# The Politics of Urban Bias: Rural Threats and the Dual Dilemma of Political Survival

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**Abstract**

Urban bias in government policy is a common phenomenon in many developing countries. Bates (1981) has famously argued that the wish to industrialize, paired with the political clout of urban residents, results in distinctly anti-rural policies. Empirically, however, the strength of urban bias varies substantially across countries and over time. This paper explains this variation by developing an argument about a countervailing force to urban bias: the threat of a rural insurgency. The direction of urban and rural bias is a function of the political threat that geographically distinct groups pose to the survival of the central government. When the rural periphery lacks collective action capacity, urban bias emerges, but if there exists a credible threat of rural violence, urban bias is diminished. I test this proposition and competing explanations using data on net taxation in the agricultural sector, covering up to 55 low- and middle-income countries from 1955-2007. The results show a strong relationship between past territorial conflict (which proxies for credible rural threats) and lower levels of urban bias in the developing world. The findings are robust to alternative model specifications, measures, and sensitivity analyses.

# 1 Introduction

If governments enable agricultural markets to function well, supply the necessary financial and technological support, and create the necessary public infrastructure, large agricultural productivity and growth gains can be reaped (The World Bank, 2007). However, economists identified a distinct anti-rural bias in the policies of many developing countries from as early as the 1950s (Myrdal, 1958). Throughout the post-WWII period, governments around the world extracted resources from agricultural producers, interfered in market organization, and distorted prices – although such neglect of agricultural development is generally seen as one of the main obstacles to sustained development. Given the negative impact of stunted rural development, why do governments engage in these inefficient and possibly harmful policies?

While the early work of development economists perceived urban bias largely as a necessary by-product of the development process, e.g., Lewis (1954)[1], Michael Lipton (1977) and Robert Bates (1981) prominently outlined a political explanation of why political leaders favor urban over rural constituents. Governments extract revenue from rural cash crop farmers in order to finance urban industrialization projects and buy the support of the urban poor in order to secure their political survival. Hence anti-rural, pro-urban policies are a persistent feature of many developing economies, as long as political structures make rulers beholden to urban groups.

Empirically though, the degree of urban bias varies dramatically across contexts (Varshney, 1994). The economic success stories of East and Southeast Asia prominently feature government support of rural areas, which stands in complete contrast to the standard expectation of urban bias. There is huge variation in empirical measures of urban bias (e.g., overvaluation of the real exchange rate, differential public goods provision in rural versus urban areas, net taxation rates for different time periods and countries), and it is unclear what factors drive these differences (Bezemer & Headey, 2008; Anderson, 2009). Prior work

[1]Later work by Arthur Lewis recognized the importance of increasing agricultural productivity (Lewis, 1978).

has failed to provide a comprehensive test of existing explanations and failed to consider other sources of variation in urban bias.

While most critics of the urban bias account (e.g., Varshney (1994)) focus on the role of political institutions and democratic elections for understanding variation in urban bias, this paper focuses on a non-institutional form of political influence.[2] I argue that our understanding of anti-rural or urban bias can be improved by combining elements of Bates' account with the literature on rural insurgencies. In many low- and middle-income countries, normal citizens do not always have measurable influence over their government's actions via institutional channels, but have to hold leaders accountable by directly threatening their political survival outside the realm of traditional political interest mediation.

By conceptualizing agricultural policy as a form of redistribution between rural and urban areas to ensure the continued support of salient groups, I identify conditions under which urban bias is expected to be especially strong and the factors that lead to rural favoritism. When the countryside is politically weak, the threat of collective action by urban residents forces rulers to buy the support of the urban sector. Urban bias, especially that of capital cities, involves the provision of public goods, excess taxation of the countryside, and price subsidies for popular consumption goods in cities (e.g., food and fuel). Yet when rural citizens can credibly threaten collective violence and diminish the chances of the ruling elite's political survival, rulers need to limit the extraction of resources from the countryside, and urban bias is expected to be lower. Rulers have to balance this dual threat of urban unrest and a rural insurgency by selecting an appropriate level of redistribution between the center and periphery.

I test my argument and compare it to competing explanations, using data on one important dimension of urban bias: net levels of nominal and relative support for agriculture. The data capture differences between local and international prices for major agricultural goods in 55 low- and middle-income countries from 1955-2007. While these data do not

[2]In many high-income countries support for the agricultural sector is also believed to emerge through the collective action potential of the shrunken farm sector (Swinnen, 2010), but it is worth considering other threats to incumbent interests in the context of developing countries.

measure other forms of urban bias (e.g., different levels of public goods provision between urban centers and the countryside), they cover a crucial policy arena of huge importance to rural incomes. To proxy for the credibility of a rural threat, I rely on prior outbreaks of territorial conflict, assuming that governments update their threat assessment based on historical experiences. To address threats to causal inference I employ fixed-effects panel estimations to account for unobserved heterogeneity. In addition, I include a comprehensive set of potential confounding variables to minimize omitted variable bias. The analysis shows that a history of territorial conflict exerts a clear negative effect on urban bias, as measured by the relative rate of support for agriculture. Territorial conflict in the last five years is associated with, on average, 10 percentage points lower net taxation of the agricultural sector. The finding is confirmed in a number of robustness checks, which employ additional model specifications and sensitivity analyses. In comparison, other explanatory factors, like the level of development, political institutions, and trade openness receive much weaker empirical support.

This paper adds to the existing research in three main ways. First, it advances our theoretical understanding of anti-rural policies in the developing world by highlighting the link between urban bias and the political threat of the countryside. Second, I use data on the support of agriculture with broad coverage to assess the relevance of this argument. Moreover, the analysis also provides evidence of the importance of other, alternative explanations of the urban bias phenomenon. Third, the findings suggest that the political economy of rural development is more closely linked to questions of political violence than what has been suggested in the literature (Varshney, 1993, 1994).

The remainder of the paper is structured as follows. Section 2 discusses the puzzle of urban bias and reviews existing explanations. Section 3 develops the argument about the importance of rural threats for diminishing urban bias. Section 4 presents the research design, data, and main results. Section 5 concludes by discussing the implications of the main findings.

