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UNIVERSITY

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Laboratory for Monitoring the Risks of  
Socio-Political Destabilization

# **Socio-Economic Development and Protests**

A Quantitative Reanalysis

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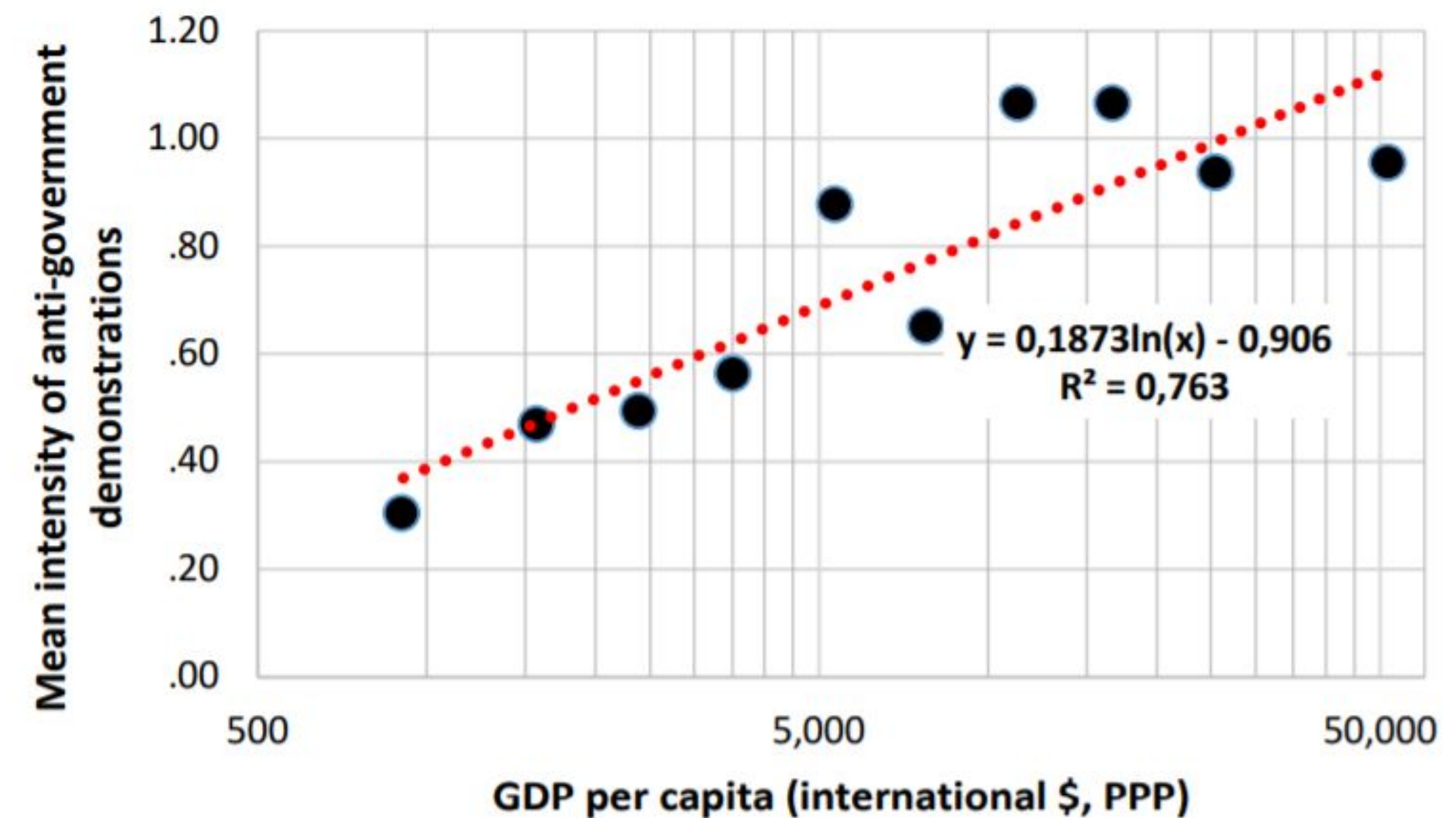
Moscow, 2019

# GDP Per Capita

What theory accounts for the correlation between GDP per capita and protest intensity?

- As GDP increases, support for socially-destabilizing actions such as political violence (Ostby, et al., 2011; Parvin, 1973), revolution (MacCulloch, 2004; MacCulloch & Pezzini, 2010), civil wars (Collier & Hoeffler, 2002; Fearon & Laitin, 2003) decreases.
- As the level of economic development increases, we generally tend to find more anti-state demonstrations and of a higher intensity (Ang, Dinar, & Lucas, 2014; Brancati, 2014; Korotayev, Bilyuga, & Shishkina, 2018; Korotayev, Vaskin, Bilyuga, & Ilyin 2018; Nam, 2007; Su, 2015).

**Figure 1:** Per Decile Correlation between GDP per capita (2011 international dollars, PPP) and intensity of anti-government demonstrations in respective years, 1960 – 2015 (scatterplot with a fitted logarithmic regression line).



