

# Labeling Laggards and Leaders: International Organizations and the Politics of Defining Development\*

Lindsay R. Dolan<sup>†</sup>

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The most recent version of this paper and the Supplementary Information are available at [www.lindsayrdolan.com/research](http://www.lindsayrdolan.com/research).

## Abstract

Many scholars view international organizations primarily as vehicles through which powerful states distribute resources. But they also influence the world through the ideas embedded in their day-to-day operations. This paper argues that bureaucratic classification systems change how classified countries are treated by elites in the global economy. Arbitrary changes in a country's classification significantly affect high-stakes decisions such as aid, investment, and democracy ratings. After proposing two mechanisms — cognitive and strategic — by which classifications influence elite behavior, I show with cross-national data from 1987 to 2015 that a country's World Bank income classification corresponds to the rewards it receives from actors who are susceptible to one or both of these mechanisms. These dynamics even lead classified countries to manipulate their income data around these thresholds. The paper identifies and explains a relatively unexamined power of international organizations in a context where its deployment matters profoundly for developing countries.

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<sup>†</sup>Fellow, Niehaus Center for Globalization and Governance, Princeton University. Assistant Professor, Department of Government, Wesleyan University. E-mail: [lindsayrdolan@princeton.edu](mailto:lindsayrdolan@princeton.edu)

In 2015, commuters in Washington, DC, walked by a new series of billboard ads, prominently featuring a Starbucks-style disposable coffee cup with a World Bank logo. The caption reads, “\$2.86 per day is NOT middle income. Raise the MIC!” The message of this cryptic image is that the World Bank’s income classification system should be changed. The World Bank currently defines a MIC as one in which a person earns at least \$2.86 per day, equivalent to the price of a cup of coffee and, in the view of this campaign, too low to be considered middle income. The Raise the MIC group, which has organized petitions and protests in addition to the ads, argues that this low threshold allows needy countries to be perceived as no longer poor, limiting the assistance they can obtain in the international community.<sup>1</sup> In short, the movement faults the World Bank for producing the classification system that others use in their operations.

The Raise the MIC campaign shines a spotlight on an important power of international organizations (IOs), the ability to classify. The World Bank’s income classification is just one of many systems mapping the landscape of global development. States may belong to the Least Developed Country (LDC) category, the Fragile and Conflict Affected State (FCAS) category, the Highly Indebted Poor Country (HIPC) category, and others. Each category is created and maintained by a prominent international institution that devotes valuable staff and resources to ensuring that the category remains fit for purpose. But these classifications do not just describe the world — they also change it in material ways.

Why are these classifications so powerful? As I will show, these systems often communicate no private or expert information but nonetheless sway the decisions of even well-informed actors. I develop two theoretical mechanisms by which classifications may be of use to so many audiences. Cognitively, classifications act as heuristic devices that simplify complex and often contradictory information and ease the process of decision-making. Strategically, by making use of classifications created by a third-party actor, elites can justify their decisions to external audiences.

Consistent with the predictions of this theory, I show that classifications exert strong effects on actors who are either susceptible to cognitive biases or are accountable to external audiences. Many susceptible actors are responsible for high-stakes decisions such as aid, investment, and ratings. I will present statistical evidence to illustrate that when countries move into categories indicating a higher level of development, those countries receive significantly less foreign aid from a variety of international financiers. They also, however, enjoy new privileges in the global economy, including improvements in evaluations of their credit-

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<sup>1</sup>Letter addressed to Jim Yong Kim, president of the World Bank, co-signed by 520 organizations. <http://raisethemic.org/wp-content/uploads/2016/01/World-Bank-Packet.pdf>

worthiness and democracy. Moreover, these effects exist even when there is *no real change* in the country's economic or political situation; rather, it has been reclassified for mundane reasons. This means that the institutions producing these classification systems have great ability to influence interactions between important actors in the international economy in ways that materially affect the lives of millions living in poverty.

Academic scholarship more often sees IOs as exercising power through resources rather than through ideas.<sup>2</sup> Numerous works seek to understand who wields power in IOs by studying patterns in the programs and loans at their command. In particular, studies of the World Bank and the International Monetary Fund demonstrate greater lending and better terms to recipients with greater representation on their Boards.<sup>3</sup>

Without disputing the importance of material power, this paper argues that IOs do more than distribute resources. They craft powerful narratives that, in turn, shape how countries are treated by other influential economic and political actors. Deliberately or inadvertently, IOs institutionalize their ideas about the world through their rules, language, and day-to-day interactions.<sup>4</sup>

My project seeks to understand this bureaucratic exercise of IO power by focusing on classification. I define classification as the organization of information by creating categories and sorting objects into them. While classifications may be ad hoc, I focus on those that are systematized according to a set of rules. Michael Barnett and Martha Finnemore have called classification “one of bureaucracy’s greatest sources of power,” but we have little understanding of its usefulness, limitations, or deployment.<sup>5</sup> IO bureaucracies are not the only ones who classify: Scott (1998) similarly argues that states extend their bureaucratic reach by making their populations “legible” to the state through censuses, mapping, and records, which classified individuals as “citizens.” Classification and governance, whether domestic or international, are intimately related.

A longstanding tradition in political science focuses on the informational role of international institutions. Regimes reduce information asymmetries, creating mutually beneficial arrangements.<sup>6</sup> By providing information about state behaviors, IOs empower other political actors to enforce governmental compliance with international agreements.<sup>7</sup> Collecting and publicizing economic, health, and environmental statistics

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<sup>2</sup>This is when scholarship views IOs as independently powerful at all. Many dismiss IOs as mere reflections of an underlying distribution of power. See Waltz (1979); Mearsheimer (1994).

<sup>3</sup>See Kuziemko and Werker (2006); Dreher et al. (2009); Kaja and Werker (2010); Kersting and Kilby (2016).

<sup>4</sup>See Barnett and Finnemore (1999, 2004); Chwieroth (2009); Autesserre (2014).