## 2 The Puzzle of Anti-Rural Bias

While an extensive literature in economics has outlined the positive effects of good agricultural policy for the development process and poverty reduction (Bravo-Ortega & Lederman, 2005; Kay, 2002; Diao *et al.* , 2006; Ravaillon & Datt, 2002; Ravaillon & Chen, 2004; Lipton, 2005) and highlighted the importance of government intervention (Binswanger & Deininger, 1997), the majority of the political economy literature that discusses agricultural policy choices has analyzed Organisation for Economic Co-operation and Development (OECD) countries. The predominant approach in the literature is inspired by Mancur Olson's theory of collective action and the formal interest group lobbying model of Grossman and Helpman (Olson, 1965; Grossman & Helpman, 2001). These approaches usually rely on assumptions of a functioning system of democratic representation, two-party competition, and the existence of an organized civil society with established channels of interest mediation. Empirical tests of these models, using data from the US and EU, have found limited support (Swinnen, 2010).

Much less theoretical and empirical attention has been given to agricultural policy determinants in the developing world. While the standard interest group and collective action models have been applied (de Gorter & Swinnen, 2002; Anderson, 2010), these studies often ignore the weakness of representative institutions, the uneven organization and influence of producer interests, and the overriding concerns of political leaders and bureaucrats in these countries. Theoretically, these models neglect the role of non-institutional threats in policy formulation, and empirically they ignore the divisive redistributive impact of agricultural and related policies across cities and the rural periphery.

Michael Lipton and Robert Bates (Lipton, 1977; Bates, 1981) have developed a different perspective on agricultural policy in developing countries.[3] Lipton's seminal book *Why Poor People Stay Poor* (1977) formulated the now-classic urban bias hypothesis: that "developing polities are so structured as to provide rural people with inefficiently *and* un-

[3]See Jones & Corbridge (2010) for a useful summary of the overall debate.

fairly few resources" (p.46, Lipton (1977), emphasis in the original). This bias emerges from (and is sustained by) the support of powerful elites and hurts the poorest segments of society. Urban bias appears in the form of stark disparities in consumption, earnings, and welfare between rural and urban citizens; the under-provision of capital in the agricultural sector; and a rural skill drain due to migration. Urban bias is also expressed in many government policies that funnel resources from the countryside to cities, e.g., excess taxation of agricultural goods, food subsidies in urban centers, and different levels of public goods provision in urban and rural areas. Lipton's fairly broad conceptualization of urban bias also includes what he calls 'price twists' (Lipton, 1977, p.287), policies that simultaneously lower market prices for agricultural goods and increase prices for urban goods sold in the countryside. Bates (1981) applies the idea of 'price twists' to the African context and argues that Africa's failed agricultural policy has been in part caused by adverse incentives for national political leaders. Producers of exportable cash crops are forced to sell their products at low prices to national marketing boards, which in turn generate substantial profits in international markets. This revenue is then used to provide public or club goods and control inflation in urban centers, fuel industrialization projects, and finance political patronage networks. Rural areas are disadvantaged in terms of stunted growth and reduced investment, lower public goods provision, and political repression.

According to Bates, the driving force behind such policies is the need for political survival. Governments use revenue to inoculate themselves against the possibility of urban unrest. Protesting urban workers either pose a direct threat to the regime or could trigger a coup, and hence have to be avoided at all costs (Casper & Tyson, 2014; Pierskalla, 2010). The African countryside, however, is politically less influential, due to low population density and a reduced threat of collective action (Bates, 1981; Herbst, 2000).

This work on urban bias is also related to research in the new economic geography tradition, which focuses on the determinants of urbanization – and specifically population over-concentration in primate cities. Overman & Venables (2005) argue that urbanization in the developing world arises as a result of several factors. On the one hand, cities offer

large productivity gains. The concentration of trade in one location deepens markets, minimizes transportation costs, allows the pooling of labor markets, and offers efficiency gains in public goods provision. On the other hand, urbanization (especially population concentration in capital cities) is also driven by a rent-seeking mechanism. Employers that have to navigate the regulatory environment of the developing state benefit from their physical proximity to administrative centers by getting better access to permits, ensuring the enforcement of contracts, and their potential access to public monies. Similarly, urban workers are attracted to cities not only for better jobs, but also because governments often offer a variety of transfers (e.g., food subsidies, better public goods and services) to the politically influential urban poor. An example of this logic is presented by Ades and Glaeser's (1995) account of urbanization processes in developing countries: proximity to the center of political power results in rents, which induces the population to concentrate inefficiently in the capital. Over-concentration of the population in the capital city is particularly common in non-democracies and can carry a growth penalty (Henderson, 2003; Henderson & Wang, 2007; Henderson, 2010). Yet concentrated cities can also provide checks on political power, for example by limiting corruption due to the increased ability of the local population to monitor their political leaders (Campante & Do, 2014).

Lipton and Bates' example of urban bias can also be likened to Latin American experiences with import substitution strategies and welfare state development, which were often implemented at the expense of the rural poor (Bruton, 1998; Haggard & Kaufman, 2008). High levels of Latin American land inequality put poor rural residents at a disadvantage for organizing powerfully along this cleavage and enabled the formation of a political alliance between rich landowners, capital, and urban labor, which protected industry and high-skill labor at the expense of the majority of rural citizens. Recent scholarship on the development of welfare state regimes in the developing world has similarly argued that in Latin America, the formation of relatively generous but narrow welfare programs that targeted urban groups was due to a coalition of capital and labor against rural interests (Haggard & Kaufman, 2008; Wibbels & Ahlquist, 2011). Indeed, the emergence of urban bias can be

understood as the by-product of Import-Substitution Industrialization (ISI) policies and the explicit efforts of developmental states to foster industrialization (Hirschman, 1968; Waterbury, 1999).

While this argument provides a powerful reason why one should expect urban bias to exist in many low- and middle-income economies, it is less able to explain varying levels of (and changes in) anti-rural and pro-urban policies. Empirical patterns of urban bias illustrate the dramatic differences across countries and time periods, which create a distinct research puzzle. For example, countries classically used as examples of urban bias in Africa have eliminated many distortionary and anti-rural policies in the wake of structural adjustment programs in the 1980s and 1990s (Anderson & Masters, 2009). In Latin America, rulers did not always align with urban labor without conflict – the repression of labor movements and the declining popularity of ISI illustrate that there is no iron law of urban bias. Compared to Latin America and Africa, many Asian governments exhibited fairly pro-rural policies in the post-WWII period. Governments in Taiwan and South Korea implemented sweeping pro-rural land reforms, while Malaysia, the Philippines, and Thailand engaged in decidedly pro-rural policies for certain periods, investing considerable resources in public health and education projects that benefited rural areas, while repressing urban labor movements (Danguilan, 1999; Doronila, 1992; McGuire, 2001; Haggard & Kaufman, 2008). Indonesia is well known for its generous support of rice farmers, despite the characteristic difficulty of organizing collective action among farmers (Simatupang & Timmer, 2008).