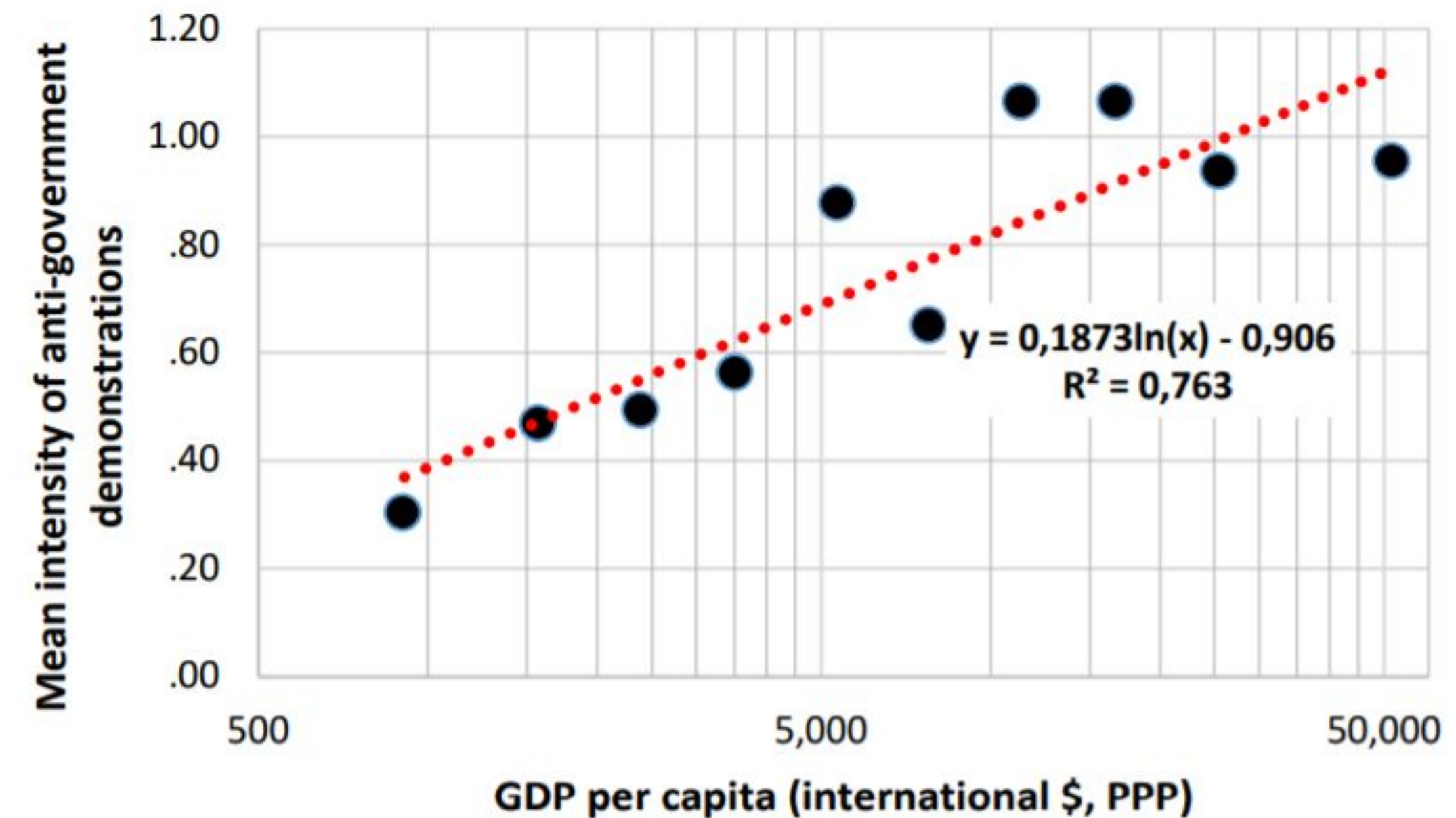
**Source:** Korotayev, Vaskin, Bilyuga, & Ilyin. (2018). pp. S19

# GDP Per Capita

What theory accounts for the correlation between GDP per capita and protest intensity?

- **Huntington's theory** - instead of a completely linear relationship between levels of GDP per capita and certain types of socio-political destabilization, we should instead find a U-shaped relationship. The middle-income countries are more prone to destabilization (**Huntington, 1968**)
- This strong correlation is observed in a very wide range of GDP per capita values up to 20,000 international 2011 dollars at PPP, encompassing the overwhelming majority of the world's population (6/7 billion).
- The negative correlation for high-income countries (1/7 billion) is rather weak or even insignificant in some tests (**Korotayev, Bilyuga, & Shishkina 2018**).