<sup>5</sup>See Barnett and Finnemore (1999, 711).

<sup>6</sup>See Keohane (1984).

<sup>7</sup>See Dai (2007); Bütthe (2012).

facilitates states' individual and collective abilities to craft policy.

But classifications are not just pieces of data — they are stories about data. Classifications organize or distill information, but in so doing, they identify certain features as more important or essential than others, and are therefore information-reducing rather than information-increasing. Political economists and economic sociologists have previously argued that ideas play a causal role in motivating economic behavior and contribute to financial crises.<sup>8</sup> According to MacKenzie (2006), economic models are an “engine not a camera,” driving behaviors rather than summarizing them. Narratives about how the world operates can be self-fulfilling and themselves cause the phenomena they describe. I argue that classifications exhibit this dynamic. Through development classifications, IOs tell a story about what constitutes development and coordinate the behavior of international actors; consequently, graduations from “low income country” status are often celebrated by national news outlets as markers of success. In this way, classifications allow the beliefs and ideas of an IO to proliferate beyond its walls and change the world.

My work joins a growing literature on the importance of labels and indicators in political science.<sup>9</sup> For example, previous studies have found that investors' risk perceptions are affected by a country's club membership and by the other peer countries with which it is grouped.<sup>10</sup> Classifications are also part of a broader array of indicators, rankings, and ratings, each purporting to evaluate a country's level of corruption, human rights record, level of democracy, debt sustainability, and other features of interest.<sup>11</sup> Frequently these indicators have been designed to pressure countries to comply with international norms and rely on politically biased data.<sup>12</sup> Perceiving the benefits of desirable indicators, governments adopt policies that will change their scores or petition the ratings organizations directly.<sup>13</sup>

Yet despite growing awareness of the politicization of these metrics, we lack a theory to explain why they occur. We know that indicators are powerful, but why? Büthe (2012) suggests that there exists both a supply and demand for indicators. My argument builds on this insight by exploring why various actors demand indicators. I draw on strategic and psychological theories to argue that actors who are susceptible to cognitive biases or accountable to external audiences will defer to classifications produced by IOs. I support

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<sup>8</sup>See Rodrik (2013); Shiller (2017); Blyth (2002).

<sup>9</sup>These phenomena are known as “global benchmarking” (Broome and Quirk 2015), “ratings and rankings organizations” (Cooley and Snyder 2015), “global power assessments” (Kelley and Simmons 2016), and “scorecard diplomacy” (Kelley 2017).

<sup>10</sup>See Gray (2013); Brooks et al. (2015).

<sup>11</sup>Classifications often are high-profile simplifications of more nuanced indicators (Davis et al. 2012, 7). Cooley and Snyder (2015, 16) note that “in many cases, it is the classification or labeling of their country by ratings and rankings organizations that state officials find more objectionable than the country score itself.”

<sup>12</sup>See Kelley and Simmons (2015, 2016); Morse (2017); Bush (2017).

<sup>13</sup>See Cooley and Snyder (2015); Kelley and Simmons (2015); Carnegie and Samii (2017); Buntaine et al. (2017).

these predictions with evidence from the domain of development. Exploiting the exogeneity of thresholds separating categories, I show with cross-national data from 1987 to 2015 that a country's World Bank income classification corresponds to its treatment by donors, investors, and raters. In response, countries even manipulate their income data around these thresholds. This argument helps us to understand, more broadly, which classifications matter and their effects. I conclude by discussing how these dynamics motivate IOs to provide certain types of indicators.

## 1 Theory

Why would classifications produced by an IO influence the behavior of other actors in the international economy? The answer is not obvious. Classifications often do not provide any information that is not already available. Take, for example, a focus of this paper, the World Bank income classification system under fire from the "Raise the MIC" campaign. In 2013, Bangladesh was classified as a LIC because its national income per capita was \$900, below the threshold of \$1,045 that separates LICs and (L)MICs. (Malawi, at \$270, was also included in this category.) In 2014, however, its income was \$1,080, above the threshold and qualifying it as a (L)MIC, a category which also included Armenia at \$3,810. Other than inflation adjustment, no information besides income per capita is used to determine its classification. The very same income data used to classify economies is widely available through the World Development Indicators, and, as I explain in greater detail below, the thresholds separating the categories were arbitrarily selected. Consequently, an observer can learn much more by looking at Bangladesh's raw income per capita than at its classification, by which metric Bangladesh graduates from Malawi's category to Armenia's in a single year.

Nor do these classifications merely clarify for non-expert consumers. While technical expertise is a leading explanation for the authority of regulatory agencies, many classifications address contested concepts like democracy or development that are imbued with subjective meaning. In fact, I will show that international observers are sensitive to these classifications, even when they know the underlying information that determine them and are themselves expert in the topics at hand.

Still other scholars of IOs may simply view classifications as rules that states agree to in order to coordinate their behaviors. According to regime theory, as developed in Keohane (1984), IOs are rationally formed by self-interested states who wish to change the international environment in ways that allow them to co-

operate. Institutions are therefore clusters of rules and norms that states follow to reap long-term efficiency gains. But it is not clear that the coordination created by classifications is intended or even desirable. These systems typically emerge in IOs decades after their inception, suggesting that classifications are not critical devices essential to restraining otherwise reckless state behavior. In the aid landscape, overly coordinated behaviors are actually problematic: when donors “herd” around preferred recipients, others are neglected.<sup>14</sup> But the broader intuitions of regime theory, particularly the observation that states are boundedly rational (incapable of processing infinite information) are consistent with my account.

In this section, I offer a theoretical framework to account for the disproportionate power these classifications acquire over elite political and economic actors, whom I broadly call “international observers.” I offer two mechanisms, outlined below. Actors can be susceptible to either mechanism, none, or both, but separating them improves our ability to explain variation in what kinds of actors will likely use a certain classification. Sometimes classifications are not used by the actors they are intended for. Understanding why certain actors rely on which classifications can help their creators to better anticipate how their systems will be used and scholars to better explain these international dynamics.