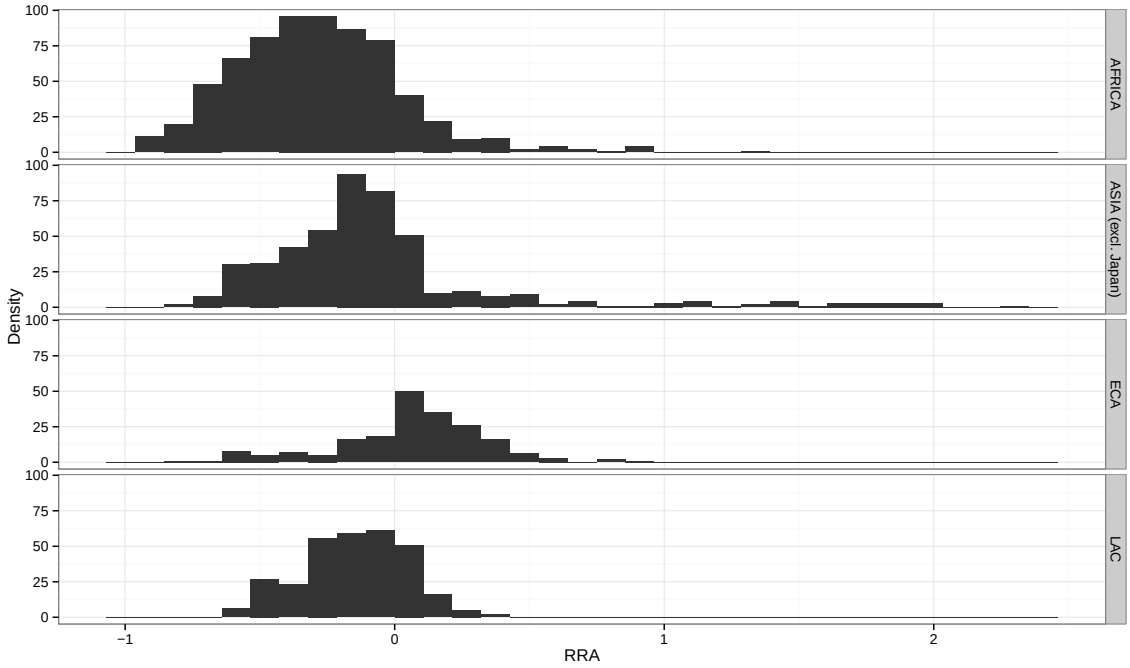
Given the multi-dimensionality of urban bias (e.g., taxation levels, public goods provision, access to services), it is difficult to quantify the overall extent of and changes in urban bias. Some studies have used the overvaluation of the real exchange rate or survey measures of public goods provision in cities and the countryside as an empirical measure (for a review of empirical studies, see Bezemer and Headey (2008)). One useful approach focuses more narrowly on the dimension of price distortions, but in turn offers better geographic and

temporal coverage. A World Bank project[4] estimated net levels of taxation for the agricultural and industrial sectors for a large set of low-, middle-, and high-income countries from 1955 to 2007 (Anderson, 2009). The World Bank defines the nominal rate of assistance (NRA) to agriculture as the percentage by which government policies have raised gross returns to farmers above what they would have been without government intervention. The measure is a trade-weighted average for the major crops in each country-year. The NRA is estimated by comparing local prices to world market prices (accounting for transportation and other costs) and attributing the remaining difference to government intervention. The NRA measure is a useful roundabout estimate of support for the agricultural sector as a whole. While it does not capture direct income transfers to rural citizens or the provision of public and private goods, it does cover various forms of input subsidies, tariffs, import/export quotas, and distortions of the exchange rate. The World Bank data also include information on the relative rate of assistance (RRA), which expresses the nominal rate of assistance to agriculture compared to manufacturing.[5] The RRA is a conceptually superior measure of urban bias, but has slightly worse data coverage than the simple NRA.

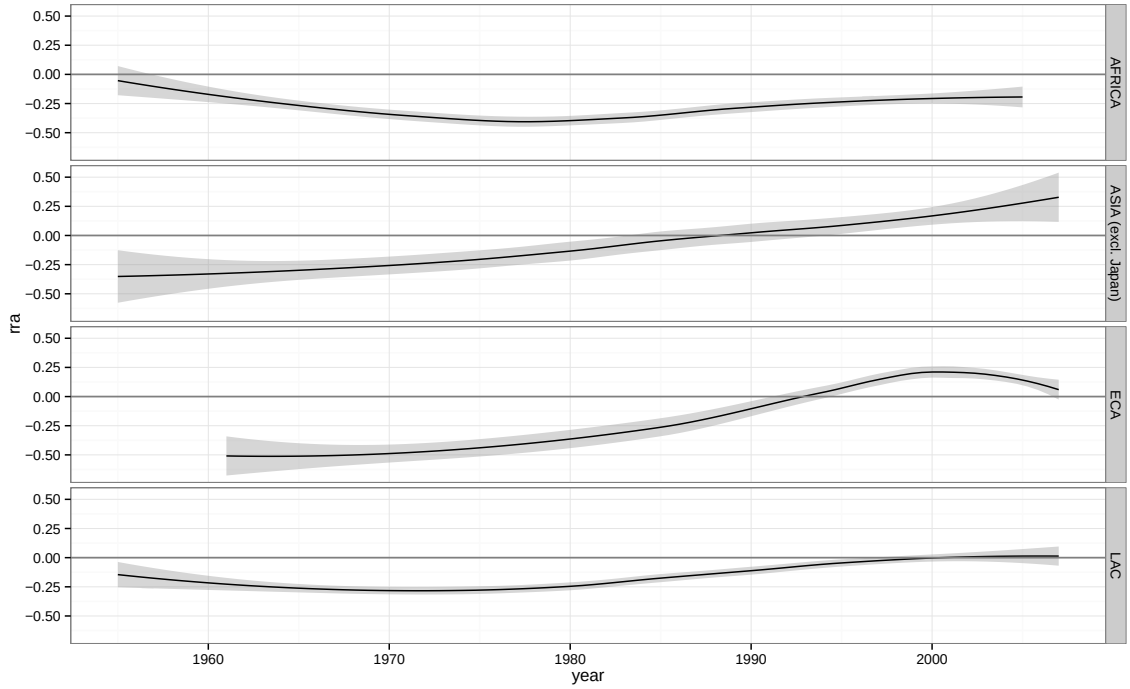
To illustrate the cross-country variation in urban bias, Figure 1 shows histograms and time series of relative support rates for agriculture for major world regions from 1955 to 2005. Negative values imply net taxation of agriculture and positive net subsidies relative to the manufacturing sector.