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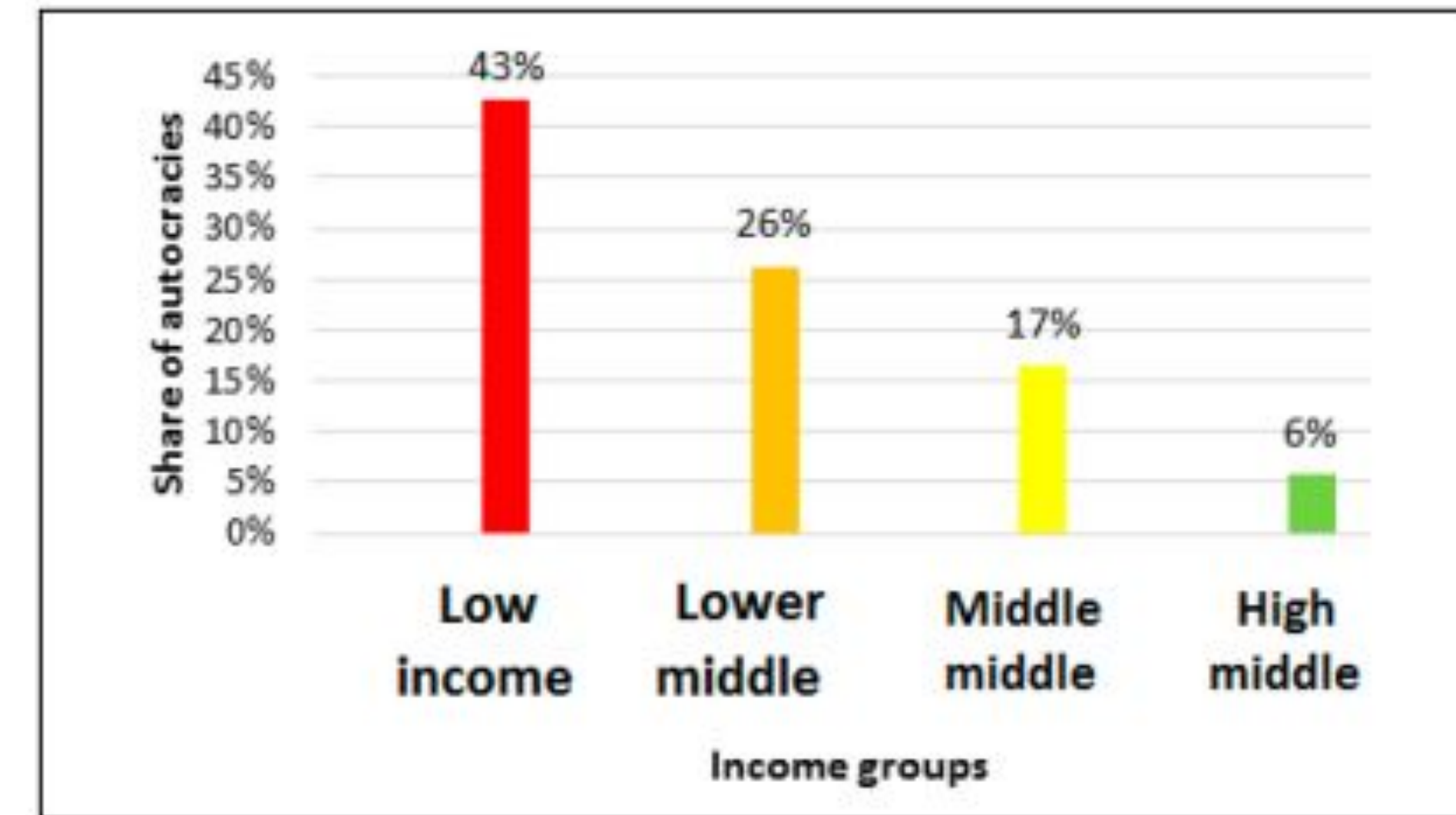


**Source:** Korotayev, Vaskin, Bilyuga, & Ilyin. (2018). pp. S19

# The Theory of Modernization?

- These results lend support to the classic *Theory of Modernization* originally proposed by **Lipset** in 1959.
- Citizens of a more economically developed country are less tolerant of repressive regimes and are more likely to undergo a transition from an autocratic state to a democratic one (**Lipset, 1959**).
- **Why the strong correlation?** - An intensification of pro-democracy protests and fewer consistently autocratic regimes as GDP per capita increases.
- This explanation can help to explain (but not fully) both the lower number of authoritarian regimes in the higher-income countries and the higher number of anti-government protests in low and middle-income countries.