## 1.1 Cognitive Mechanism

Extensive research in behavioral economics has found that many decision-makers are susceptible to cognitive biases. One important finding from this literature is that people lack the ability to process abundant information and behave rationally, and they turn to shortcuts or “heuristics” to assist in their decision-making.<sup>15</sup> People often cope with uncertainty and complexity by reducing a decision to simpler elements. Specifically, individuals may use categories to make inferences about less familiar cases based on the other cases they know in a category.<sup>16</sup> Many developing countries may be especially unfamiliar to international observers, making the heuristic all the more valuable. Studies show that categories cause individuals to think units are more similar within group and more different between group.<sup>17</sup> These practices can lead to stereotype bias as people activate learned categories when confronted with an evaluation or decision.<sup>18</sup> At this point, people tend to explain away information that is inconsistent with the held stereotype, while

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<sup>14</sup>See Frot and Santiso (2011); Galiani et al. (2015).

<sup>15</sup>See Simon (1955); Conlisk (1996); Kahneman (2011).

<sup>16</sup>These are known as representativeness heuristics. See Fiske and Taylor (2013).

<sup>17</sup>Tajfel and Wilkes (1963) conduct an experiment in which individuals are asked to estimate the lengths of four short lines labeled “A” and four long lines labeled “B.” The group who saw the “A” and “B” labels estimated the within-group lengths to be more similar than the group who did not see the labels.

<sup>18</sup>See Taylor (1981); Wilder (1986).

latching on to reinforcing information.<sup>19</sup> Data about developing countries often presents a mixed picture, but heuristics will facilitate international observers' propensities to explain away inconsistencies.

Cognitive psychology has also shown the existence of a "halo effect," which could amplify the heuristic effects of classifications. Social psychologists show that an individual's opinions about an actor's attribute A are influenced by information about that actor on unrelated attribute B. For example, people who are thought to be more attractive are often perceived as being more competent or intelligent.<sup>20</sup> If international observers are also susceptible to this bias, classifications could affect international perceptions on more dimensions than just that which they seek to measure. For instance, countries that graduate in a development classification might also more easily persuade observers that they are democratic or respect human rights.

Cognitive biases could affect the behavior of even elite, highly informed actors. Previous works have pointed to the role of euphoria and positive affect in how investors evaluate risk and returns, and these cognitive factors have been partially blamed for financial crises.<sup>21</sup> According to Steinbruner (1974), executives actually avoid collecting too much information, especially in group decision-making.<sup>22</sup> At the same time, it is possible that elite actors have more informed priors that are less sensitive to the heuristics I describe. Moreover, decisions that are filtered through more institutionalized processes with more veto players could be subject to greater, rather than less, scrutiny.<sup>23</sup> Consequently, to a great extent, whether or not elite actors are susceptible to the cognitive biases documented in the mass population remains an empirical question.

## 1.2 Strategic Mechanism

Even actors who are not susceptible to cognitive biases could nonetheless rely on classifications for strategic reasons. When actors must make contentious distributive decisions that will produce backlash from those who are adversely affected, using a classification developed by a third party allows them to escape accusations of partisanship. This logic is also used to explain why governments delegate regulatory powers to independent agencies. Weaver (1986) notes that one way legislators often avoid blame is to "cede discretion to the president or an independent agency for making politically costly decisions" (375).<sup>24</sup> Similarly, if

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<sup>19</sup>See Fiske and Taylor (2013, 296).

<sup>20</sup>See Greenwald and Banaji (1995).

<sup>21</sup>See Aspara and Tikkanen (2010); Kindleberger (2005).

<sup>22</sup>Organizational conditions that exacerbate cognitive biases have been especially scrutinized in security studies. See, e.g., Jervis (2006).

<sup>23</sup>Many point out that it is unclear how individual-level psychological traits aggregate to explain state-level outcomes. See Dafoe et al. (2014, 388).

<sup>24</sup>See also Fiorina (1982); Mattli and Büthe (2005); Landwehr and Böhm (2011).

political actors incorporate classifications into their allocative decisions, they can credibly demonstrate their impartiality to any who demand it.

The strategic mechanism is most likely to affect the least autonomous actors, especially those that are agents in a principal-agent relationship. The more an actor must produce evidence of her strong performance in order to receive funding or avoid punishment, the more that actor must prioritize the appearance of her behavior over making the most informed decision. Conversely, an autonomous actor may behave optimally, no matter how it looks. The strategic mechanism is therefore most strongly present in relationships of institutional delegation.

### **1.3 Testable Hypotheses**

To generate testable hypotheses, I apply these mechanisms to the case of development classifications. My focus partly arises because of global changes in the demography of poverty, which have caused many high-profile “graduations” of countries that continue to experience high levels of poverty or inequality.<sup>25</sup> This has cast a spotlight on these classification systems, causing significant controversy surrounding whether they continue to be fit for purpose.

An additional reason to focus on development is to mitigate alternative explanations for the power of classifications. Many argue that IOs design indicators, often in the form of scorecards or blacklists, to pressure countries to adopt or avoid certain behaviors.<sup>26</sup> This means that a country’s inclusion or exclusion from the list clearly signals its type to the international community, providing a rational basis for the power of these categories. In contrast, a country’s level of development, while related to its behaviors, is a much murkier signal of that government’s quality. This means that we must dig deeper to understand why development classifications are so influential, and in so doing, may uncover additional mechanisms by which indicators more broadly (including performance assessments) may cause such strong effects.

To begin, I select the international observers whose behaviors are most important for developing countries: donors, investors, and raters.<sup>27</sup> I use knowledge about the varying career concerns and organizational structures of these actors to generate predictions about which mechanism(s) they may or may not be susceptible to, resulting in an expectation for each about the existence and magnitude of a “classification effect.”

