we explain economic, social and political prosperity in Norway?

*(Как объяснить процветание Норвегии?)*

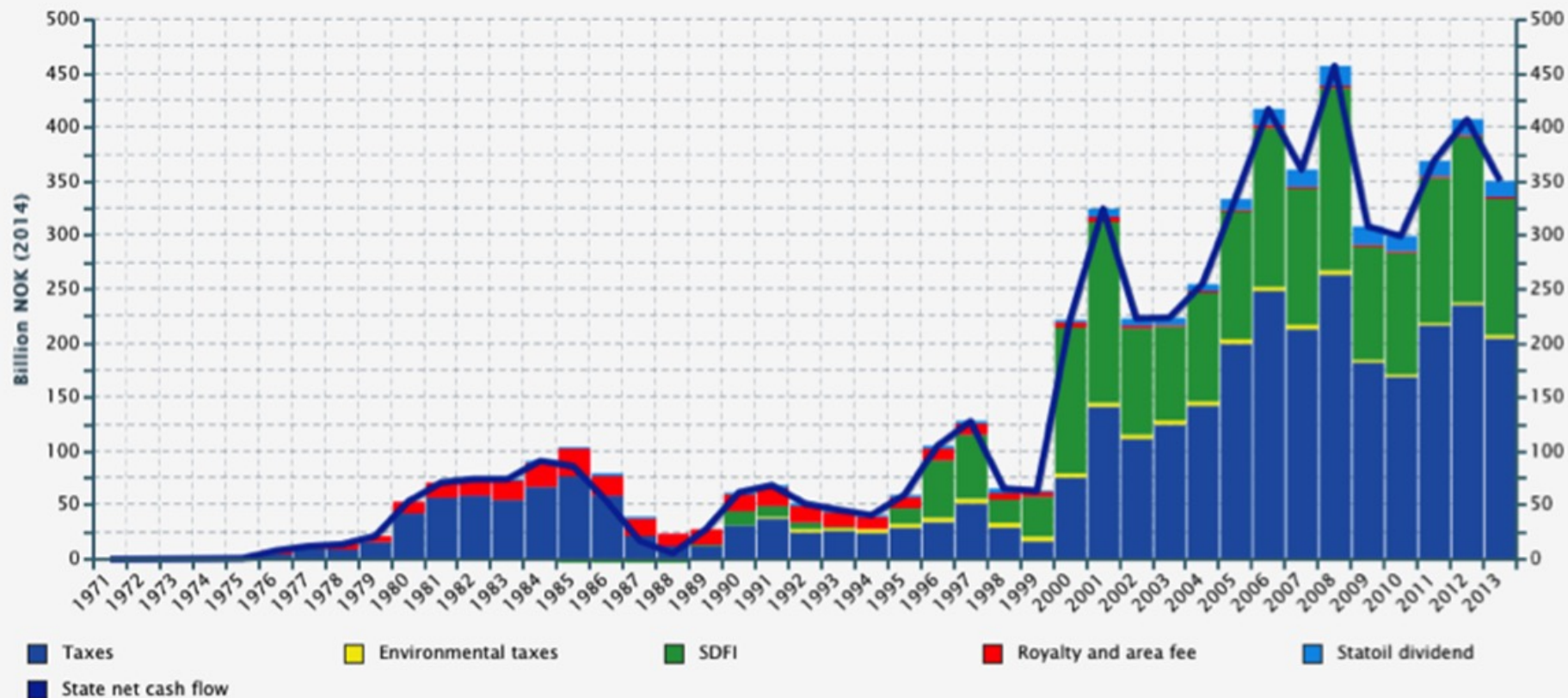


## THE NET GOVERNMENT CASH FLOW FROM PETROLEUM ACTIVITIES, 1971-2013

Updated: 16.03.2015

Source: Ministry of Finance, Statistics Norway

[Print illustration](#) [Download data](#) [Last ned PDF](#) [Last ned PNG](#)



# Why is Norway thriving despite the wealth of oil? (*Почему Норвегия процветает несмотря на обилие нефти?*)

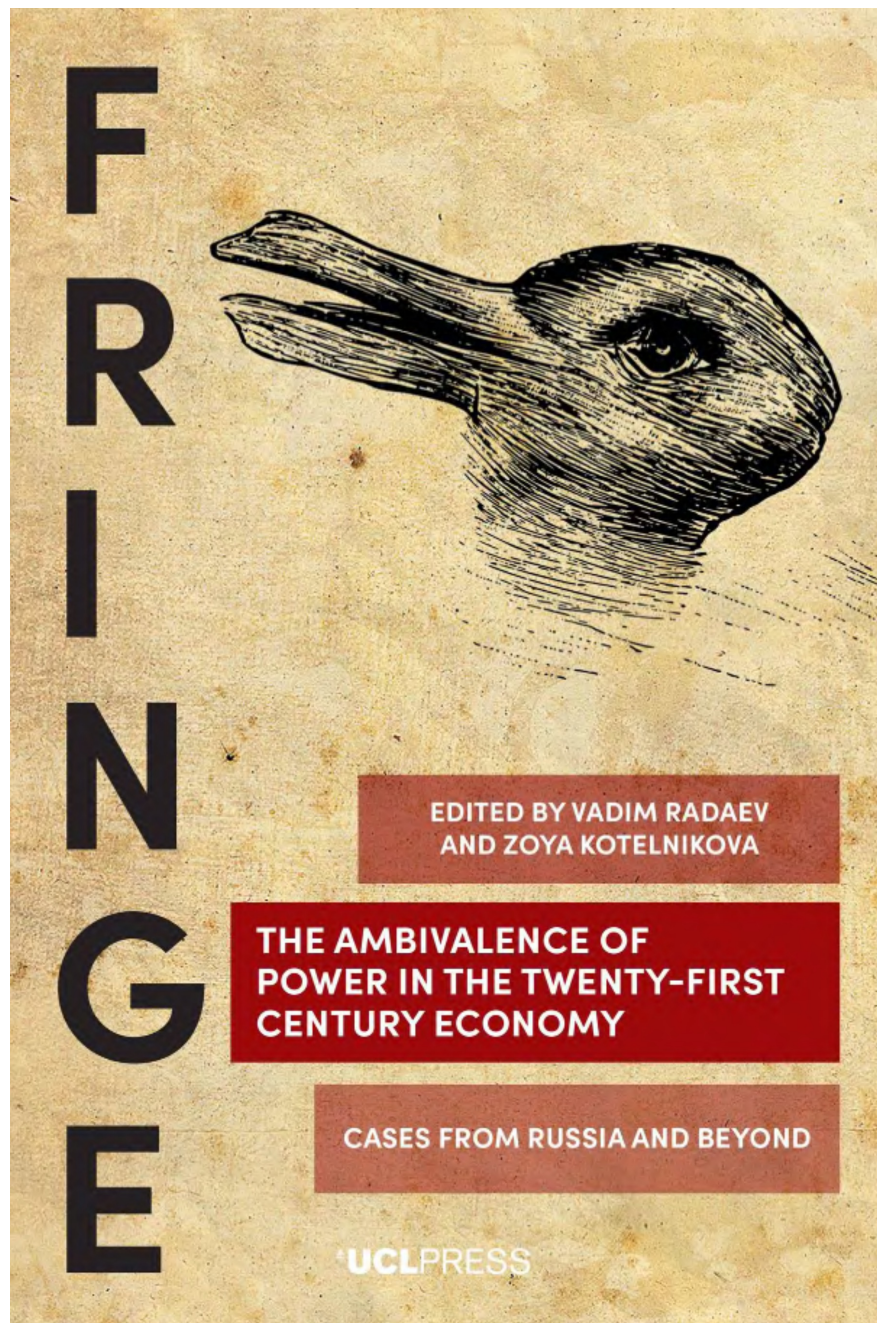
- Norway has strong political and economic institutions, which were established there long before the start of oil producing.
- Revenues from oil export are redistributed equally among all segments of the Norwegian population.
- Revenues from oil export strengthen Norwegian political and economic institutions rather than undermine it.
- The wealth of natural resources is a “blessing” for Norway rather than the “curse.”