**Figure 2:** Share of autocracies per income groups (up to \$20,000), 1960-2014.

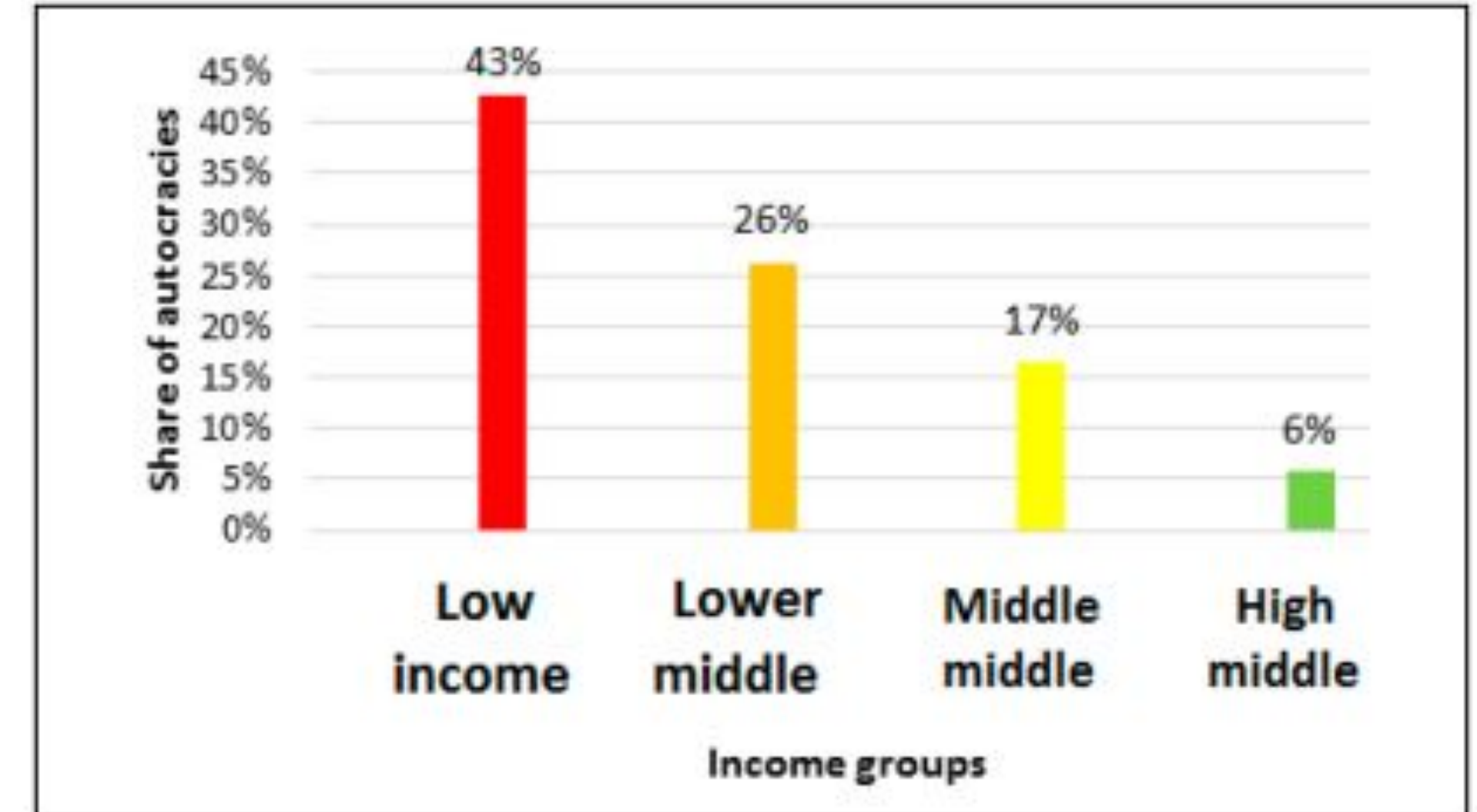


**Source:** Korotayev, Bilyuga, and Shishkina. (2018). p. 418.

# Democratization and Protests

- Within the interval of up to \$20,000 GDP per capita - We find a decrease in the proportion of authoritarian regimes and an increase in the share of non-authoritarian regimes (democratic and hybrid).
- The presence of democratic and hybrid regimes in this range significantly and positively correlates with higher intensity of anti-government demonstrations. This mechanism also provides an explanation for the correlation between GDP per capita and anti-government protests.
- **Przeworski and Limongi** - The probability of a democratic regime emerging is more or less the same at all levels of economic development, however, in the more economically developed countries democratic regimes have a much higher chance of survival (**Przeworski & Limongi, 1997**).
- For our purposes, both Lipset and Przeworski's theories can provide complementary explanations for this phenomenon.

**Figure 2:** Share of autocracies per income groups (up to \$20,000), 1960-2014.



**Source:** Korotayev, Bilyuga, and Shishkina. (2018). p. 418.

# Democratization and Social Movements

- In their classic text entitled *Social Movements: 1768-2008*, Tilly and Wood (2009, pp. 137-9) highlight several points concerning this relationship between democratization and social movement activity:
  1. States which promote regular relationships with their population, in the form of “citizenship”, help to facilitate social movement claim-making. Otherwise, state authorities can feel threatened and to protest would be to risk one’s life.
  2. The expansion of rights to speech, association, and assembly go a long way in promoting protest activity.
  3. A general equalization of the rights of citizens within public politics, such as the inclusion of minorities in a society by enshrining their rights in law actively promotes their participation in politics and social movement activity.
  4. A principal goal for most social movements is to influence public policy. This can only take place when a politician considers them to be constituents whose voice is worth listening to.
  5. Without state protections for minorities and more vulnerable sections of the population, social movements can face mass repression which prevents them from speaking out.
  6. The creation of “complementary institutions” such as labor unions, electoral campaigns, political parties, and other societal organizations provide social movements with allies in other fields of politics, legal protection for their campaigns, and “vehicles for their mobilization”.

# Formal Education and Protests

- There is a strong positive correlation between education and the level and economic growth at the early phases of modernization (**Barro, 1991; Barro & Sala-i-Martin, 1995; Benos & Zotou, 2014; Korotayev, 2009; Korotayev & Khaltourina, 2010; Korotayev, Malkov, & Khaltourina, 2006, 2007; Sadovnichij, Akaev, Korotayev, & Malkov, 2016; Sala-i-Martin, 1997**).
- GDP per capita growth allows social systems to increase spending on education, which promotes its quantitative expansion; herewith the issue of education quality becomes more important at the later phases of modernization transition (**Sachs & Warner, 1997; Hanushek & Kimko, 2000; Hanushek & Woessmann, 2008, 2009, 2011, 2012; Atherton, Appleton, & Bleaney, 2013**).
- A number of studies have demonstrated that the level of formal education is a significant factor of non-violent protests over more violent forms of collective action due to it being the preferred method of protest for the educated (**Hall, Rodghier, & Useem, 1986; Jenkins & Wallace, 1996; Olson, 1963; Korotayev, Bilyuga, & Shishkina, 2018**).

# Formal Education and Protests

- **Huntington (1968)** - Cases in which educational and economic growth surpass political development are likely to foster reformatory and revolutionary change.
- **Arab Spring** - Highly-educated, yet disenfranchised youth led the protests when economic conditions were bad (**Korotayev and Khodunov 2012; Korotayev et al. 2011; Korotayev and Zinkina 2011; Korotayev et al. 2013; LaGraffe 2012**).
- **Educational Capital** - Essential to the operations of an effective movement (**Morris and Staggenborg 2007, pp. 174-6**).
- A common trait that most leaders of social movements share is that they come from the educated middle and upper classes, and are relatively more educated than their followers (**Brinton 1952; Flacks 1971; Oberschall 1973; Rejai and Phillips 1988; Veltmeyer and Petras 2002**).