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<sup>25</sup>See Moss and Leo (2011); Morris and Gleave (2015).

<sup>26</sup>See Kelley (2017); Morse (2017).

<sup>27</sup>Donors and investors provide two of the three largest sources of external finance for developing economies (UNCTAD 2017). The assessments of raters are often the gateway through which developing countries may access finance.

While my theoretical framework is agnostic about the direction of the this effect, I draw on existing literature and a survey of experts to add directions to my hypotheses. I proceed by discussing each of these actors in turn.

## **Donors**

Donor agencies are especially sensitive to the strategic mechanism, as they must justify their allocation decisions to the legislatures (and, by extension, mass publics) that determine their budgets. Donor agencies often try to emphasize their impartiality in their concern for development. Milner (2006), for example, argues that bilateral donors finance multilateral agencies, who are more trusted by the mass public to carry out development, in an effort to reassure their funders that they are providing needs-based aid. Particularly during hard times when donor publics feel aid could be better spent at home, donors may have greater need to show their constituents the impoverishment of aid recipients. Donors may also be evaluated by other donors. For example, the first page of every “peer review” conducted by the OECD shows a breakdown of each donor’s allocation of aid by income group and Least Developed Country status.<sup>28</sup> In this way, IOs influence the behavior of states indirectly by shaping the standards against which donors are evaluated.<sup>29</sup>

There is a weaker but non-trivial argument that donors could be susceptible to cognitive biases. To my knowledge, no studies to date have tested for the presence of cognitive bias in a sample specifically limited to donors; however, research has found that elite samples may actually exhibit cognitive biases more strongly than the general population.<sup>30</sup> I therefore do not rule out the possibility that donors could exhibit a cognitive bias, despite their relative expertise in development. Testing this claim empirically is among the contributions of this project.

Given the strategic and cognitive reasons for donors’ sensitivity to classifications, I expect that higher classifications will result in lower levels of aid, as a country is perceived as less needful of assistance. Lumsdaine (1993) argues that most foreign aid serves the donor public’s humanitarian interests. Research on public opinion in donor countries finds that humanitarian, altruistic, and sometimes paternalistic concerns can motivate individuals to support foreign aid or immigration despite nationalist incentives.<sup>31</sup> Emphasizing the relative need of aid beneficiaries will therefore improve support for foreign aid. While donors also value

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<sup>28</sup>See e.g. <https://www.oecd.org/dac/peer-reviews/OECD%20Australia%20FinalONLINE.pdf>.

<sup>29</sup>This may partially explain why donors tend to “herd,” duplicating rather than complementing the assistance provided by other donors. See Frot and Santiso (2011); Galiani et al. (2015).

<sup>30</sup>See LeVeck et al. (2014).

<sup>31</sup>See Paxton and Knack (2012); Newman et al. (2013); Bechtel et al. (2014); Baker (2015).

Table 1: Predicted mechanisms and hypotheses (by observer)

	<i>Mechanism</i>		<i>Hypothesis</i>
	Cognitive	Strategic	Higher classifications...
Donors	✓	✓	<b>H1:</b> ↓ aid
Investors	✓	∅	<b>H2A:</b> ↑ perceived creditworthiness
	✓	∅	<b>H2B:</b> ↑ FDI
Raters	✓	∅	<b>H3:</b> ↑ democracy scores

...even with no real change.

strategic and business interests in aid allocation decisions, *ceteris paribus*, donor countries are more likely to give aid to needier recipients.<sup>32</sup> Since aid is a scarce resource, I do not expect donors to contribute more to a country perceived as more developed.

**Hypothesis 1.** Higher classifications will decrease the amount of aid a country receives. This effect may be transmitted through both cognitive and strategic mechanisms.

### Investors

Research finds consistent evidence that investors are susceptible to cognitive biases when assessing risks, such as whether a government defaults on a loan or violates the property rights of a foreign firm. The very discipline of behavioral economics grew in order to explain “irrational exuberance” in financial markets and pointed to tendencies like overconfidence and loss aversion.<sup>33</sup> Studies show that investors also depend on heuristic peer country groupings to assess the riskiness of a potential borrower.<sup>34</sup> Managers’ decisions to internationalize their firms can similarly be explained by conceptions of “foreignness.”<sup>35</sup> Investors therefore may be highly likely to defer to classification systems.

Investors are not susceptible, however, to the strategic mechanism. Unlike donors, investors must deliver a return; sacrificing profit in the pursuit of social goals would violate their commitments to shareholders.<sup>36</sup> They face no incentive to do anything but make the most sound judgment possible.<sup>37</sup> Any classification effect on investors, therefore, cannot be explained by the strategic mechanism.

I would expect the cognitive “classification effect” to be positive because investors will view higher

<sup>32</sup>See Alesina and Dollar (2000); Neumayer (2005).

<sup>33</sup>See Shiller (2015); Thaler (2016).

<sup>34</sup>See Gray (2013); Brooks et al. (2015).

<sup>35</sup>See Aharoni (2010); Maitland and Sammartino (2015); Williams and Grégoire (2015).

<sup>36</sup>See Grieder (1998).

<sup>37</sup>One challenge to this view stems from the observation that human rights violations deter FDI (Blanton and Blanton 2007). But this may be because investors interpret human rights violations as a sign of risk. Even if it results from consumer punishment, I would expect these audiences to support, not oppose, a firm’s investment in a developing country.

levels of development as signs of stability. Many point to a “developed nation discount” in FDI.<sup>38</sup> Investors are attracted to high human capital, stable political environments, and democratic domestic institutions.<sup>39</sup> Although conceptually distinct from development, these factors are correlated with a country’s national income level, and the “halo effect” would expect investors to associate unrelated positive attributes. An investor may assume that a country experiencing a higher level of development may be a better investment for other reasons.

**Hypothesis 2A.** Higher classifications will improve investors’ confidence in a country’s creditworthiness. This effect will be transmitted through only the cognitive mechanism.