*Petroleum, after all, is nothing but a  
black viscous material*

Terry Karl

The Paradox of Plenty:  
Oil Booms and Petro-State, 1997



# The Ambivalence of Power in the Twenty-First-Century Economy

*Cases from Russia and beyond*

Edited by Vadim Radaev and Zoya Kotelnikova

3

**The pitfalls of rent-seeking:  
Alternative mechanisms of resource  
rent collection in Russia and Venezuela**

Alexei Pobedonostsev



# Research question (исследовательский вопрос)

- **Why do governments of some nations successfully collect resource revenues while governments of other countries fail to do so?**
- **Почему в одних странах правительства собирают больше доходов от природных ресурсов чем правительства в других странах?**
- For instance, what political and economic factors determine the success of resource revenue collection in countries like Kuwait and the failure of resource rent collection in countries like Côte d'Ivoire?
- The academic literature says almost nothing about how governments get their hands on oil revenues. Some scholars consider the transformation of resource rents into government revenues as largely automatic and unproblematic (Mahdavy, 1970; Beblawi, 1987).
- The traditional 'resource curse' theory considers the state a priori as the key beneficiary ('principal recipient' – *главный выгодоприобретатель*) of all revenues from oil production in resource-rich countries. This theory ignores the fact that in the real world governments need to take some action to collect revenues from oil production.
- In other words, **transforming resource rent into government income** (*превращение ресурсной ренты в доходы государства*) **is a puzzle for comparative political economy.**

# The circulation (allocation) of resource revenues (*циркуляция ресурсных доходов в экономике*)

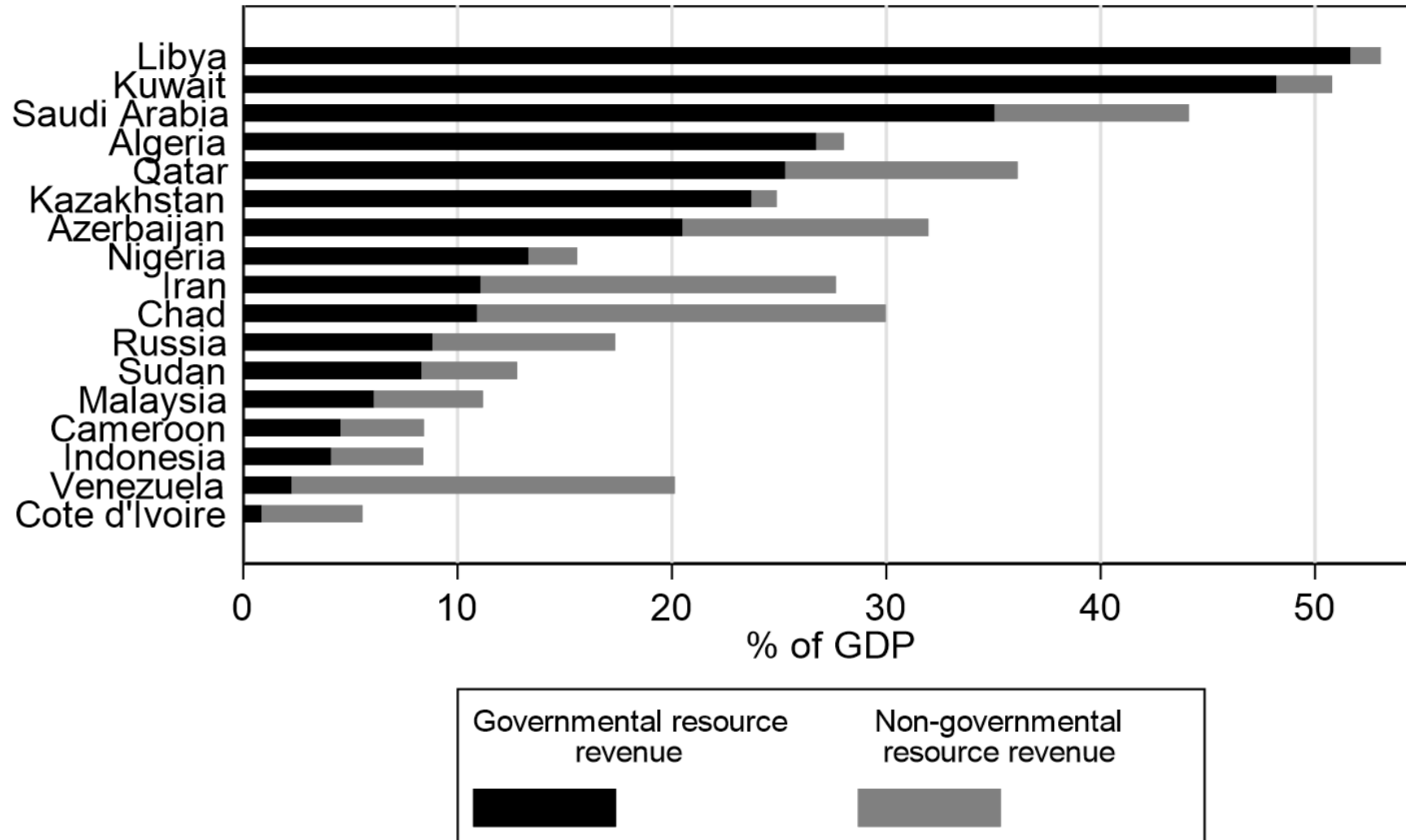


- **Resource revenues do not exist in a vacuum.** In all countries governments are required to take some action to capture resource revenues from the extraction of natural resources. *Государство должно что-то предпринять для того чтобы собрать ресурсные доходы.*
- Resource rent allocation is the circulation of resource rent in the economy.
- In all countries, resource rent is generated by companies, collected by the state, and redistributed by the government among social groups.
- **Resource rent collection is the process of transforming resource rent into government income.**

# Governmental and non-governmental resource revenues

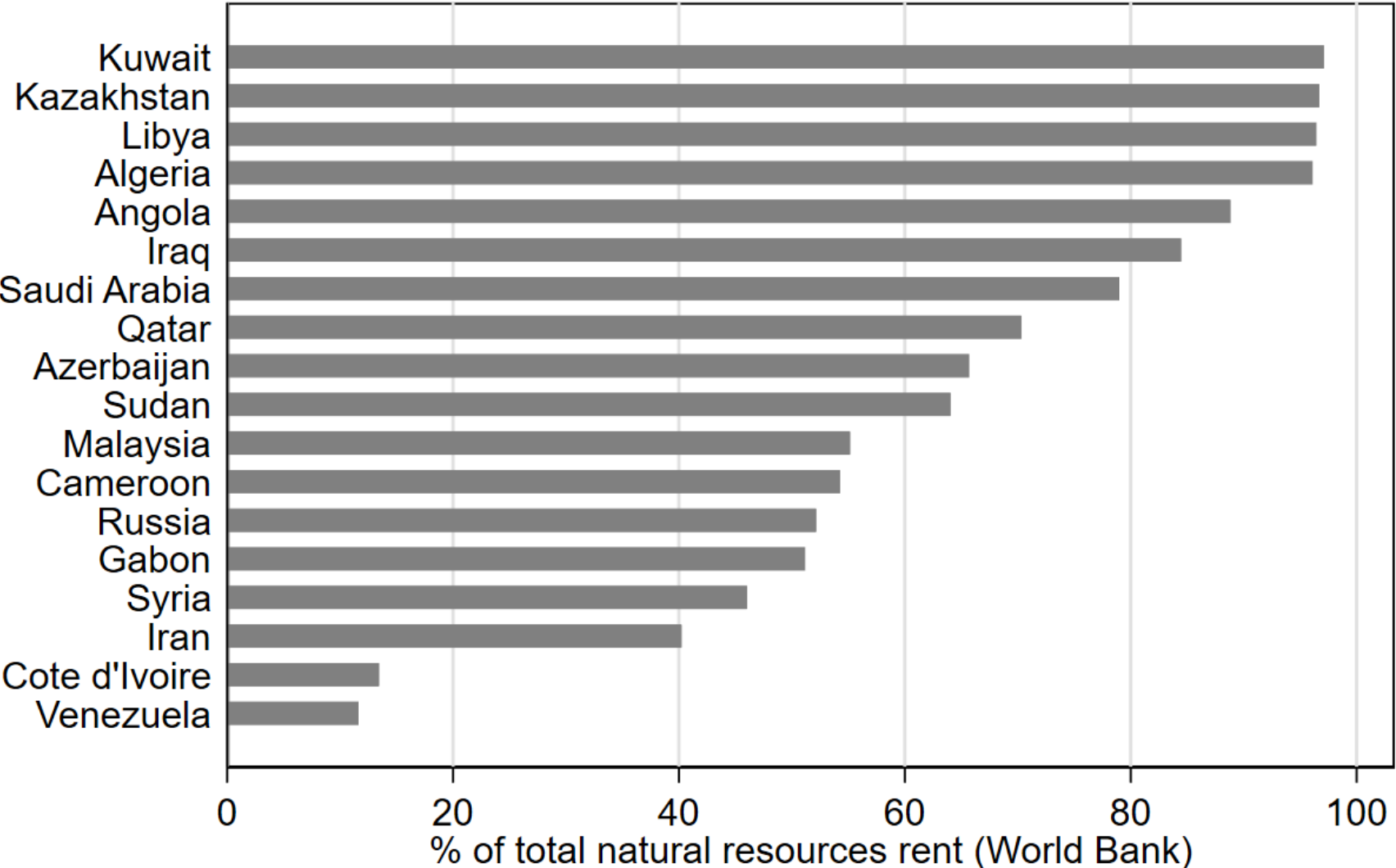
- **Governmental resource revenue** (*правительственные ресурсные доходы – те доходы от природных ресурсов, которые достаются правительству/государству*) is that part of total resource rent that the government transforms into its income and accumulate in the state budget. Governmental resource revenue (% GDP) can be taken from the Government Revenue Dataset provided by the International Center for Taxation and Development (ICTD).
- **Non-governmental resource revenues** (*те ресурсные доходы, которые не достаются государству*) are that part of total resource rent that remains outside the budgetary system. The lion's share of non-governmental resource revenues is concentrated in the hands of oil companies (resource-extractive companies).
- **The dependent variable** (*зависимая переменная*) of my research is **resource revenue collection**. Empirically, I define this variable as **the state's capture of total resource revenue** (*захват государством ресурсных доходов*).
- **State's capture of resource revenues** = 
$$\frac{\text{Governmental resource revenue (\% GDP)}}{\text{Total resource revenue (\% GDP)}}$$