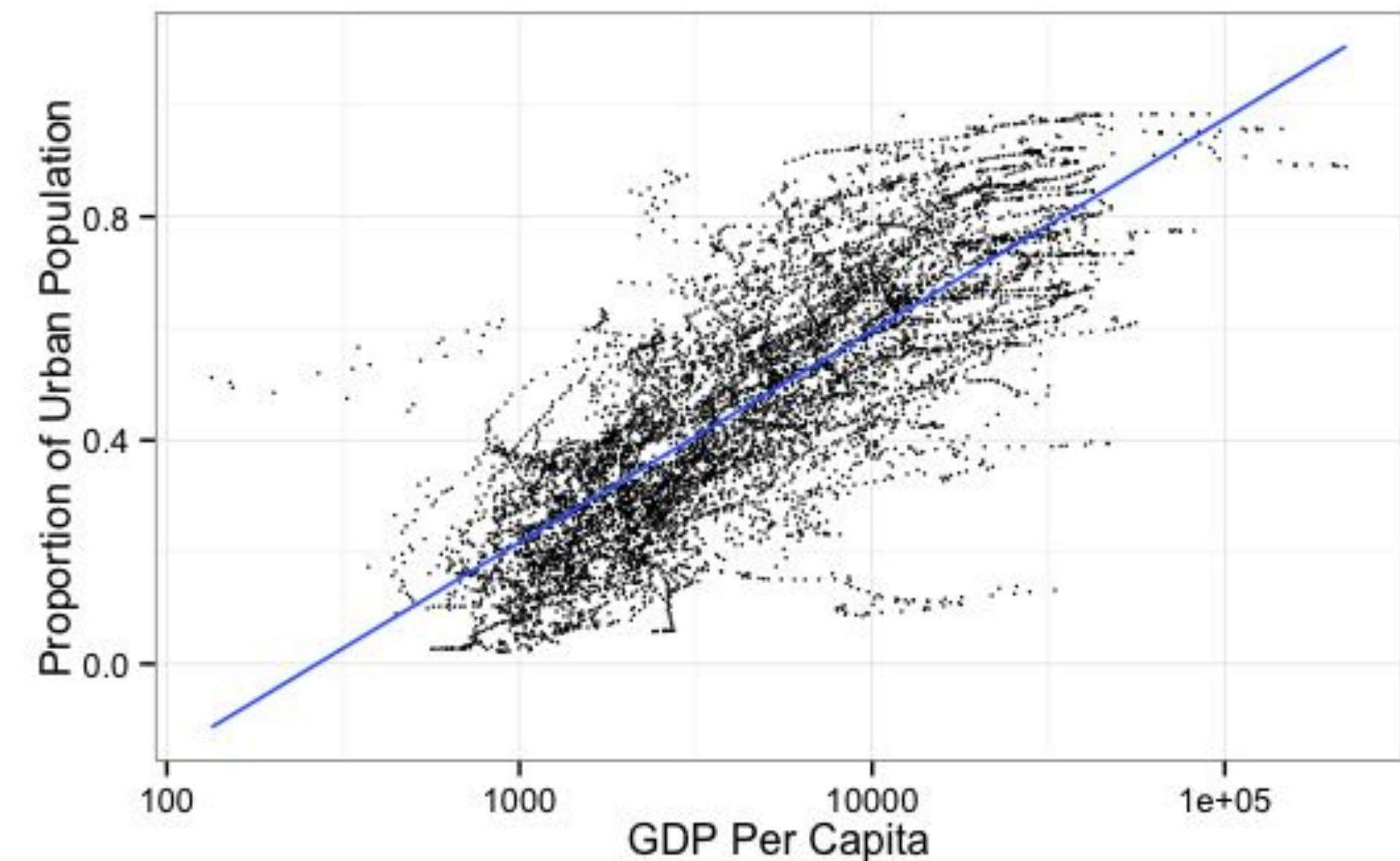
# Only a Partial Explanation

- Formal tests performed by **Korotayev, Bilyuga, Shishkina (2018)** have shown that these factors could only partly account for the positive correlation between GDP per capita and anti-government demonstration intensity.
- Our current study proposes to investigate the level of urbanization (the percentage of the urban population to total population) as a possible factor.

# Urbanization as a Process of Economic Development

- The urbanization process is very closely tied to the expansion in economic growth.
- Much of this growth arises from the movement of labor from the traditional sectors of the country, concentrated in rural areas, to the more modern sectors located on the cities (**Korotayev, et al. 2011**).
- As this growth advances and societal resources are accumulated in the cities, they become more capable of supporting larger populations (**Zinkina, et al. 2019, pp. 131-34**).
- In Korotayev, et al.'s (**2011**) research, the large migration of the population from rural to urban environments has been identified as a major component of the “trap” at the “escape from the Malthusian trap”.
- Economic development → decline in the mortality rate → large population growth and youth bulges (the group most inclined to radical politics).
- Urban centers begin to expand and industrialization pushes workers out of rural environments and into the cities.