**Hypothesis 2B.** Higher classifications will result in greater FDI. This effect will be transmitted through only the cognitive mechanism.

## **Raters**

We typically think of indicators as produced by raters who operate independently, but can these raters too exhibit a classification effect? To my knowledge, there are no behavioral studies of cognitive biases in raters. But there is certainly evidence that their methodologies sometimes permit these biases to enter their judgments, with some agencies using more objective and falsifiable criteria than others. In the case of democracy rating agency Freedom House, for instance, the subquestions guiding scorers are “highly general and subjective in nature,” such as “Is the government free from pervasive corruption?”<sup>40</sup> Unsurprisingly, these ratings have been shown to consistently favor countries who support the U.S.<sup>41</sup>

Although raters may be accountable to external audiences, I do not expect them to use classifications to justify their decisions. They may be agents who rely on a certain organization or interest group for funding and must produce ratings that promote their principal’s interests.<sup>42</sup> But it is never in their strategic interest to use a classification produced by *another* rater. Doing so concedes the relevance of their competitors’ indicators and undermines their own. Raters should therefore never be strategically incentivized to use these classifications.

In terms of direction, I expect a classification effect to bias ratings upwards rather than downwards due to the halo effect logic described above. I specifically focus on democracy scores, which should be concep-

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<sup>38</sup>See Mosley (2003); Blonigen and Wang (2005); Wibbels (2006).

<sup>39</sup>See, for example, Jensen (2006); Büthe and Milner (2008); Biglaiser and Staats (2010).

<sup>40</sup>See Bradley (2015, 37-38).

<sup>41</sup>See Bush (2017).

<sup>42</sup>See Pistor (2012).

tually distinct from development classifications, because concerns about democracy guide the behavior of so many elites.

**Hypothesis 3.** Higher classifications will improve a country’s subjectively-determined ratings on other dimensions, such as democracy scores. This effect will be transmitted through only the cognitive mechanism.

Because the directions associated with each of these hypotheses are based on assumptions rather than derivations, I also surveyed a group of experts about their priors regarding the existence of and directions of classification effects. Overall, respondents expected classifications to have effects consistent with my hypotheses. (See Section S1 of the Supplementary Information.)

While hypotheses 1 through 3 examine the effects of development classifications on specific actors, they also, if confirmed, suggest which actors more broadly are likely to use classifications in their decisions. If support is found, it sheds light on the composition of the “users” in Büthe (2012)’s conceptual model of indicators.

### **Downstream Effects**

If classifications are so powerful, then I also expect governments of classified economies to try to change their classifications as a means of achieving their political or economic goals, to the extent that they are able. Some may hope to improve their country’s ratings or investments by seeking higher classifications, while others may prefer to delay their graduation and continue accessing aid. Without seeking to explain variation in these strategies, I simply look for evidence of any strategic behavior at all:

**Hypothesis 4.** Countries will try to influence their classifications.

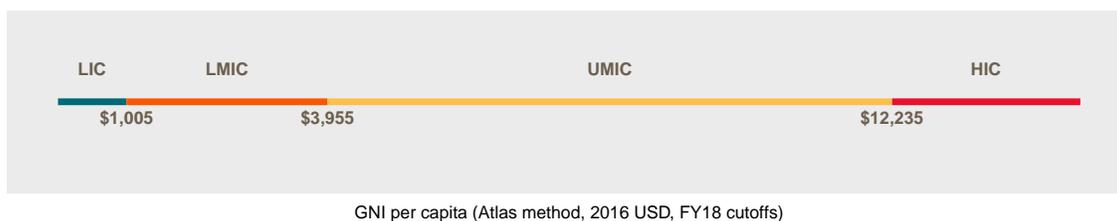
## **2 Quantifying Classification Effects**

The aim of this study is to illustrate systematic relationships between a country’s classification in a given year and the way it is perceived and treated in the global economy. To do so quantitatively requires a large data set with sufficient variation in the classifications countries receive cross-nationally and over time. The World Bank analytical income classification system exhibits this necessary variation and is ideal for this quantitative analysis.<sup>43</sup> However, a naive regression of outcomes on World Bank income classifications would not adequately show this relationship, since international observers could be influenced directly by

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<sup>43</sup>In other work, I use qualitative approaches to reveal similar dynamics surrounding the UN’s Least Developed Country category and the World Bank’s operational classifications (IDA/Blend/IBRD), indicating that my findings are not limited to this system.

Figure 1: The World Bank analytical income classification system



GNI per capita (Atlas method, 2016 USD, FY18 cutoffs)

*Note:* Figure indicates the thresholds used to classify countries as “low income countries,” “lower middle income countries,” “upper middle income countries,” and “high income countries.” Thresholds are revised each year only to account for inflation and are released annually on July 1, along with the revised classifications assigned to each country. This particular set of thresholds was published on July 1, 2017. *Source:* World Bank.

the factors that determine a country’s classification and not at all by the classification itself. My estimation strategy addresses this obstacle by controlling for the determinant of the classification (GNI per capita) and estimating the effect of being above a threshold determining eligibility for a classification. Subsequent analysis addresses the possibility that classifications are endogenous to the behaviors of classified countries, and I argue this phenomenon in fact further illustrates the politics of classification. Before outlining these models, I begin by introducing the system and my data.

## 2.1 The World Bank Income Classification System

The World Bank’s income classification system separates countries into “low income countries,” “lower-middle income countries,” “upper-middle income countries,” and “high income countries” on the basis of their gross national income (GNI) per capita. A series of GNI per capita thresholds separate the categories, and no other indicators are used to determine a country’s classification. Figure 1 illustrates that a country’s classification is an exact function of its GNI per capita. Each year on July 1, the World Bank Development Economics Group updates the thresholds in real terms to account for inflation and releases the set of country classifications made on this basis.<sup>44</sup> The current system has been in place since 1989, when it was devised for exclusively analytical purposes to facilitate World Bank research. Because it is predicated on a relatively volatile variable — national income — countries change categories frequently. This allows me to statistically quantify the effects of these classifications in a large data set. The World Bank has never used these classifications for operational (lending) purposes, and they were not designed for this purpose. The income classifications have become essential to the vocabulary used to discuss development, and they have attracted a fair amount of controversy.