## Average governmental and non-governmental resource revenues for selected countries (2000-2014)



Note: non-governmental resource revenues (grey color) are calculated as governmental resource revenues (ICTD) excluded from total natural resources rents (World Bank)

Graph 2. Average state's capture of total resource rent for selected countries (2000-2014)



Source: International Center for Taxation and Development, 2019. My calculations

# Structural factors of resource revenue collection

*(структурные условия успешного сбора ресурсных доходов государством)*

- **I. The ownership structure of the petroleum industry.** Petroleum ownership can be nationalized or privatized. The nationalization of the petroleum industry can enable the state to collect more revenues from oil production. *I hypothesize that governments should collect more resource revenues in countries with nationalized petroleum industries than in countries with privatized petroleum industries.*
- **II. State capacity.** Strong state capacities should allow the government to collect more resource revenues. *I hypothesize that the more robust state capacity in an oil-producing country is, the more significant share of total oil rents the government of this country should transform into its revenues.*
- **State capacity** = административно-силовой потенциал государства.

# Petroleum ownership and national oil companies

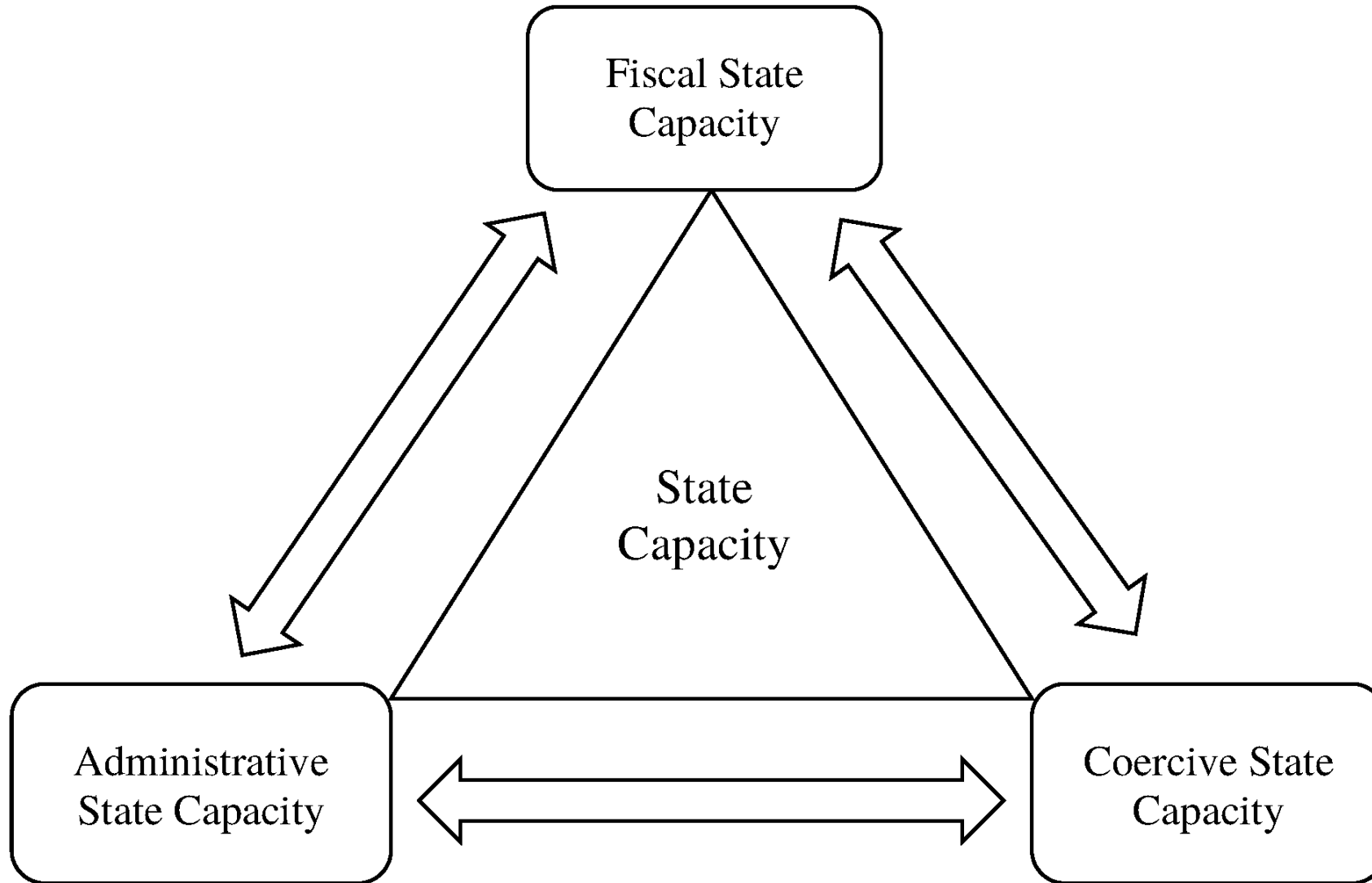
- **National Oil Companies (NOCs)** are state-owned enterprises in countries with nationalized petroleum industries (Hults et al., 2012; Heller & Mihalyi, 2019).
- National oil companies allow the state to exercise its control over nationalized resource-extractive industries (primarily in the oil and gas sectors).
- There two “ideal” types of national oil companies: operational and non-operational NOCs. The key difference is that while **operational NOCs** are the operators of oil production, **non-operational NOCs** delegate oil production to service companies (Mahdavi, 2020).
- Example 1: Gazprom and Rosneft in Russia, and PDVSA (*Petróleos de Venezuela*) in Venezuela are **operational NOCs**.
- Example 2: National Iranian Oil Company in Iran and Nigerian National Petroleum Company in Nigeria are **non-operational NOCs**.

# State capacity (*административно-силовой потенциал государства*)

- Max Weber defined the state as a ‘human community that (successfully) claims the *monopoly of the legitimate use of physical force* within a given territory’ (Weber, 1946 [1919]: 78).
- State capacity is the state’s ability to **perform the core functions** most commonly deemed necessary for modern states: **protection from external threats** (Tilly, 1990), **the maintenance of internal order**, the **administration** and provision of basic **infrastructure necessary** to sustain economic activity (Mann, 1984), and **the extraction of revenue** (Levi, 1988; North, 1981; Tilly, 1990).
- In short, state capacity is the ability of the state to exercise its jurisdiction (authorities) within a given territory.