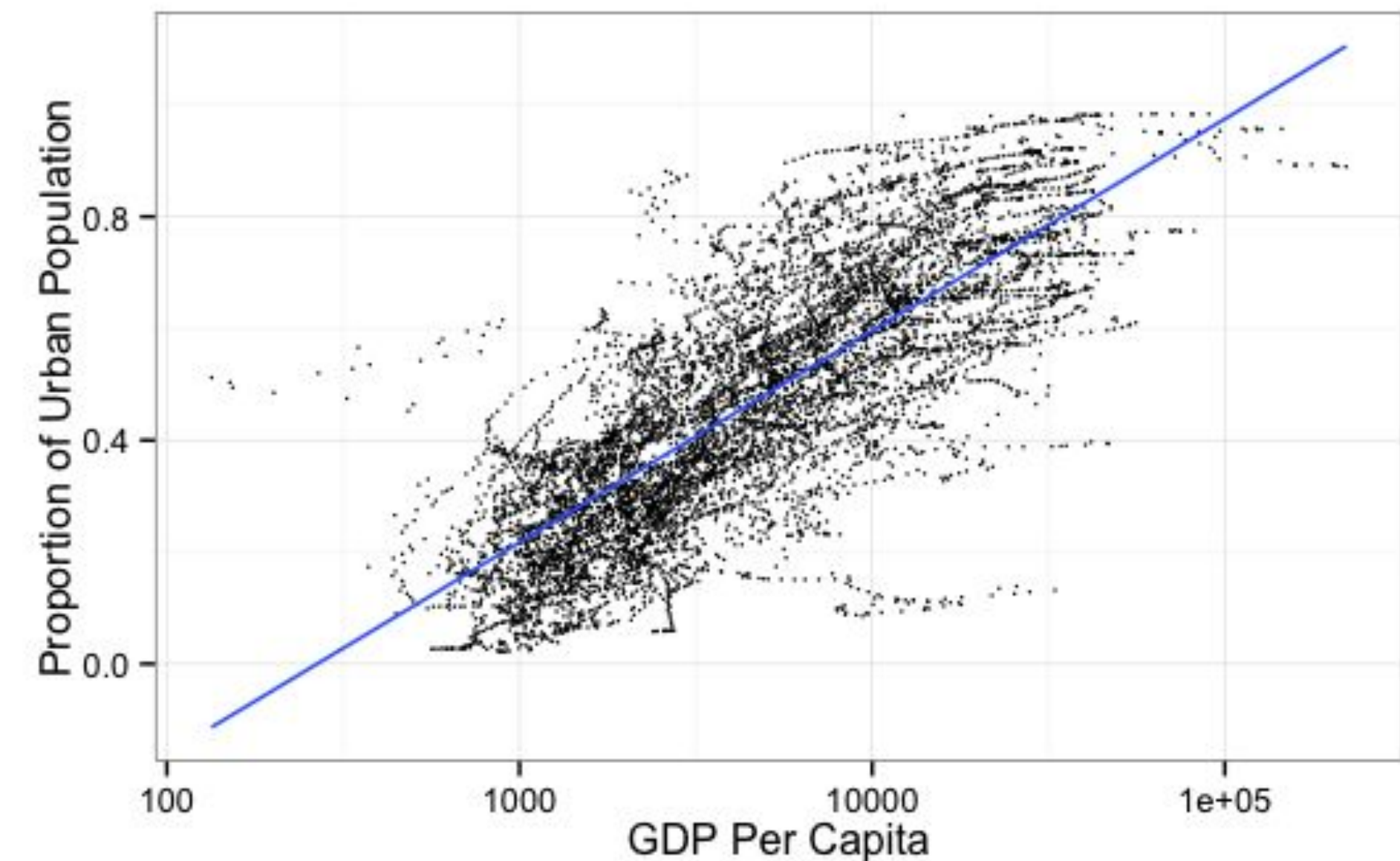
**Figure 3:** Urbanization and GDP Per Capita



# Urbanization as a Process of Economic Development

- Rural-urban migration creates a significant number of dissatisfied and precarious workers as they are only able to get unskilled low-paying jobs and low-quality housing.
- While job creation expands in the urban areas, typically, it is not enough to keep up with the large increase in the population creating a higher levels of unemployment among the youth.
- This “army” of dissatisfied youth have the potential to participate in protests as a means to ameliorate their conditions
- Ultimately, the “escape” from the Malthusian trap requires the development of new sectors of the economy at the expense of old ones which necessarily leads to these painful structural changes that fosters a radicalization of the working class.
- The urban poor have often found it in their interest to protest the state within these contexts (**Davis 2017, pp. 158-63; Korotayev, et al. 2011; Piven and Cloward 1979**).

**Figure 3:** Urbanization and GDP Per Capita



# Urbanization and Protests

- It has been suggested that the modern metropolis has become the focus of the efforts of movements due to it becoming the “space of the common” (**Hardt and Negri 2009, p. 250**).
- Unlike the industrial workers of the 19th century, who viewed the city as the primary arena for their struggle (**Tarrow 2003, p. 64**), for modern urban social movements the city represents not only the arena of their struggle, but also the stakes (**Brenner 2013**).
- These ‘urban social movements’ are defined by their demands to have a “right to the city” which they live in, and have as an objective the transformation of social relations within the urban space (**Hamel 2014; Harvey 2012; see also Castells 1972; Eckstein 1989; Escobar and Sonia 1992; Jelin 1987; Schuurman and Naerssen 2011; Slater 1985; Wignaraja 1993**).
- Non-violent protests tend to occur more often in urban areas where people possess more of society’s resources as well as more dense personal networks, all of which make them more prone to protest (**Gledistch and Rivera 2017**).
- Political entrepreneurs are more able to connect and direct the actions of the masses as urbanization levels increase. (**Tilly, 1995**).
- Certain key cities become key targets for leaders of social movements as efforts to undermine state forces are more effective there (**Gledistch and Rivera 2017**).

# Materials and Methods

- Our cross-national database covers the time period from 1950 to 2016.
- **Negative Binomial Regression** - meant for dependent variables with non-normalized Poisson distributions with country-year observations.
- Non-violent Anti-Government Protests - from the *Cross-Sectional Time-Series* (CNTS) Database (**Banks & Wilson, 2019**). Banks and Wilson define anti-government demonstrations as “any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of a distinctly anti-foreign nature”.
- GDP Per Capita - Figures from the *Maddison Project Database* provided in the *Varieties of Democracy* (V-Dem) dataset (**Bolt, Inklaar, de Jong, & van Zanden 2018; Coppedge, et al., 2019**). This dataset was chosen because of the scope of time it covers. These figures are logged in order to ensure a normal distribution.
- Urbanization - from the *Varieties of Democracy* (V-Dem) dataset (**Coppedge, et al., 2019**). Defined as the “ratio of urban population to total population”.
- Political Regime type - Originates from Jack Goldstone, et al.’s (**2010**) study *Global Model for Forecasting Political Instability*. As the principal difference in protest activity is understood to revolve around those regimes which are fully autocratic our data reflects this; our data is coded using dummy variable to represent either fully authoritarian regimes or the rest.
- Education - *Varieties of Democracy* (V-Dem) dataset and denotes the average level of education after 15 years of age (**Coppedge, et al. 2019**).
- Population Size - *Varieties of Democracy* (V-Dem) (**Coppedge et al., 2019**). These figures are logged for a normal distribution.