<sup>44</sup>Additional detail appears in Section S2 of the Supplementary Information).

## 2.2 Data

To test my hypotheses, I combine data on a variety of economic outcomes with the classifications countries received from the World Bank and the indicators used to determine those classifications. Since the World Bank began its current classification system in 1989, my sample includes all country-years that ever received classifications during the period 1987 to 2015, excluding countries that have been continually classified as HICs since before 1989.<sup>45</sup>

The main explanatory variables are historical data on gross national income (GNI) per capita and the historical thresholds that were used to classify countries in each year. I obtained the original GNI data that were used to classify countries at their time of classification from the World Bank Development Economics Data Group.<sup>46</sup> It is important to note that this figure can differ significantly from the estimate of GNI that can be obtained by downloading the most current World Development Indicators online. This is because income estimates are often revised over time on the basis of updated economic assumptions, new population data, and other causes. I use the historical income data and the historical thresholds, which is the best way of approximating how a country was perceived at the time of its classification, regardless of how it would be classified *ex post* on the basis of contemporary data. The historical thresholds are available online from the World Bank.<sup>47</sup>

Dependent variables include aid, foreign direct investment, creditworthiness, and democracy ratings. In keeping with the literature, I measure *Aid* as net disbursements of official development assistance (ODA) as reported by the OECD, and I impute zeroes for missing values.<sup>48</sup> I use both a behavioral and a perceptual measure of investment. I use logged net annual inward *FDI flows* from UNCTAD's Handbook of Statistics.<sup>49</sup> This measures how firms behave with respect to classified countries. I also use a perceptual measure of the classified countries' *Creditworthiness* using the biannual country risk ratings published in the investment journal *Institutional Investor*. These ratings range from 0 to 100 and are the most widely available contin-

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<sup>45</sup>Because the present categories were defined in FY89, the first observation for most countries therefore contains the classification awarded in FY89 (July 1, 1988-June 30, 1989), which was determined in spring 1988 on the basis of data from calendar year 1987. Unless otherwise indicated, years are reported in terms of data years.

<sup>46</sup>The World Bank provided the GNI data used for the analytical classifications from 1999-2015 (i.e., used to classify economies for FY01 onwards) and the GNI data used for the operational classifications from 1973-2007. In this paper, I use the analytical figure for all years after 1999 and the operational figure for years before. Where they overlap, the numbers are very close to one another.

<sup>47</sup><http://databank.worldbank.org/data/download/site-content/OGHIST.xls>

<sup>48</sup>See Knack et al. (2014) for precedent.

<sup>49</sup>While some scholars prefer to use FDI flows as a percentage of GDP (see Büthe and Milner (2008)), I prefer the use of levels to avoid detecting a mechanical relationship as the result of changes in GNI. However, the results are the same in both specifications (see Table S4 in the Supplementary Information).

uous indicator of creditworthiness.<sup>50</sup> According to the magazine, the IIR ratings “are based on information provided by senior economists and sovereign-risk analysts at leading global banks and money management and securities firms. They have graded each country on a scale of zero to 100, with 100 representing those countries that have the least chance of default. ... The individual credit responses are weighted using a formula that gives more importance to responses from institutions with greater worldwide exposure and more sophisticated country analysis systems.” Because these ratings are compiled using surveys, I treat them as a proxy for how investors perceive these countries. I obtained the IIR ratings by scanning and transcribing the tables published in March and September issues of the U.S. edition, 1987-2012. Since income classifications are released on July 1, I operationalize this variable by taking the mean of the September rating and the March rating from the following year, resulting in a single rating for a fiscal year, and for my baseline model, I impute zeroes for missing values to capture the poor reputation associated with being unrated. To measure the decisions of professional raters, I use Freedom House’s political rights score measuring *Democracy*, treating it as a perceptual rather than a latent variable. I flip the score so that higher levels refer to higher scores on political rights, from 1 to 7. Summary statistics appear in Table S2 in the Supplementary Information.

### 2.3 Estimation Strategy

The main challenge to identifying the effect of classifications is that international observers could be influenced by the determinants of a country’s classification rather than by the classification itself. Fortunately, since the World Bank uses exact, public, and arbitrary cutoffs in GNI per capita to determine classifications, these factors can be controlled for directly. My main specification regresses outcomes of interest on both a dummy variable indicating that a country’s GNI per capita surpasses a relevant cutoff and also on the continuous GNI per capita variable, which conceivably directly shapes observers’ perceptions of the country independent of its classification. Controlling for this variable allows me to estimate the effect of the classification itself,  $\beta$ . The functional form for this specification is:

$$Y_{i,t} = \alpha + \beta \text{Above cutoff}_{i,t-1} + \delta \log(\text{GNIpc})_{i,t-1} + \gamma \mathbf{X}_{i,t-1} + \mu_i + \tau_t + \varepsilon \quad (1)$$

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<sup>50</sup>The creditworthiness ratings cover more countries than do formal credit ratings. This is especially true of developing countries in which I am most interested. Many countries are included in the IIR before they receive a formal credit rating. For works comparing various measures of creditworthiness, see Vij (2005); Oetzel et al. (2001); Ratha et al. (2011).

where  $Y$  is an outcome,  $\mathbf{X}$  represents a vector of covariates, and  $t$  denotes the year or period of analysis. Country and period/year fixed effects are used, and I cluster standard errors by country. A similar specification is used by Knack et al. (2014), who study the effect of crossing the operational cutoff on aid allocations.<sup>51</sup> I evaluate the effect of different cutoffs within the same classification system in separate models, as different categories within the same classification system could understandably produce effects of various magnitudes or directions. In order to improve comparability across outcomes, I standardize all dependent variables.