**Figure 1-1.** Three dimensions of state capacity



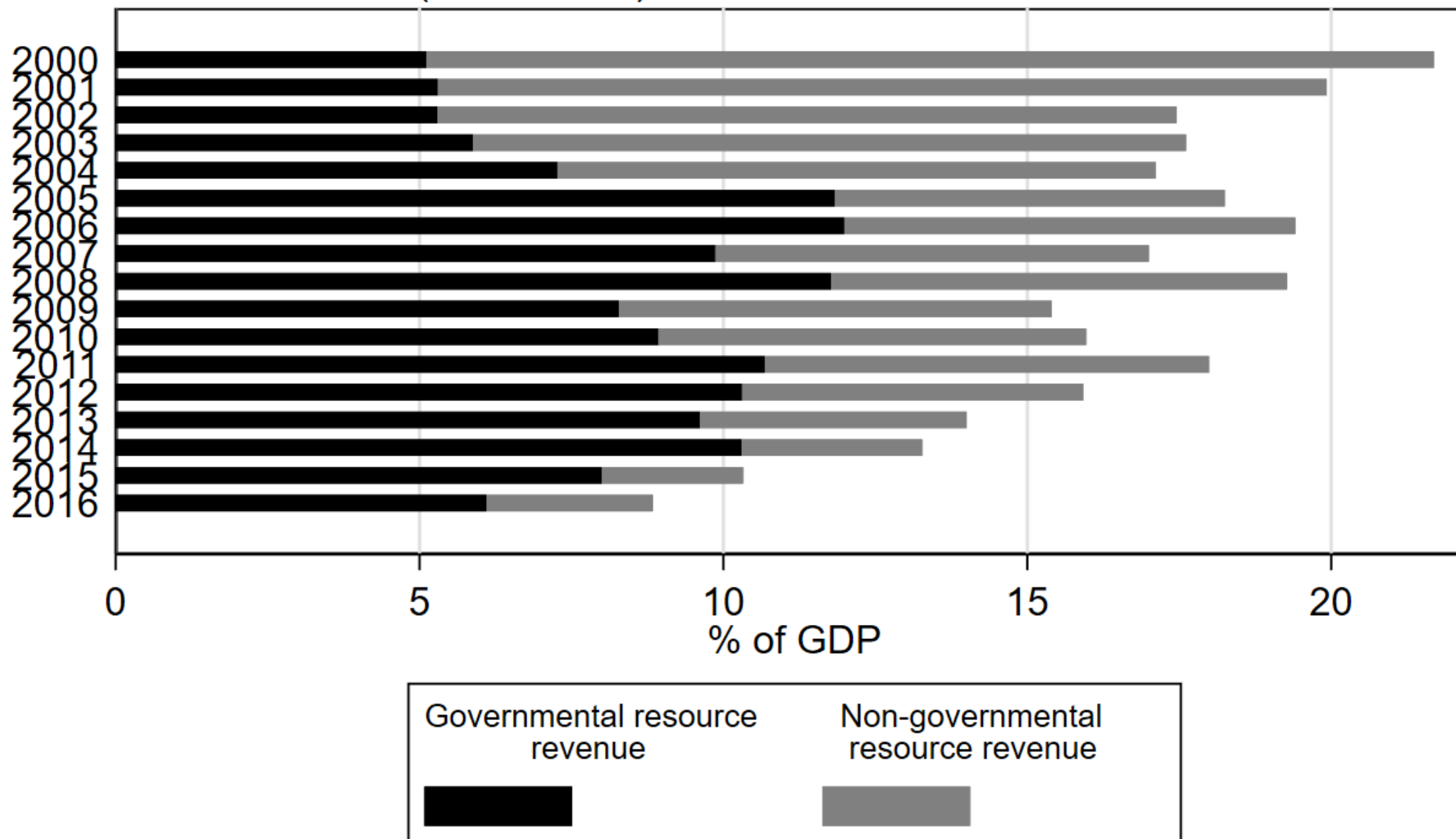
# State capacity and oil revenues

- Some scholars believe that no state capacity is needed to collect oil revenue (Karl, 1997; Ross, 2001; Dunning, 2008). For instance, Evan Lieberman claims that resource rent collection does not require any significant state enforcement (Lieberman, 2002: 98).
- However, in all countries, governments should take action and use various instruments to capture resource revenues from the extraction of natural resources.
- The resource rent of an oil-producing country is not inevitably transformed into government income because the transformation of resource rent into the resource revenue of the state is a complicated and controversial process.
- The state needs a relatively high level of state capacity to collect resource revenues.

# The comparative analysis of Russia and Venezuela

- Russia and Venezuela are two paradigmatically oil-producing countries of the 21<sup>st</sup> century.
- The choice of these countries is determined by the fact that Russia and Venezuela had different patterns of resource revenue collection at the beginning of the 21st century. While in Russia, the federal government could collect 65-70% of total resource revenue in the state budget, in Chavez's Venezuela, the central government could collect only 10-15%.
- Both countries have nationalized petroleum industries (with operational NOCs). As, in theory, the nationalized model of the petroleum industry enables the state to capture almost all revenues from oil production, Russia and Venezuela should have similar patterns of resource rent collection.
- However, the government of Venezuela transforms a less significant percentage of the total resource rent into government income than would be expected given that this country has a nationalized petroleum industry and a great amount of oil rents.

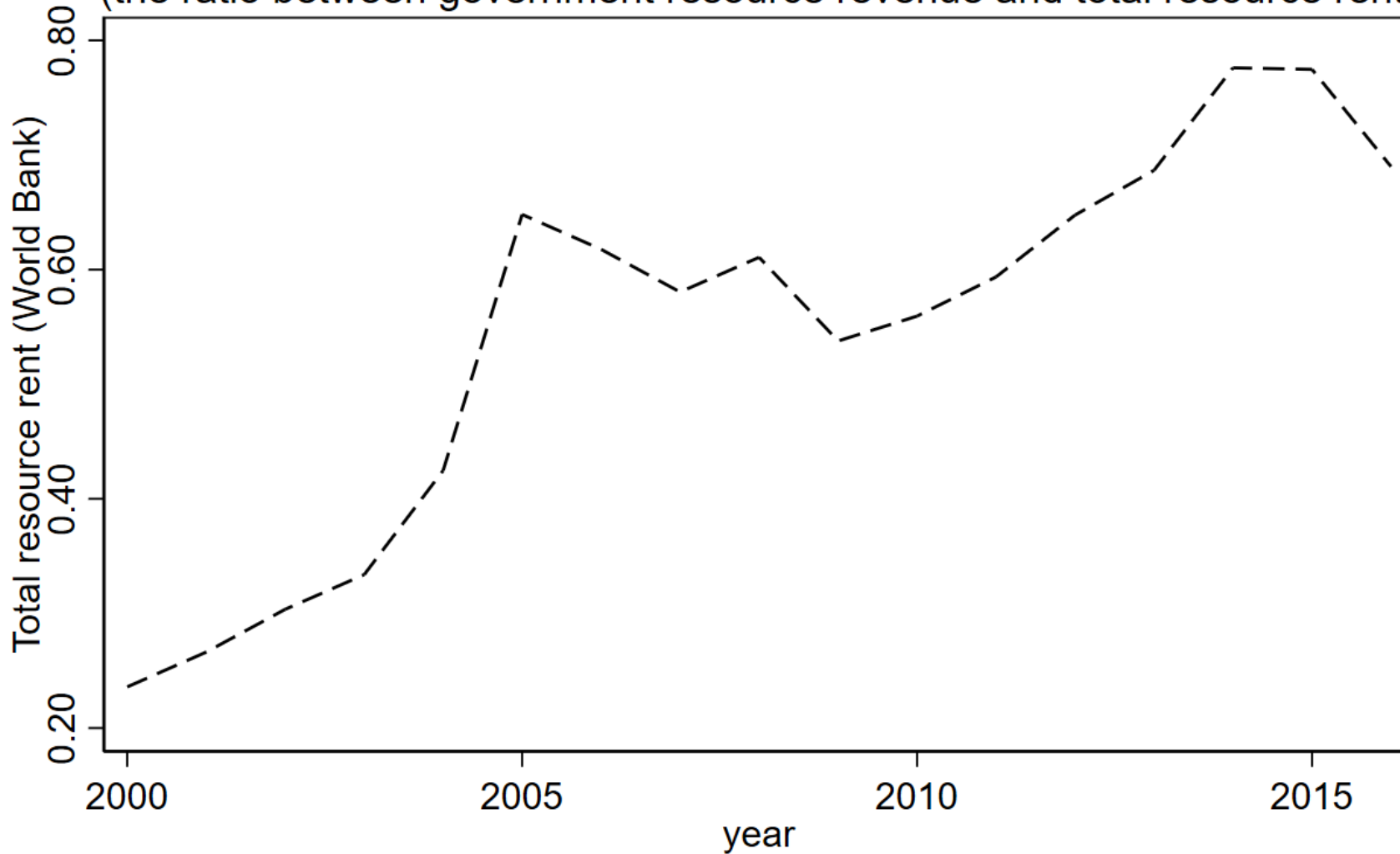
Graph 3-1. Governmental and non-governmental resource revenues in Russia (2000-2016) based on ICTD and World Bank data