[4]The World Bank Project on Distortions to Agricultural Incentives (www.worldbank.org/agdistortions).

[5]It is formally defined as $RRA = 100[(1 + NRAag/100)/(1 + NRAnonag/100) - 1]$. NRAag is the NRA to agricultural production, and NRAnonag is assistance to non-agricultural production (NRAnonag).




(a) Histograms




(b) Time Series

Figure 1: (1) Histogram for the Relative Rate of Assistance to Agriculture (RRA) by region, ECA is Eastern Europe and Central Asia, LA is Latin America. (2) RRA over time.

The graphs show interesting spatial and temporal variation in urban bias. Africa has the highest level of urban bias on average, while Asian countries show the largest number of cases with high levels of support for the rural sector.[6] Note that even Africa has large intra-regional variation, with many countries increasingly supporting the agricultural sector, as indicated by the longer right tail of the distribution. Over time, urban bias has abated in Africa, Asia has experienced a gradual shift to pro-rural policies, and levels of agricultural support in Latin America seem to have remained fairly stable.

The standard account of urban bias was developed as an exercise in ideal type creation, based on Africa's experience (Bates, 1993), but does not automatically lend itself to explaining the variation within and across regions of the world. To make more sense of the empirical variation in anti-rural policies, we need to consider the conditions under which political leaders are beholden to urban or rural interests. Here, I focus on one possible explanatory variable to explain differences in urban bias: the strength of a rural threat.

## 3 Rural Threats and Urban Bias

In order to develop a better understanding of urban and rural bias, it is instructive to consider the whole spectrum of experiences in developing countries in Latin America, Asia, and Africa while holding on to Bates' important assumption about a regime leader's basic motivation: political survival. The recent experience of the Arab Spring and research on food riots in cities has confirmed that the ever-present possibility of urban unrest is a real threat to many regimes (Arezki & Brückner, 2011; Bellemare, 2011). When the danger of urban unrest is high, rulers will have to use resources to alleviate these pressures. Population concentration in the capital has been found to negatively affect regime stability and political survival (Do & Campante, 2007; Wallace, 2007b,a), which provides general support for the notion that urban actors are politically powerful. This argument assumes that citizens in the countryside face a comparative disadvantage in political collective ac-

[6] Overall, high-income countries have the highest rates of rural support on this measure.

tion. Often living dispersed across a large territory, lacking the necessary social and human capital to quickly solve collective action problems, and being constrained by landowners in their ability to organize, citizens in the countryside certainly face daunting challenges for political action (Bates, 1981; Herbst, 2000).

Given this asymmetry in political power, rulers have incentives to focus on the possibility of urban riots. Revenue-poor governments have to resort to taxing less politically influential productive factors in the economy to satisfy this protest constraint: e.g., rural producers of (ideally exportable) agricultural goods. This is the expectation of the standard urban bias argument. However, the problem with this strategy is twofold. First, there are economic limits to the degree to which urban bias can be financed through excess taxation of the countryside. Raising revenue through export taxes, government monopsonies, or other measures produces revenue that can be used to minimize the political threat of the urban population, but it also alters incentives for economic production. If farmers are unable to limit excess taxation through political means, they will adjust the production of heavily taxed goods by substituting crops or reducing production, even to the point of abandoning their land (Bates, 1981; Binswanger, 1989; Khan, 2001). This "weapon of the weak" (Scott, 1985) represents the indirect economic means through which taxation of the rural sector limits the amount of recoverable revenue by the government.

Second, the continuous extraction of economic resources and political repression of the countryside can create important grievances that eventually ferment into organized collective action, despite the initially higher costs. Taxation without representation and minimally responsive government can create political opposition in the countryside. Rural citizens might eventually demand a basic bargain that provides some form of government services in return for their supply of government revenue. Rather than assuming that citizens in the countryside are always powerless, we ought to consider the conditions under which this is more or less likely. For example, East and Southeast Asia's experience with rural insurgencies suggests that collective action in the periphery is possible and can (sometimes) force the government to initiate rural development programs (Kerkvliet, 1977;

Haggard & Kaufman, 2008; Muscat, 1990).

The large literature on civil wars also illustrates that rural violence is possible and sometimes a long-lasting threat to the government. Violent civil conflicts are often started and fought far away from the capital and urban centers (Wickham-Crowley, 1991; Buhaug & Rød, 2006; Buhaug *et al.* , 2009), and are motivated by economic grievances, political exclusion, or goals of self-determination (Collier *et al.* , 2003; Miguel *et al.* , 2004). The connection between state exploitation and repression and rural mobilization is an important theme in the scholarship on historical peasant revolts and uprisings. While many authors do not see a strong association between peasant violence and positive effects on the fate of the rural poor, the threat of rural groups – sometimes paired with the backing of powerful landlords – can have important consequences for central government policies (Binswanger & Deininger, 1997; Hawes, 1990; Jones, 1989; Migdal, 1974; Moore, 1966; Kerkvliet, 1977; Kriger, 1992; Paige, 1975; Wolf, 1969). For example, the experience of the Vietnam War has changed perceptions about the feasibility of a successful rural insurgency, even against an opponent with vastly more resources. A credible rural threat also does not require farmers and other rural citizens to join in violent collective action directly, as long as rebel groups can depend on their support to sustain an insurgency campaign (Kalyvas, 2006).

While citizens in the rural periphery might face higher costs of collective action due to their geographic and economic circumstances, it is also often much more expensive for the government to enforce central government policies and quell rural resistance. Engaging a rural insurgency can be very costly and tie up important resources, weakening the government's position against other threats. Quantitative work has highlighted an important feature of rural conflict: difficult terrain favors the outbreak (and increases the length) of civil wars (Fearon & Laitin, 2003; Buhaug & Rød, 2006). To engage an effective rural insurgency, governments need to invest in a capable military, which in turn might pose problems of military control and coups after the conflict is resolved (Acemoglu *et al.* , 2009).