The unit of analysis differs between *Aid* and other regressions. In keeping with Knack et al. (2014), *Aid* is aggregated into three-year periods corresponding with the IDA replenishment cycles of the World Bank, a grouping which reflects the natural decision-making timeline of most donors and also smooths an otherwise volatile variable.<sup>52</sup> In *Aid* regressions, I restrict the sample to just those countries that have ever benefited from IDA during the time frame. This is because countries that have never benefited from IDA are unlikely to exhibit any change in their aid receipts, so their inclusion only serves to reduce my power. Since all countries may receive FDI, credit ratings, and democracy ratings, I use samples of all countries in these regressions.

Many factors shape economic perceptions of countries. I therefore include several controls that are thought to influence the views and decisions of a variety of global economic elites. Larger countries are more likely to receive aid and attract international attention, so I control for the country's logged population. A country's level of democracy is known to influence the behavior of donors, investors, and credit raters, so I include lagged values of the Freedom House Political Rights score as a control in these regressions (but not when it is the dependent variable).<sup>53</sup> Any actor participating in a financial transaction with a country must also take into account the country's financial assets. I therefore include logged gross capital formation, which has been found by Vij (2005) to be one of the biggest predictors of the *IIR* rating.

I include these controls primarily to improve the precision of my coefficient estimates rather than to address bias in my coefficient estimates. This is because there are very few variables that would be sys-

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<sup>51</sup>Despite using the same empirical model, the results I present in the next section will differ from those reported in Knack et al. (2014). This is because my sample includes two additional periods (data through 2015) that were not available at the time the authors conducted their analysis. A complete replication of the paper and more detailed explanation of our different findings appears in Section S7 of the Supplementary Information.

<sup>52</sup>All variables are aggregated using means, while income variables and the cutoff dummy are taken from the final year in each period.

<sup>53</sup>See, for example, Alesina and Dollar (2000); Li and Resnick (2003). Knack et al. (2014) also control for logged population and Freedom House. In addition, they include the World Bank's Country Policy and Institutional Assessment (CPIA) score, but these data are not publicly available, and the authors report that their results are robust to dropping this control.

tematically correlated with my main explanatory variable: whether a country is above the LIC or the LMIC threshold. I later acknowledge, however, that sometimes a country may try to influence its position above or below important thresholds by manipulating its GNI per capita data. This is a relevant consideration, since it suggests that a country's position above or under a threshold may not be (as-if) random. However, this is most threatening to the inferences I make if international observers are able to see that governments manipulate their data. But if international observers prefer blunt categories to raw GNI per capita data, it is hardly likely that they look deep enough to question the raw GNI per capita data itself. If international observers are blind to data manipulation, then their evaluations of governments should not reflect their judgments of these behaviors. A further concern arises if some types of governments are more likely to manipulate their data than others, and these characteristics are observable, even if data manipulation is not. I address this concern by controlling for democracy, as existing studies claim that "joking the stats" is more common in authoritarian regimes.<sup>54</sup>

## 2.4 Results

The main results appear in Table 2. Consistent with the hypotheses, certain classifications affect the aid a country is able to attract from foreign donors, investors' perceptions of its creditworthiness, and ratings of its democracy, although its FDI inflows do not exhibit any effect. I proceed by discussing each of these results in turn.

Overall, the income classification system affects a country's ability to attract aid, but these effects only appear when countries become "upper-middle income." Model 1 of Table 2 illustrates that "upper-middle income" countries experience a decline in their aid by a quarter of a standard deviation as a result of their label, even when raw GNI is taken into account. However, there is no detectable difference between "low income" and "lower-middle income" countries in the aggregate development assistance countries receive. This suggests that contrary to the concerns of countries approaching "middle income country" status, donors do not appear to penalize countries for their growth until those countries have advanced into "upper-middle income" status, but when they do, the effect is sizable. In Section S4 of the Supplementary Information, I explore heterogeneity in these results by donor. As would be predicted by my theory, I find that donors with a greater need to signal their commitments to development to an external audience exhibit stronger classification effects.

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<sup>54</sup>See Magee and Doces (2015) and Wallace (2016).

Table 2: The effects of classifications on behavior of donors, investors, and raters

	(1) Aid	(2) FDI inflows	(3) Creditworthiness	(4) Democracy
<b>A. Above LIC ceiling</b>				
Above LIC ceiling ( <i>t</i> -1)	-0.022 (0.063)	0.011 (0.069)	0.053 (0.059)	0.170** (0.071)
Constant	3.151 (5.124)	-0.121 (4.078)	-2.719 (3.841)	-1.669 (4.421)
Covariates	✓	✓	✓	✓
Country F.E.	✓	✓	✓	✓
Period F.E.	✓	✓	✓	✓
Period	3-Year	Year	Year	Year
Observations	632	3,062	2,148	3,204
R <sup>2</sup>	0.886	0.833	0.916	0.828
<b>B. Above LMIC ceiling</b>				
Above LMIC ceiling ( <i>t</i> -1)	-0.246** (0.107)	-0.032 (0.048)	0.111* (0.064)	0.027 (0.069)
Constant	4.374 (4.874)	0.032 (4.123)	-3.661 (3.944)	-2.805 (4.445)
Covariates	✓	✓	✓	✓
Country F.E.	✓	✓	✓	✓
Period F.E.	✓	✓	✓	✓
Period	3-Year	Year	Year	Year
Observations	632	3,062	2,148	3,204
R <sup>2</sup>	0.887	0.833	0.917	0.827

Standard errors in parentheses

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

*Note:* The table reports coefficients from OLS regressions of the outcome on a dummy variable coded 1 if a country is above the cutoff, controlling for GNI per capita. Standard errors are clustered at the country level. Covariates include lagged values of log population, log gross capital formation, and Freedom House political rights score, and they include country and either year or period fixed effects. The Freedom House political rights score is inverted so that positive values are more democratic, and this covariate is omitted when it is the dependent variable. In the aid regressions, the sample is restricted to countries that have ever benefited from IDA after 1987. All dependent variables have been standardized for ease of comparison.