Note: total resource revenue is operationalized as total natural resources rents (World Bank). Non-governmental resource revenues (grey color) are calculated as governmental resource revenues (ICTD) excluded from total natural resources rents (World Bank)

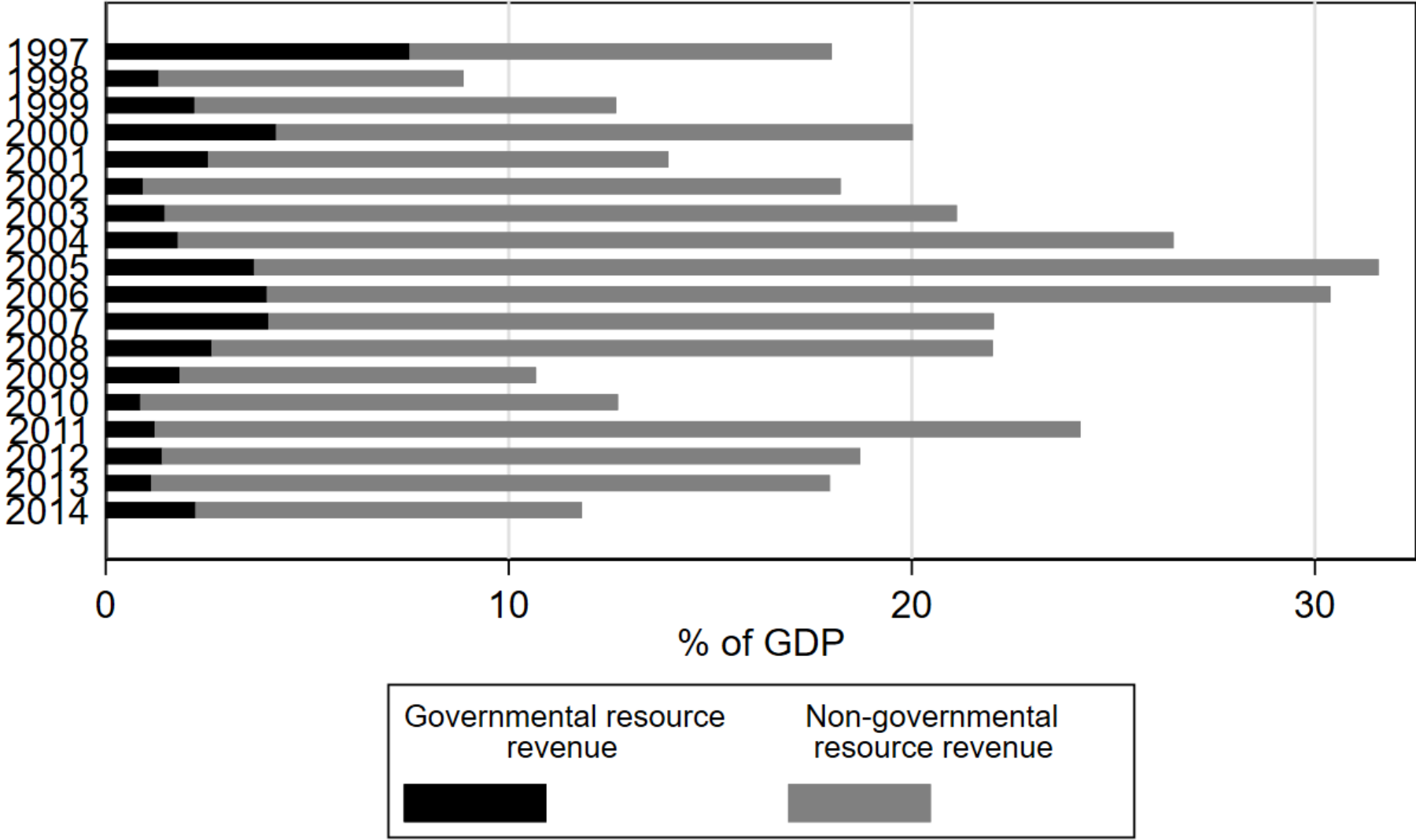
# The dynamics of extractive power in Russia (2000-2016)

(the ratio between government resource revenue and total resource rent)



Note: my calculations based on the data of World Bank and ICTD

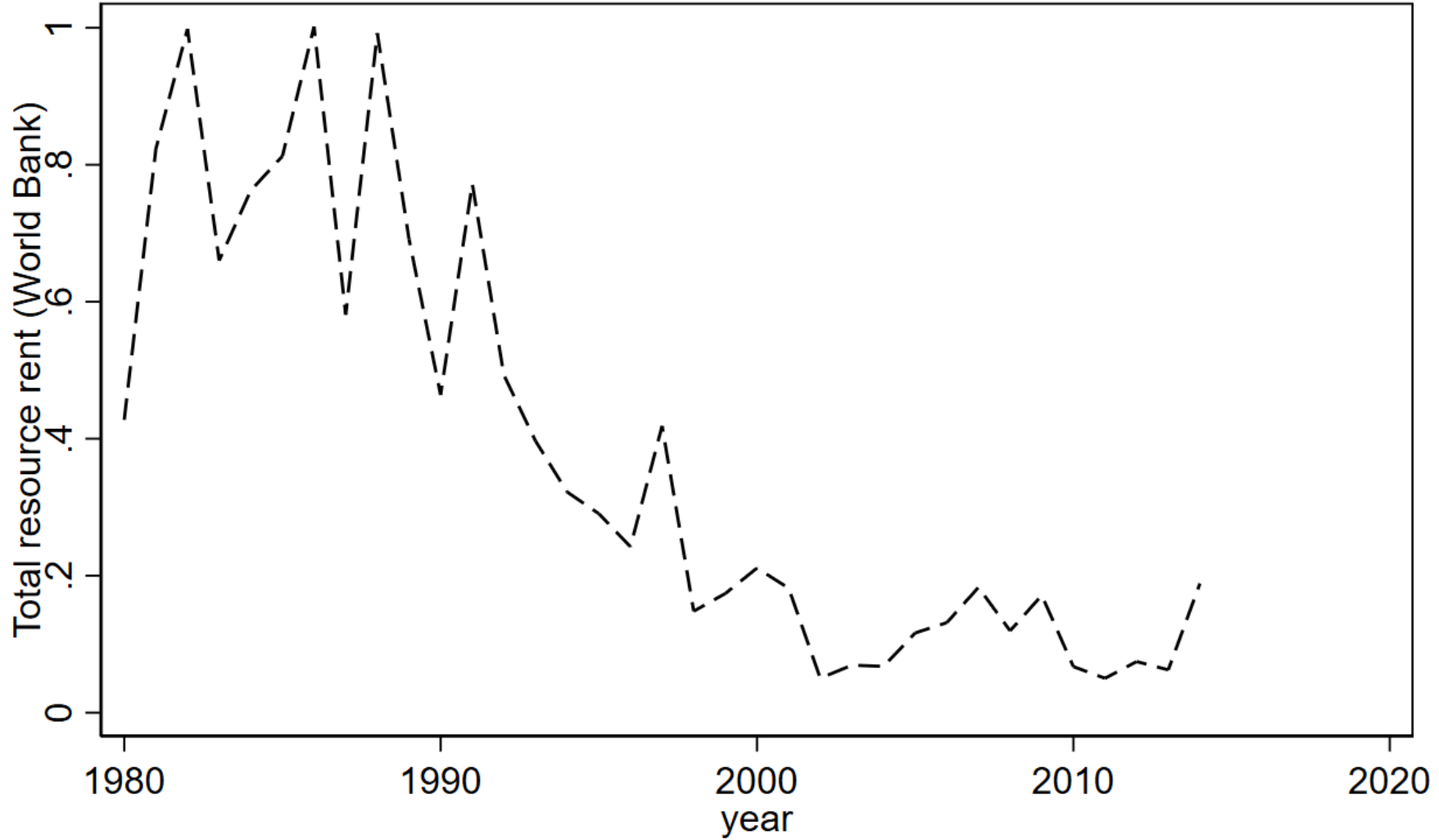
Graph 3-2. Governmental and non-governmental resource revenues in Venezuela (1997-2014) based on ICTD and World Bank data