# Results

**Table 1. Negative binomial regression of the intensity of non-violent demonstrations, 1950–2016**

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
GDP per capita (log)	0.435*** (0.029)	14.95	0.401*** (0.028)	14.29	0.397*** (0.03)	13.17	-0.209*** (0.075)	-2.76	-0.435*** (0.081)	-5.35
Population (log)			0.332*** (0.021)	15.32	0.302*** (0.022)	13.42	0.033*** (0.033)	8.3	0.312*** (0.033)	9.29
Full Autocracy [=1] vs. Other Regimes [=0]					-0.546*** (0.079)	-6.91	-0.358*** (0.091)	-3.93	-0.330*** (0.09)	-3.66
Average Years of Education (15+)							0.025*** (0.024)	5.77	0.050* (0.027)	1.83
Share of urban population, %									2.822*** (0.395)	7.13
Time Fixed-Effects	Yes		Yes		Yes		Yes		Yes	
Country Fixed-Effects	Yes		Yes		Yes		Yes		Yes	
Observations	8866		8866		8309		6623		6623	
Akaike Inf. Crit.	14101.33		13872.61		12820.56		8906.194		8856.296	

note: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

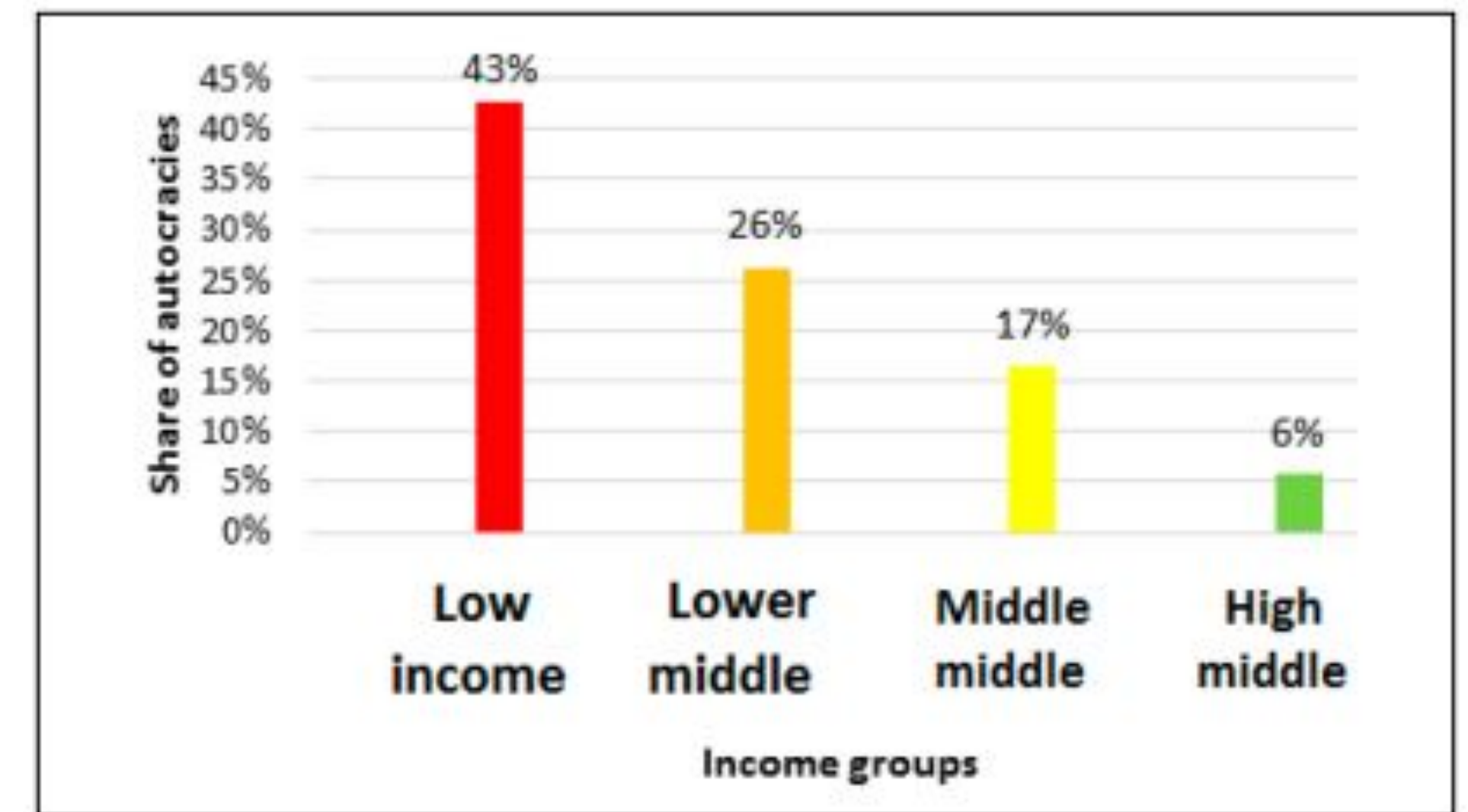
# Conclusions - GDP per capita and Modernization