To be sure, urban and rural threats vary in qualitative ways, for example differences in the immediacy of danger and the ability to punish. Rural violence poses a less direct threat to the central government, because insurgents often fight for more regional autonomy or independence, rather than to capture the capital. Rural insurgencies can extend over long time periods with varying degrees of intensity, and be very hard to stop; rebels may retreat into hard-to-reach territory. Engaging a rural insurgency is costly for a central government, and limits its ability to sustain the support of other elements in the ruling coalition. Riots in the capital represent a more direct threat, and are more feasible targets for repressive measures. Urban protesters are easier to track down and punish as long as the riots do not escalate to an insurmountable size.

Despite these differences, rulers interested in political survival have to balance opposition in both the urban and rural sectors. Understanding policies that contribute to urban bias as a form of redistribution between groups in society allows us to link the credibility of rural and urban threats to varying degrees of urban and rural bias. Urban bias should be especially strong where there is a politically weak countryside, and much lower when the potential of rural violence credibly threatens to tie up essential government resources in an open conflict.

Thailand's historical experience with a rural communist insurgency serves as a useful illustrative example. For long periods of time, Thailand's political system was strongly centered around the capital city of Bangkok (McVey, 2000). While the north and northeastern provinces in particular were neglected politically and economically, rulers in Bangkok always used the export taxation of rice producers and low public goods provision in the countryside as a means to concentrate economic benefits in the capital region. The revolution of 1932 ended the absolute monarchy and marked the beginning of the country's constitutional monarchy. Under the leadership of the military governments of Phibun (1938-1944, 1948-1957) and Sarit (1958-1963) Thai politics was conflictual, and several coups and counter-coup attempts were testament to the infighting between Bangkok's elites, who were largely oblivious to the growing discontent over lagging economic develop-

ment in the countryside (Chaloemtiarana, 2007). The Communist Party of Thailand (CPT) started organizing in the rural periphery and engaged in small-scale conflict in the 1960s. Receiving important support from China and Vietnam, the CPT was able to organize a strong rural support network that reached several million people and several thousand fighters, especially in the north and northeast. The reaction of the Thai government to this mounting rural threat is highly instructive. It combined military and police action with an extensive government initiative for rural development, which was strongly backed by the United States. (Christensen, 1993; Dixon, 1999). Especially in regions suspected of high levels of CPT support, the government started to invest in rural infrastructure and build roads, schools, and hospitals (Muscat, 1990). At the same time, agricultural pricing policies toward rice started to shift and alleviated some of the traditional extraction of economic surplus through export taxes (Choeun *et al.* , 2006; Forssell, 2009; Isvilanonda & Poapongsakorn, 1995). The combination of counter-insurgency and development policies eventually drained support for the CPT and by the 1980s had dramatically reduced the threat of an active rural insurgency. While the CPT was never really able to jeopardize the survival of the Thai state, the threat of rural collective action was enough incentive for Bangkok's elites to initiate important shifts in economic policies and build the foundation of a successful rural development program that marked the beginning of the pro-rural turn in Thai politics.

In summary, where the government has to raise revenue to satisfy urban citizens' domestic economic demands, the extent of urban bias is naturally limited by rival economic and political constraints from the countryside. Hence, I expect that the degree of urban bias will be a function of the credibility of rural collective action.

# 4 Empirical Analysis

For the empirical analysis I use the data on agricultural price distortions introduced above and restrict the sample to low- and middle-income countries to avoid conceptual stretching.

Price distortion plays an integral role in both Lipton's and Bates' work on urban bias, and has strong distributive consequences for rural incomes. Specifically, I use the RRA as my main proxy for urban bias and the NRA for robustness checks. While neither variable captures differences in public goods and services provision or other aspects of urban bias, they represent a useful opportunity to provide empirical insight into the urban bias phenomenon. The goal of the statistical analysis will be to relate the level of anti-rural bias in each country-year to the credibility of rural threats, accounting for a number of control variables.

The main independent variable of interest is the extent to which a rural threat jeopardizes the government's chances of political survival. Since measuring the credibility of rural collective action directly is infeasible or even impossible, I have to identify a proxy measure that indirectly captures rural citizens' ability to threaten violence. To do so, I assume that governments operate under incomplete information and update their assessments of rural threats based on new information. Once rural insurgency groups engage in violence, governments update their assessments of the countryside's resolve and capabilities. While not perfect, prior instances of rural violence indicate the feasibility of future rural violence to the current government. I construct a simple empirical measure to reflect this reasoning. I create a binary variable that records whether a territorial civil conflict took place in the five or ten preceding years for each country-year in the dataset, based on information from the Uppsala Conflict Data Program (UCDP) (Themnér & Wallensteen, 2014). In other words, for each year in each country, the dummy variable indicates whether a conflict took place in a moving window of the last five or ten years. The UCDP defines an armed conflict as "a contested incompatibility which concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths." (Themnér & Wallensteen, 2014). The fairly low threshold of 25 battle-related deaths is important, because it captures a number of low-intensity conflicts that are still costly for the central government to engage in. Out of the universe of armed conflicts, I focus on *territorial* conflicts to better capture the idea

of center-periphery cleavages and exclude cases of urban warfare (additional robustness checks include the broader definition of conflict). I select the 5- and 10-year windows to discount historical episodes of rural violence that are less indicative of current collective action capacities. Countries with recently active insurgencies are expected to institute fewer anti-rural policies than those without a recent history of rural violence. For an additional robustness check I also use the logged number of years since the last territorial conflict to measure the credibility of a rural threat.[7] Fewer years since the last conflict should be associated with higher levels of support for the agricultural sector.

Control variables are based on competing explanations in the literature or are selected because they might act as confounding variables. The first measure to consider is the size of the urban population. Larger urban populations might indicate an increased threat of urban riots or protests, which may increase urban bias. At the same time, as the share of the urban population increases, the collective action problem of the rural sector diminishes and we might expect more favorable policies toward the countryside. For the analysis I use the percentage of urban population taken from the World Development Indicators (WDI).