Note: non-governmental resource revenues (grey color) are calculated as governmental resource revenues (ICTD) excluded from total natural resources rents (World Bank)

# The dynamics of extractive power in Venezuela(1980-2014)

(the ratio between government resource revenue and total resource rent)



Note: my calculations based on the data of World Bank and ICTD

# The difference between Russia and Venezuela

- In the 21<sup>st</sup> century, Russia and Venezuela demonstrate different patterns of resource rent allocation (including resource rent collection).
- State leaders of both countries implemented two different strategies of resource rent collection in the early 2000s. The key difference between these strategies lies in the percentage of total oil rent that each government captures and transforms into its income.
- While in Russia almost all petrodollars collected by the federal government flows into the state budget, with 60–70 percent of the total resource rent transformed into budgetary revenue, in Venezuela only 10–15 percent of the oil rent collected by the central government ends up in the state budget.
- This difference between Russia and Venezuela is puzzling because both countries have nationalized petroleum industries with powerful national oil companies (NOCs).

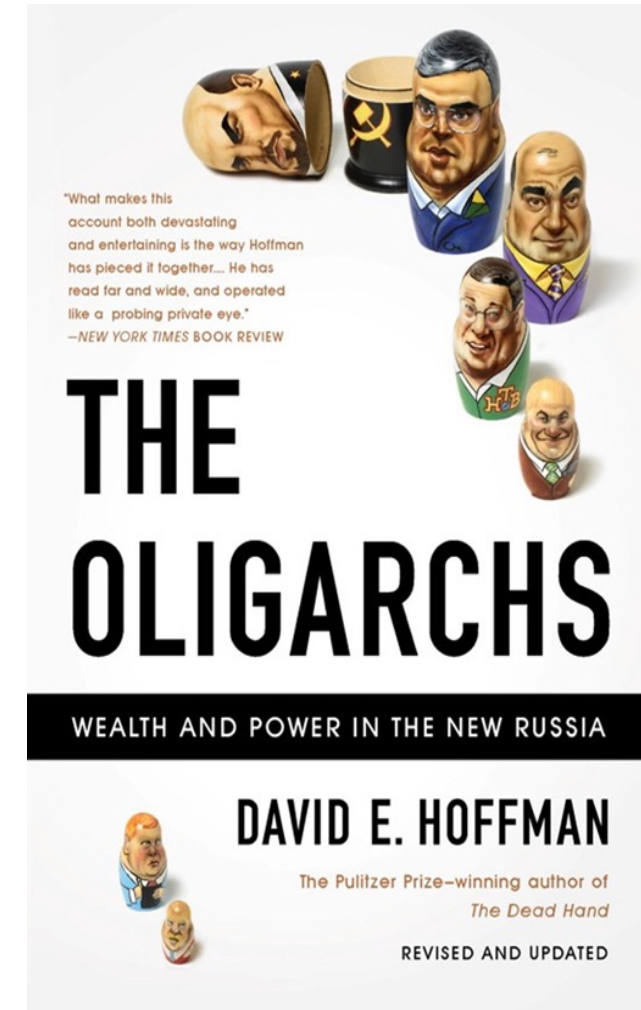


# State capacities in Russia and Venezuela

- This different pattern of resource rent collection in Russia and Venezuela can be explained by different trajectories of state capacity at the beginning of the 21<sup>st</sup> century.
- In the 2000s, the boom of oil prices allowed the Putin administration to improve radically Russian state capacities.
- In Venezuela, on the contrary, the beginning of the oil boom of the 2000s coincided with a sharp decline in state capacities.
- The strengthening of Russian state capacity allowed the government to improve its extractive power and the ability of the state to collect resource revenues. The weakening of Venezuelan state capacity undermined the ability of the state to extract oil revenues.

# The privatization of Russian oil in the 1990s (in the conditions of weak state capacity)

- After the dissolution of the Soviet Union in 1991, the Russian oil industry was privatized. Some of the businessmen who privatized the oil sector in the 1990s subsequently became well-known as Russian ‘oligarchs.’
- In the 1990s and early 2000s, the Russian federal government proved itself to be very poor at capturing revenue from oil and gas production.
- The Russian state did not have efficient fiscal instruments to force private oil companies to pay taxes to the state budget. While in the 1990s oil companies and oligarchs were very strong and powerful, the state was very weak and chaotic and thus struggled to bring order to the regulation of the economy.

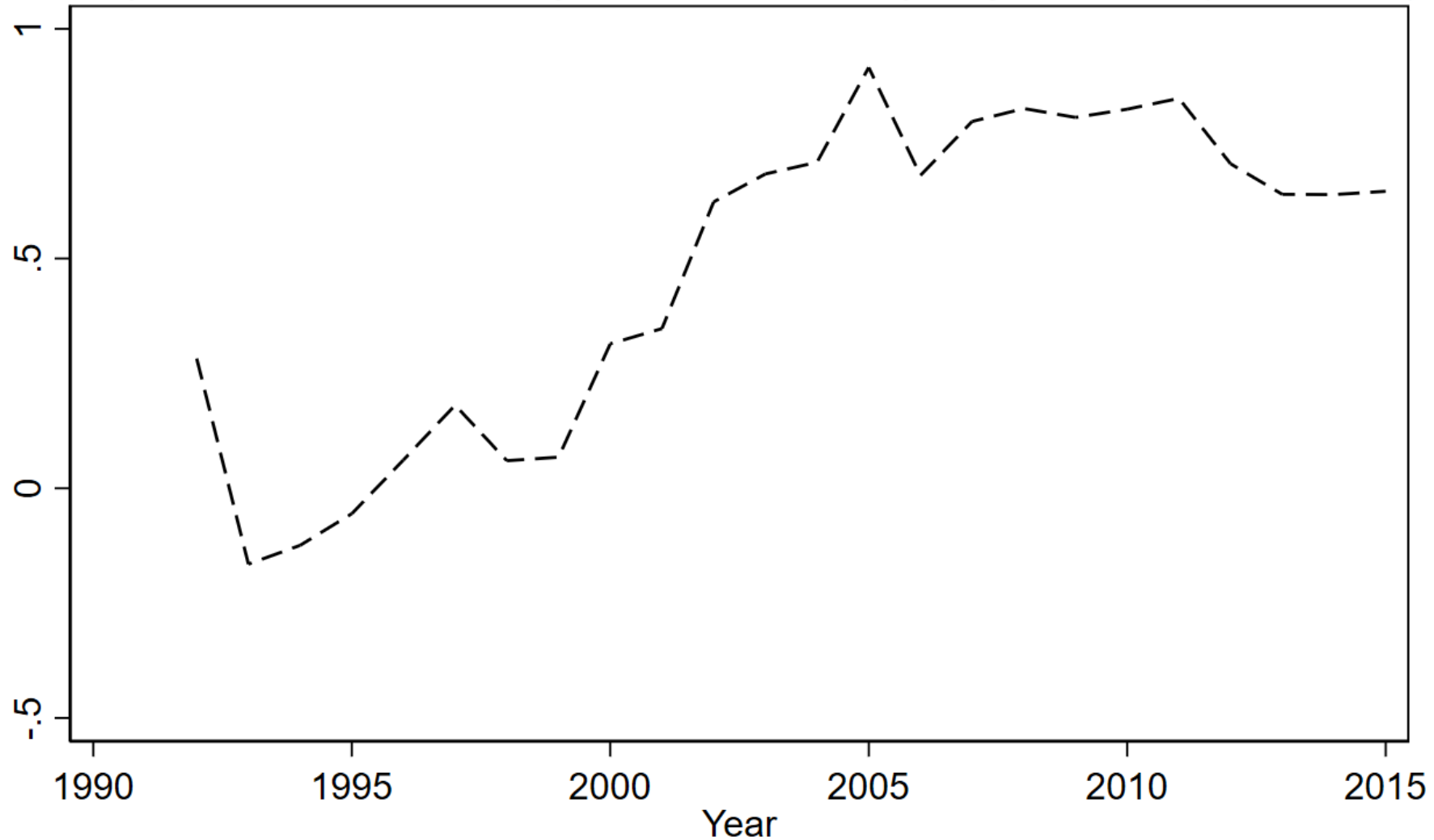


# **The re-nationalization of the petroleum industry and the consolidation of state capacity in Russia**

*(национализации нефтяной промышленности и консолидация силового потенциала государства в России)*