- The proliferation of formal education, increases in the rate of urbanization, and the transition from full autocracies to non-autocracies are the main factors accounting for the relationship between GDP per capita and anti-government protest intensity.
- GDP per capita growth can be regarded as a significant inhibitor of anti-government demonstrations, but on the other hand, it unleashes such powerful forces as democratization, urbanization, and formal education proliferation that appear to overwhelm the generally inhibiting influence of economic development.
- Our tests also permit us to estimate the relative contribution of democratization, formal education, and urbanization to the transformation of the GDP per capita relationship with anti-government demonstrations from a negative into a positive one.
  - a. Urbanization
  - b. Democratization
  - c. Education

# Conclusions - \$20,000 Threshold and the Saturation Effect

- **An explanation for the negative correlation in High-Income countries** - Saturation effect after the \$20,000 threshold - The social forces generating anti-government protests associated with economic growth (democratization, education, and urbanization) have *approached their saturation levels* and the effects produced by these forces on the further growth of protest activities extinguishes.
- **Democratization** - At \$20,000 threshold, there has already been a significant decrease in fully authoritarian regimes. Beyond this threshold, there are no longer any sharp declines in fully-autocratic regimes.

**Figure 2:** Share of autocracies per income groups (up to \$20,000), 1960-2014.



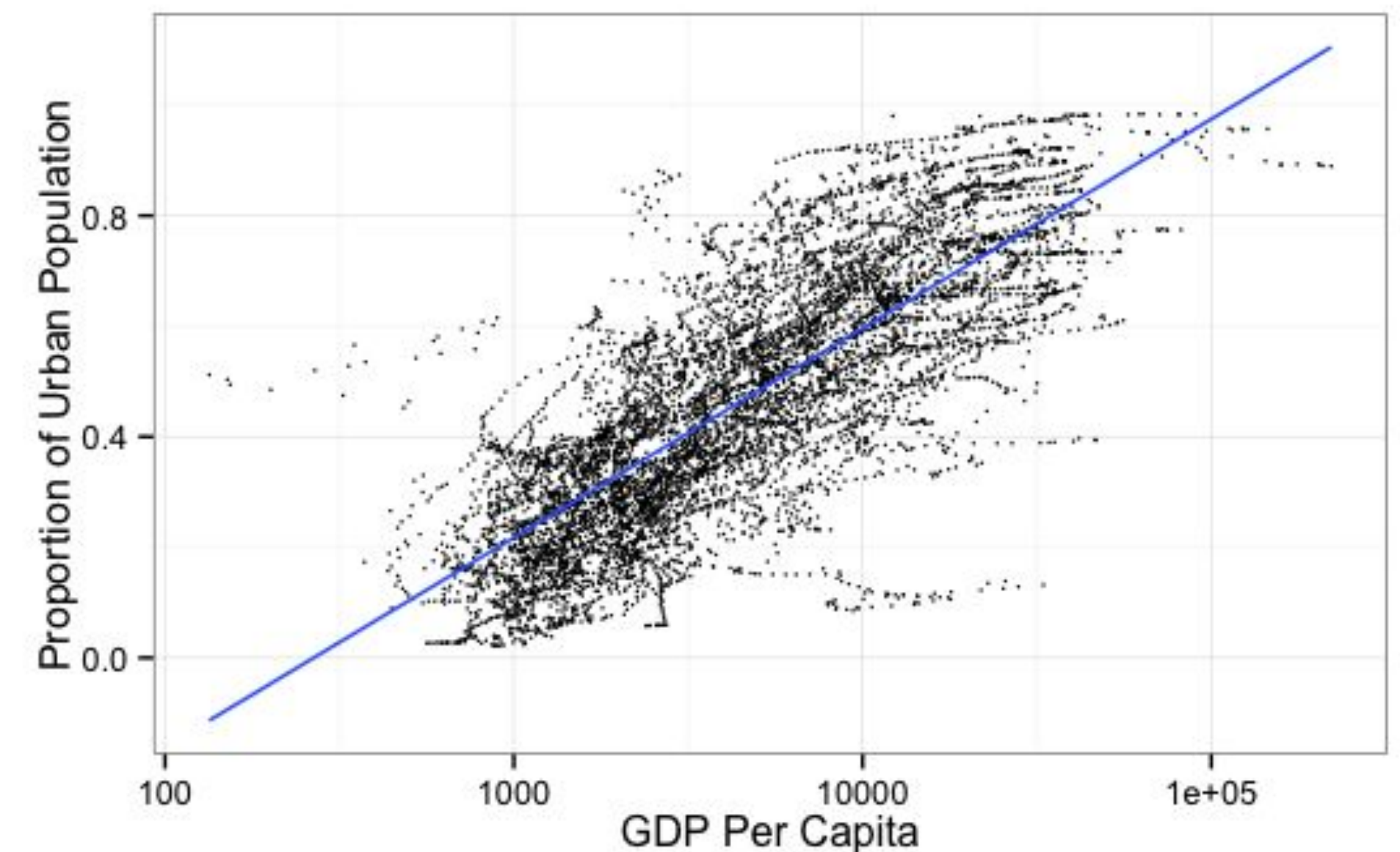
**Source:** Korotayev, Bilyuga, and Shishkina. (2018). p. 418.



# Conclusions - \$20,000 Threshold and the Saturation Effect

- **Urbanization** - All those who felt impelled to migrate from rural areas to the urban centers have more or less already done so by the \$20,000 threshold and further economic growth logically cannot increase these figures above one-hundred percent (**United Nations Department of Economic and Social Affairs: Population Division, 2018**).
- **Education** - In high-income countries, further economic growth is not accompanied by any significant increases in education levels measured by enrollment rates or mean years of schooling (**Jahan, 2018, p. 22**).
- Unlike the middle-income countries, there is no significant variance between the high-income countries in terms of primary school attendance or mean years of schooling.

**Figure 3:** Urbanization and GDP Per Capita





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