Prior empirical analyses of agricultural policy in developing and developed economies have identified several other variables of importance (de Gorter & Swinnen, 2002). I control for agriculture's value added as a percentage of GDP (from the WDI) to account for the importance of the agricultural sector in the economy. Small agricultural sectors are usually associated with stronger government support. I also control for the size of the manufacturing sector to account for the strength of urban industrial interests (also from the WDI). I control for logged real GDP per capita in constant prices from the Penn World Tables (Heston *et al.* , 2011)[8], because richer countries are often found to support agriculture more strongly – one possible mechanism for this is the reduced role of food expenditures at the household level (Baker, 2003). Using data on sector market shares in agriculture for each country-year from the World Bank Project on Agricultural Distortions, I also calculate

[7] It is unreasonable to think that a rural threat diminishes linearly over time.
[8] Measured in thousands of US dollars.

a Herfindahl concentration index for agriculture. The expectation is that countries with one dominant agricultural product will focus on extracting resources from that particular sector (Bates, 1981). I also control for the Polity 2 score, as reported by the Quality of Government data set (Teorell *et al.* , 2009) because it has been argued that democracy increases support for farmers (Varshney, 1994; Bates & Block, 2013). In addition, I consider trade openness as a control variable. A growing literature in economic geography argues that increased trade openness can magnify domestic regional inequalities, in turn affecting government policies on regional redistribution and support for the rural sector.[9] Trade openness is measured as imports plus exports as a percentage of GDP in constant prices (Penn World Tables (Heston *et al.* , 2011)). I also include a binary indicator for the presence of active International Monetary Fund (IMF) programs, which might imply that outside actors forced countries to remove price distortions (data come from Dreher (2006)). Finally, I control for yearly oil income per capita (Haber & Menaldo, 2011) to proxy the amount of available non-tax revenue. Higher non-tax revenue might allow governments to buy off the whole population in order to avoid urban, as well as rural, resistance (Basedau & Lay, 2009). Summary statistics and a list of countries in the full sample are available in the Supplementary Appendix.

### 4.1 Estimation Strategy

The data cover a sample of 55 low- and middle-income countries from 1955-2007, which represents an unbalanced panel of time-series cross-sectional observations, with countries as units. The analysis will rely on ordinary least squares panel data models that relate the dependent variable to the rural threat measure in the following way:

$$y_{it} = \alpha_i + time_t + \mathbf{x_{it}}'\beta + \delta \cdot \text{threat}_{it} + \epsilon_{it}$$

[9] See, for example, Krugman (1991).

where $y_{it}$ is the relative or nominal rate of assistance for agriculture in country $i$ in year $t$, $\alpha_i$ represents country fixed effects, $time_t$ decade or year effects, and $\mathbf{x_{it}}'\beta$ captures the effect of the control variables. The parameter $\delta$ captures the effect of a credible rural threat. The parameter $\epsilon_{it}$ stands for an independent error term. All models cluster standard errors at the country level to correct for heteroskedasticity and arbitrary serial correlation. The inclusion of fixed effects controls for any unobserved, time-invariant factors at the country level that affect urban bias (e.g., the effects of unfavorable capital city location, country size, and other geographic characteristics). The inclusion of decade or year effects controls for temporal shocks common to all countries in the sample.

### 4.2 Results

Table 1 reports estimated coefficients and clustered standard errors for the RRA as dependent variables with the full set of control variables. Models 1 and 3 include decade fixed effects, while Models 2 and 4 include year fixed effects.

First, evidence for the established hypotheses in the literature is mixed at best. I find only weakly statistically significant effects for logged GDP per capita. The common finding that higher-income countries support the rural sector more strongly is primarily driven by differences between low- and high-income countries, rather than variation within developing economies. The Polity 2 score is estimated to be positive in three of the four models, but fails to reach statistical significance at standard levels. This does not lend support to the idea that extending voting rights to the wider, often rural, population produces more pro-rural policies than autocratic policies (Varshney, 1994). The size of the agricultural sector, on the other hand, has a negative effect, which is statistically significant below the 5% and even the 0.1% level, providing support for the classic collective action argument. Similarly, a larger manufacturing sector is also associated with less support for agriculture, indicating the increased influence of industrial interests.[10] The level of product

[10] A large industrial sector in terms of value added does not necessarily imply the same degree of collective action problems as in the agricultural sector, since the owners of capital are generally a smaller share of the population.

Table 1: Determinants of Urban Bias

| | (1) RRA | (2) RRA | (3) RRA | (4) RRA |
|---|---|---|---|---|
| log(GDP per capita) | 0.0179 | 0.0254 | 0.0292 | 0.0379 |
| | (0.0512) | (0.0516) | (0.0517) | (0.0522) |
| Polity 2 | 0.000629 | 0.0000764 | 0.000292 | -0.000237 |
| | (0.00195) | (0.00202) | (0.00203) | (0.00210) |
| Agriculture, Value Added | -0.00941*** | -0.00874*** | -0.00923*** | -0.00853*** |
| | (0.00162) | (0.00158) | (0.00167) | (0.00157) |
| Manufacturing, Value Added | -0.00648** | -0.00625* | -0.00634* | -0.00619* |
| | (0.00235) | (0.00240) | (0.00235) | (0.00241) |
| Agricultural Concentration | -0.335* | -0.337* | -0.321* | -0.319* |
| | (0.137) | (0.144) | (0.137) | (0.144) |
| Urbanization | 0.00709** | 0.00651** | 0.00721** | 0.00679** |
| | (0.00206) | (0.00230) | (0.00217) | (0.00237) |
| Trade Openness | -0.000739+ | -0.000824 | -0.000718 | -0.000796 |
| | (0.000435) | (0.000524) | (0.000441) | (0.000521) |
| Active IMF Program | -0.0179 | -0.00708 | -0.0150 | -0.00606 |
| | (0.0783) | (0.0778) | (0.0782) | (0.0786) |
| log(Total Oil Income per capita) | -0.00538 | 0.000548 | -0.00653 | -0.0000758 |
| | (0.00909) | (0.0102) | (0.00999) | (0.0111) |
| Territorial Conflict, 5 yrs | 0.118*** | 0.118** | | |
| | (0.0304) | (0.0346) | | |
| Territorial Conflict, 10 yrs | | | 0.104** | 0.108** |
| | | | (0.0305) | (0.0346) |
| Constant | -0.230 | -0.334 | -0.340 | -0.357 |
| | (0.421) | (0.439) | (0.423) | (0.424) |
| Decade FE | ✓ | - | ✓ | - |
| Year FE | - | ✓ | - | ✓ |
| Observations | 996 | 996 | 996 | 996 |
| Adjusted $R^2$ | 0.412 | 0.425 | 0.406 | 0.420 |

Clustered standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

concentration in the agricultural sector (Agriculture Herfindahl) also has a negative effect and is statistically significant below the 5% level. Higher levels of urbanization imply stronger support for the rural sector, which is statistically significant below the 1% level, again suggesting the relevance of collective action problems in the rural periphery. The coefficient for trade openness is statistically significant at the 10% level in Model 1, but fails to attain significance in the remaining models. Similarly, active IMF programs and oil income per capita are insignificant across all four specifications.