- Everything changed in the early 2000s with the increase in international oil prices and the improvement of Russian state capacity.
- In the early 2000s, some political and administrative reforms allowed the federal government to strengthen its control over the economy. These reforms improved Russian state capacity (administrative, fiscal and coercive state capacities).
- The Russian government carried out the nationalization of the oil sector in 2003. This politics of “*renationalization*” meant the return of some strategic economic assets to the state.
- The improvement of state capacities allowed the state to strengthen its extractive power and its ability to collect resource revenues.

Graph 5-1. The historical dynamics of state capacity in Russia (1992-2015)



Source: Hanson J., Sigman R. (2021). Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research // *The Journal of Politics*, 83(4): 1495-1510.

Note: the composite state capacity index based on 21 indicators

Table 1. Indicators of State Capacity

| Indicator   | Countries | Years     |
|---|-----------|-----------|
| Administrative efficiency (Adelman and Morris 1967)             | 69        | 1960–62   |
| Bureaucratic quality (Political Risk Services)                  | 141       | 1984–2015 |
| Census frequency (calculated from UN 2016)                      | 173       | 1960–2015 |
| Efficiency of revenue mobilization (World Bank CPIA)            | 72        | 2005–15   |
| Fiscal capacity (V-Dem v9)                                      | 174       | 1960–2015 |
| Information capacity (Brambor et al. 2020)                      | 70        | 1960–2015 |
| Law and order (Political Risk Services)                         | 141       | 1984–2015 |
| (log) Military personnel per 1,000 in population (COW, WDI)     | 176       | 1960–2015 |
| (log) Military expenditures per capita (SIPRI, COW)             | 176       | 1960–2015 |
| Monopoly on use of force (BTI)                                  | 129       | 2006–15   |
| (log) Police officers per 1,000 in population (UN)              | 121       | 1973–2015 |
| Quality of budgetary and financial management (World Bank CPIA) | 72        | 2005–15   |
| Quality of public administration (World Bank CPIA)              | 72        | 2005–15   |
| Rigorous and impartial public administration (V-Dem v9)         | 177       | 1960–2015 |
| State antiquity index, based on Bockstette et al. (2002)        | 172       | 1960–2015 |
| State authority over territory (V-Dem v9)                       | 177       | 1960–2015 |
| Statistical capacity (World Bank)                               | 127       | 2004–15   |
| Taxes on income as % of taxes (ICTD, IMF)                       | 168       | 1963–2015 |
| Taxes on international trade as % of taxes (ICTD, IMF)          | 167       | 1960–2015 |
| Total tax revenue as % of GDP (ICTD, IMF, OECD)                 | 167       | 1960–2015 |
| Weberianness (Rauch and Evans 2000)                             | 34        | 1970–90   |

# Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research

**Jonathan K. Hanson**, University of Michigan  
**Rachel Sigman**, Naval Postgraduate School

Table 2. Correlation of Capacity with Base Indicators

| Indicator  | <i>r</i> | <i>N</i> |
|--|----------|----------|
| Statistical capacity                             | .83      | 1,492    |
| Bureaucratic quality                             | .81      | 4,089    |
| Rigorous and impartial public administration     | .80      | 8,252    |
| Law and order                                    | .77      | 4,089    |
| Quality of public administration                 | .74      | 724      |
| Monopoly of force                                | .74      | 1,247    |
| Fiscal capacity                                  | .73      | 7,673    |
| Quality of budgetary and financial management    | .71      | 724      |
| Administrative efficiency                        | .70      | 199      |
| (log) Military expenditures per capita           | .70      | 7,925    |
| Efficiency of revenue mobilization               | .67      | 724      |
| State authority over territory                   | .66      | 8,237    |
| Total tax revenue as % of GDP                    | .66      | 6,413    |
| Information capacity                             | .66      | 3,591    |
| Weberianness                                     | .59      | 714      |
| Census frequency                                 | .59      | 8,201    |
| Taxes on income as % of tax revenue              | .57      | 5,854    |
| State antiquity index                            | .42      | 8,032    |
| (log) Military personnel per 1,000 in population | .26      | 8,116    |
| (log) Police officers per 1,000 in population    | .03      | 1,569    |
| Taxes on international trade as % of tax revenue | -.67     | 6,270    |

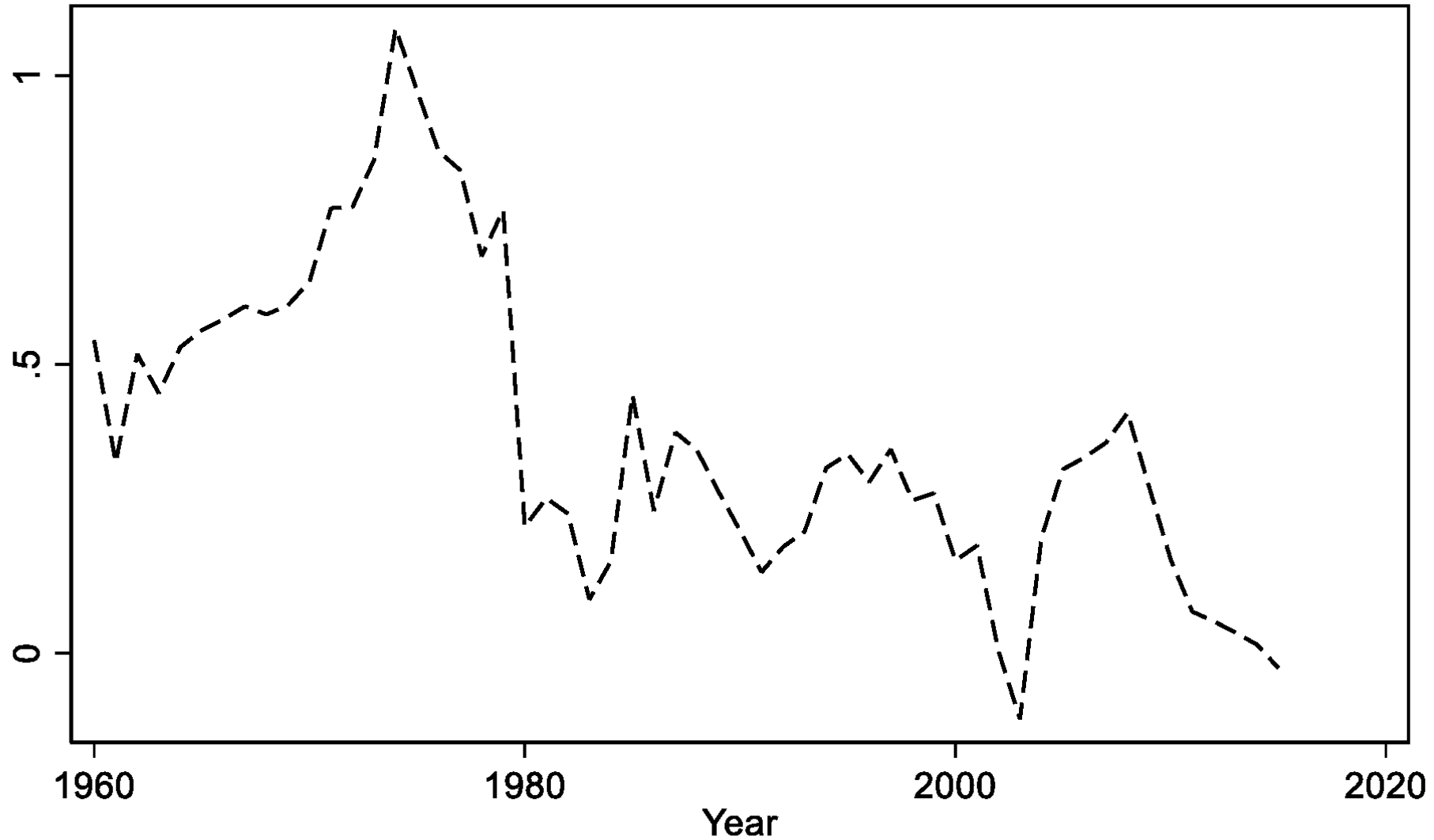
# The crisis of the Venezuelan petrostate (*нефтяного государства*) before Hugo Chavez (in the 1990s)

- Venezuela is a country with a nationalized petroleum industry. The oil sector was nationalized in 1975 and, as a result, the expropriated oil assets were concentrated in the hands of the state-owned oil company PDVSA (*Petróleos de Venezuela*). During the oil boom of the 1970s and 1980s, PDVSA was a ‘cash cow’ for the government of Venezuela.
- In the 1990s the oil price remained very low, so these years can be characterized as the ‘lost decade’ (*потерянное десятилетие*) of the Venezuelan economy.
- The 1990s was a decade of ‘neoliberal’ reforms, as a result of which the legitimacy of the democratic system and the stability of the economy were undermined.

# Weakness of state capacity in Chavez's Venezuela

- Hugo Chavez won the presidential election in 1998 (as a populist outsider). During the electoral campaign, Chavez exploited the rhetoric of resource nationalism, according to which all profits from oil production should be owned by the people rather than international investors and corrupt elites.
- After the electoral victory of 1998, **the Chavez administration faced a deep political crisis in Venezuela.** The old elites openly demonstrated their disloyalty to the new president and his reform agenda. Chavez faced political resistance from the old elite and the bureaucracy in the first years of his presidency, so he had good reason to believe that the state apparatus was not loyal to him.
- The political crisis resulted in the deep disorganization of coercive, fiscal, and administrative state capacities in Venezuela in the late 1990s and early 2000s. This crisis of state capacity undermined the extractive power of the Venezuelan petrostate at the beginning of the 21<sup>st</sup> century.

Graph 7-1. The dynamics of state capacity in Venezuela (1960-2015)



Source: Hanson J., Sigman R. (2021). Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research // *The Journal of Politics*, 83(4): 1495-1510

Note: the composite state capacity index based on 21 indicators



- The weakness of Venezuelan state capacity did not allow the Chavez administration to use the state apparatus for the effective collection and redistribution of oil revenues. The quality of public administration (*государственного управления*) was very bad.
- In 2003, the level of Venezuelan state capacity was at a historical minimum (Hanson & Sigman, 2021).
- This weakness of state institutions pushed Chavez to establish alternative (non-state) mechanisms for the collection and redistribution of resource rent (*распределение нефтяных денег*). For instance, Chavez delegated some state functions to the national oil company (PDVSA).

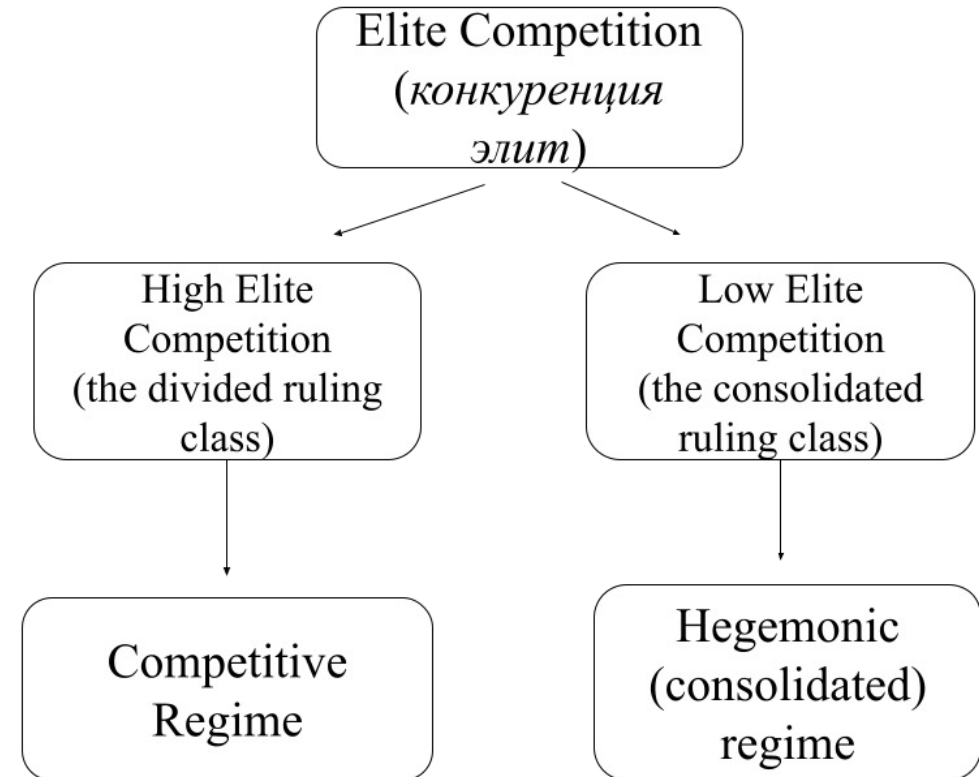


# The extra-budgetary obligations of PDVSA (дополнительные (внебюджетные) обязательства PDVSA)

- PDVSA was required to assume some functions that are not typical for state-owned oil companies (*государственных нефтяных компаний*).
- **The national oil company was obliged to provide some public goods to the population, while real formal institutions were partially destroyed and unable to function well.**
- Under Chavez, PDVSA became a parallel state (*'estado paralelo'* или *"параллельное государство"*), which assumed many of the functions of the central government. In addition to formal tax pressure on the company, the government of Venezuela imposed heavy non-budgetary obligations on PDVSA.
- Chavez implemented a very unusual model of resource rent allocation, which is atypical for petrostates with nationalized petroleum industries. **In this model, a significant amount of the resource revenue is redistributed through non-budgetary mechanisms rather than through public spending of the state budget.**

# Elite competition and resource revenue collection

- In addition to petroleum ownership and state capacity, **elite competition** is another factor that can explain different patterns of resource revenue collection in Putin's Russia and Chavez's Venezuela.
- Low elite competition allowed Vladimir Putin to consolidate his power and strengthen state capacities in Russia in the early 2000s. High elite competition prevented Hugo Chavez from consolidating state capacities in Venezuela in the 2000s.
- While Putin's Russia can be classified as a **hegemonic regime**, Chavez's Venezuela is a **competitive autocracy** (Howard & Roessler, 2006).



# National oil companies and resource revenue collection in Russia and Venezuela

- The comparative analysis of Putin's Russia and Chavez's Venezuela shows that NOCs play different roles in these countries.
- In Russia, Gazprom and Rosneft allow the federal government to accumulate almost all resource revenues in the state budget. In other words, Russian NOCs can be considered as obedient (*послушные*) fiscal instruments of the state.
- In Venezuela, PDVSA does not allow the government to collect all oil revenues in the state treasury. However, under Chavez, this NOC became a parallel state (*'estado paralelo'*), which was obliged to provide some public goods to the population. In other words, PDVSA was a 'welfare agency' in the Chavez regime.
- In both countries, state leaders exercised their political control over NOCs by appointing loyal people to the top position of these oil companies.

# The difference between Russia and Venezuela

- Russia and Venezuela illustrate two alternative models of resource rent collection (and resource rent allocation).
- The Russian model implies that almost all oil revenues are concentrated in the federal budget (and other public funds) through which the central government redistributes ‘petrodollars’ (or *petro rubles* – “нефтяные рубли”) among social groups.
- The Venezuelan model implies that the ruling regime redistributes oil revenues among social groups indirectly using non-state funds, PDVSA, and informal mechanisms.
- Differences in state capacities and elite competition in these countries cause the different models of resource revenue allocation in Russia and Venezuela.

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Thank you for your attention!  
I would be happy to answer to your questions