Turning to the effects of territorial conflict, the coefficient of the 5-year measurement is positive and statistically significant below the 0.1% and 1% levels in Models 1 and 2. For the alternative 10-year measurement, the coefficients shrink somewhat in size, but are still positive and statistically significant below the 1% level. Taking Model 2 as a reference, the size of the coefficient also implies substantive importance. Having experienced any territorial conflict in the last five years implies a relative rate of support for agriculture that is about 12 percentage points higher than without any such conflict.

To further probe this finding, I repeat the analysis of the RRA measure in Table 1, but now focusing on all armed conflict in the last five or ten years. Table 2 reports the coefficient estimates and associated standard errors. Models 1 and 2 of Table 2 clearly confirm the initial finding. When using all conflicts to construct the measure of rural threat, the estimated coefficient drops in size by more than half, but the effect is still positive and statistically significant below the 5% level. The 10-year version of the variable is only statistically significant below the 10% level. This slight drop in the strength of the finding is to be expected, because this measure includes several armed conflicts that do not necessarily represent a threat from the rural periphery.

I collapsed the history of territorial conflict into a binary measure for ease of interpretation, but a continuous measure produces substantively identical findings. Using the logged number of years since the last territorial conflict to measure the credibility of a rural threat produces a negative and highly statistically significant coefficient across Models 1-4

Table 2: Determinants of Urban Bias, All Conflict

| | (1) RRA | (2) RRA | (3) RRA | (4) RRA |
|---|---|---|---|---|
| log(GDP per capita) | 0.0352 | 0.0438 | 0.0437 | 0.0537 |
| | (0.0531) | (0.0524) | (0.0534) | (0.0525) |
| Polity 2 | 0.0000634 | -0.000482 | 0.000111 | -0.000438 |
| | (0.00189) | (0.00197) | (0.00194) | (0.00200) |
| Agriculture, Value Added | -0.00945*** | -0.00875*** | -0.00918*** | -0.00840*** |
| | (0.00155) | (0.00149) | (0.00164) | (0.00160) |
| Manufacturing, Value Added | -0.00626* | -0.00615* | -0.00646** | -0.00634* |
| | (0.00234) | (0.00239) | (0.00230) | (0.00235) |
| Agricultural Concentration | -0.360* | -0.358* | -0.350* | -0.349* |
| | (0.142) | (0.150) | (0.144) | (0.152) |
| Urbanization | 0.00620* | 0.00560$^{+}$ | 0.00630* | 0.00570$^{+}$ |
| | (0.00252) | (0.00287) | (0.00258) | (0.00290) |
| Trade Openness | -0.000418 | -0.000456 | -0.000421 | -0.000443 |
| | (0.000479) | (0.000555) | (0.000482) | (0.000550) |
| Active IMF Program | -0.0153 | -0.00993 | -0.0125 | -0.00299 |
| | (0.0733) | (0.0737) | (0.0734) | (0.0736) |
| log(Total Oil Income per capita) | -0.0123 | -0.00574 | -0.0130 | -0.00678 |
| | (0.0102) | (0.0112) | (0.0103) | (0.0116) |
| Conflict, 5 yrs | 0.0483* | 0.0517* | | |
| | (0.0212) | (0.0224) | | |
| Conflict, 10 yrs | | | 0.0480$^{+}$ | 0.0536$^{+}$ |
| | | | (0.0259) | (0.0270) |
| Constant | -0.339 | -0.448 | -0.423 | -0.551 |
| | (0.426) | (0.427) | (0.429) | (0.427) |
| Decade FE | ✓ | - | ✓ | - |
| Year FE | - | ✓ | - | ✓ |
| Observations | 996 | 996 | 996 | 996 |
| Adjusted $R^2$ | 0.397 | 0.411 | 0.397 | 0.412 |

Clustered standard errors in parentheses

$^{+}$ $p < 0.10$, $^{*}$ $p < 0.05$, $^{**}$ $p < 0.01$, $^{***}$ $p < 0.001$

(see the Supplementary Appendix for a detailed regression table). This provides further evidence that a recent history of rural violence (i.e., fewer years since the last conflict) is associated higher levels of support for the agricultural sector relative to manufacturing.

### 4.3 Additional Robustness Checks and Sensitivity Analysis

I implement a number of additional robustness checks to ascertain the reliability of the results. Detailed tables are available in the Supplementary Appendix. In the following I will simply summarize the main findings. The first robustness check uses an alternative dependent variable. While the RRA is conceptually the closest measure available to capture the degree of urban bias, it also relies on estimates of support for the manufacturing sector. The NRA instead simply captures absolute support for the rural sector. While conceptually inferior, the NRA has better data coverage and provides a useful opportunity to test the robustness of the main finding. I estimate the models in Table 1 using the NRA as the dependent variable, confirming the initial results.

A second robustness check adds the level of overvaluation in the exchange rate as an additional control variable. An overvalued exchange rate allows the (usually richer) urban consumers the cheaper consumption of foreign goods, offering an alternative pathway to engender the support of the urban sector. At the same time, exchange rate movements might be affected by prior domestic conflict. To probe for potential omitted variable bias, I re-estimate the models in Table 1 using the overvaluation of the exchange rate as an additional predictor (data from the WDI). Doing so has no impact on the statistical significance of the territorial conflict variable.

Third, population density might be an important omitted variable. As Varshney (1994) points out, India might have shown more support for the rural sector not only because it introduced representative political institutions before industrialization, but also because of higher levels of rural population density. If population density correlates with rural violence and agricultural pricing policies, I might be overestimating the effect of actual violence.

To safeguard against this possibility I re-estimate the models in Table 1 including overall population density and rural population density as controls. Neither variable changes the sign or significance of the historical conflict variable or exerts any direct effects. This suggests that there is more to rural collective action, in terms of representing a credible threat, than mere population density.

Fourth, I also repeat the main estimations including a lagged dependent variable. Including a lag in the context of a fixed-effects model induces Nickel bias, but might improve the modeling of the dynamics of the RRA. The lagged dependent variable has a statistically significant and positive effect ($< 1$) and shrinks the coefficient of the conflict variable to about half its prior size. Nonetheless, the coefficient for territorial conflict remains positive and statistically significant below the 5% level.

The last robustness check engages the question of endogeneity. Although the use of country and time period fixed effects controls for a number of unobservable factors, it could still be the case that other unobserved factors or reverse causality are generating the observed association between territorial conflict and lower urban bias. Reverse causality is a concern if a policy of urban bias generates large enough grievances to trigger the outbreak of violence. This is certainly plausible, but is unlikely to produce the main finding of the paper. First, for all models I rely on past incidence of conflict to avoid direct simultaneity. Second, if reverse causality were driving the finding, it would generate a *negative* correlation between the RRA measure and territorial conflict– the opposite of what is observed in the data. Hence, at most, reverse causality creates a downward bias on the coefficient for prior territorial conflict, implying that the true causal effect of a credible rural threat is even larger.

Omitted variable bias, however, is still a lingering concern. Despite the set of control variables and the country and year fixed effects, there might exist unobserved variables that are driving both the level of urban bias and past incidence of conflict. A typical approach to addressing this concern would be to identify an exogenous source of variation

in prior conflict and implement an instrumental variables estimation. For this approach to identify a causal effect, though, four assumptions need to be satisfied: (a) exogeneity, (b) the exclusion restriction, (c) strength, and (d) monotonicity (Angrist & Imbens, 1994). Finding a time-varying instrument that fulfills these four assumptions for the prior conflict measure is nearly impossible. For one, the established conflict literature has identified few variables with any predictive power (Fearon & Laitin, 2003; Ward *et al.* , 2010). Moreover, many of the variables that show statistically significant effects on armed conflict (e.g., GDP per capita) lose explanatory power when the sample is restricted to developing countries. Lacking a set of plausible instruments, it is still possible to probe the degree of omitted variable bias that is necessary to invalidate the main finding. To do so, I perform a sensitivity analysis following a procedure outlined by Bellows & Miguel (2009). This approach requires comparing the estimated coefficient for prior conflict from the main specification to a set of "sparse" regression models with fewer controls. Taking these coefficients, I calculate the ratio $\frac{\hat{\beta_{full}}}{\hat{\beta_{sparse}}-\hat{\beta_{full}}}$. This ratio increases with the size of the estimated (conservative) regression coefficient for the full model and decreases in the differences between regression coefficients, i.e., the degree to which observable factors change the estimate. The higher the ratio, the larger the selection in unobservables must be to explain the estimated effect. Bellows & Miguel (2009) suggest a value of 1 (100% of the variation) as a rule-of-thumb threshold, below which selection based on unobservables could cast doubt on the results. I calculate the ratio based on a comparison of the full regression model to a model with just country and year effects, a model with just time-varying control variables, and a model with no controls. The ratio varies between 1.19 and 7.57, indicating that unobserved factors would have to explain 120-760% of the variation explained by observables to completely overturn the main finding. Despite the lack of a proper instrumental variable, this suggests that any remaining omitted variable bias is negligible.

# 5 Conclusion

This paper describes an important puzzle in the political economy of development: governments vary in their treatment of the rural periphery. Existing explanations focus on rulers' political incentives to align themselves with powerful urban groups at the expense of rural residents. However, this explanation struggles to account for the rich gradation of urban bias and cases of rural bias. I propose a simple extension of Lipton's and Bates' (1981) logic that draws on the literature on rural insurgencies. While rural collective action faces inherent challenges, it is not true that the countryside is always politically weak. A large literature on armed conflict and insurgencies illustrates the potential for armed resistance to generate substantial costs for the government. Even if rural violence cannot directly threaten leaders' political survival, credibly threatening the disruption of government policies and tax extraction can be enough to limit urban bias.

The empirical analysis focuses on one important dimension of urban bias: price distortions in the agricultural sector. I utilize data on agricultural price distortions in a broad set of countries from 1955 to 2007 to test the main implication of the argument by measuring the credibility of a rural threat via prior territorial conflicts. By controlling for a number of rival arguments and including fixed effects, I document a clear link between urban bias and rural threats: countries with a recent history of rural violence exhibit lower levels of urban bias than those without such a history. This finding is robust to the inclusion of a number of important control variables, and is sustained over various measures and estimation approaches. A sensitivity analysis suggests that any remaining omitted variable bias is unlikely to be large enough to explain the size of the estimated effect.

This paper offers several contributions to the literature. First, it highlights the importance of developing a better understanding of rural development policies and their variation around the world. Agricultural policies are a crucial component of development, and understanding the underlying political economy deserves additional attention. Second, this paper builds on existing theories to make a novel theoretical claim that links rural violence

to urban bias. As such, it connects two disconnected bodies of research to develop a better understanding of an important policy outcome. Third, it offers quantitative evidence to support this claim, adding to the small body of literature dealing with urban bias (Anderson, 2010). In addition to documenting the effect of rural violence on urban bias, the empirical analysis also provides useful evidence with regard to the broader determinants of agricultural policies and urban bias in the developing world. The results suggest that, apart from rural threats, the size and concentration of the agricultural sector are important correlates of urban bias, while the level of democracy, GDP per capita, and economic openness have limited explanatory power.

Despite these contributions, open questions remain. For example, while data on agricultural pricing distortions offer a unique empirical insight into the urban bias phenomenon, it is also limited. As Lipton himself points out, although nominal price distortions have been reduced as part of structural adjustment programs, urban-rural inequalities might not actually have been diminished, because governments have other redistributive policy tools at their disposal (Eastwood & Lipton, 2000). Hence, future work ought to exploit more detailed data on sub-national variation in public goods and services provision to further unpack the urban bias phenomenon. Work on urban-rural divisions in China, for example, suggests that the degree of urban or rural bias is often a function of the policy domain being analyzed (Nolan & White, 1984). Moreover, it might be worthwhile to move from the binary distinction of urban vs. rural bias to a more nuanced understanding of regional bias and divisions within the rural and urban sectors. Doing so would allow us to consider the implications of political and economic geography more seriously, and might offer important insights for various issues, ranging from distributive struggles and political violence to questions of regime change and democratization.

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