I find mixed results regarding the sensitivity of investors to classifications. On the one hand, private investors do not appear to change their decisions to directly invest in foreign countries based on their classifications. Model 2 of Table 2 shows that graduating to “lower-middle income” and later “upper-middle income” country status does not affect a country’s net FDI inflows.

On the other hand, surveys of sovereign risk analysts reveal that classifications affect their perceptions of the creditworthiness of countries. Model 3 of Table 2 shows that becoming “upper-middle income” is associated with a bump in a country’s creditworthiness score, and this result is significant at the .1 level. This specification likely understates the effect at this threshold, as it imputes zeroes for all country-years with no rating. Table 3 presents the results without these imputations, in other words, using only the data for countries that received a creditworthiness score. In this specification, the coefficient size on graduating to “upper-middle income” status doubles and becomes significant at the .05 level. However, graduating to “lower-middle income” status also becomes significant yet produces a negative rather than a positive effect. This is because countries are more likely to be rated when they become “lower-middle income,” as shown in Model 3 of Table 3. This finding too suggests the importance of the income classifications, as being rated itself communicates an improvement in a country’s standing. Despite the fact that sovereign lending involves careful analysis of economic fundamentals, these results suggest that even senior analysts responsible for these decisions are biased by how a country is classified.

Finally, raters of democracy also exhibit a classification bias. Countries that reach “lower-middle income” status have systematically higher Freedom House ratings than their “low income” counterparts, and the result is statistically significant at the .05 level. This result should be surprising for two reasons: This rating aims to capture democracy rather than development, and raters claim to follow rigorous coding procedures. The presence of a classification effect even in these evaluations of a dimension separate from economic development is consistent with the widely documented “halo effect,” by which units sharing one characteristic are assumed to share other characteristics. However, these classifications appear to more powerfully influence Freedom House ratings at the lower end of the income spectrum; no difference is detected between “lower-middle” and “upper-middle” countries.

These results are robust to several alternative specifications. One concern is that including Freedom House as a control variable in the aid, FDI, and creditworthiness regressions introduces endogeneity, since I have demonstrated that the classifications influence this measure. In the Supplementary Information, I show that my results are robust to dropping this control as well as all controls. The aid results also do not change

Table 3: The effects of classifications on credit ratings

	(1) With imputations	(2) Without imputations	(3) Any rating (0-1)
<b>A. Above LIC ceiling</b>			
Above LIC ceiling ( $t-1$ )	0.053 (0.059)	-0.156*** (0.055)	0.185* (0.104)
Constant	-2.719 (3.841)	14.489*** (5.496)	-10.678 (6.992)
Covariates	✓	✓	✓
Country F.E.	✓	✓	✓
Year F.E.	✓	✓	✓
Period	Year	Year	Year
Observations	2,938	2,148	3,202
R <sup>2</sup>	0.851	0.916	0.768
<b>B. Above LMIC ceiling</b>			
Above LMIC ceiling ( $t-1$ )	0.111* (0.064)	0.197** (0.077)	0.054 (0.094)
Constant	-3.661 (3.944)	13.820** (5.546)	-12.039* (7.066)
Covariates	✓	✓	✓
Country F.E.	✓	✓	✓
Year F.E.	✓	✓	✓
Period	Year	Year	Year
Observations	2,938	2,148	3,202
R <sup>2</sup>	0.851	0.917	0.767

Standard errors in parentheses

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

*Note:* The table reports coefficients from OLS regressions of the outcome on a dummy variable coded 1 if a country is above the cutoff, controlling for GNI per capita. Standard errors are clustered at the country level. Covariates include lagged values of log population, log gross capital formation, and Freedom House political rights score. All dependent variables have been standardized for ease of comparison.

by using yearly rather than periodic observations. Finally, Section S2 in the Supplementary Information presents the results from an alternative model, which uses change scores and holds changes in GNI per capita constant to identify the effect of crossing a cutoff. This model focuses on explaining year-to-year variation in how observers react to a single country's change in category, omitting the country-to-country variation in how observers react to countries just above and just below a threshold. The results from this exercise are similar to those yielded by the baseline model.

## 2.5 Discussion

With some exceptions, the classification effects I measure are consistent with those predicted by my theory. I found strong support for hypothesis 1: Donors are susceptible to the income classifications. Donors are significantly more likely to prefer allocating aid to LMICs than to UMICs. Curiously, there is no evidence of donor departure following a country's graduation from LIC to LMIC status. This may be because there is a growing emphasis on effective aid in the development community, leading some donors (such as the U.S.) to privilege giving aid to (higher-income) places where it will be prudently managed over the places with greatest need. Such behaviors may obscure my ability to observe a classification effect. An alternative possibility is that publicity about the challenges LMICs face has succeeded in mitigating the classification effect at this threshold, while UMICs receive no such attention. Both of these explanations are consistent with the strategic story I outline, as donors must justify their allocation of a scarce resource across a pool of competitive applicants based on norms in the development community.

With respect to hypothesis 2, I found more evidence that classifications affect the perceptions (2A) than the behaviors (2B) of investors. When a country crosses the LMIC ceiling, it is more likely to be perceived as creditworthy by sovereign risk analysts who are responsible for deciding to lend to a country. However, classifications do not produce any observable change in FDI. One interpretation of these findings is that classifications shape a country's reputation as a borrower but not its reputation for creating a stable business environment, but it is hard to imagine that these two features are unrelated in the minds of investors. Another interpretation is that while investors' perceptions change, the effect is not large enough to induce changes in behaviors. One existing study finds no observed relationship between the World Bank's Ease of Doing Business ranking and FDI.<sup>55</sup> This is noteworthy because this ranking *should* rationally influence FDI in a way that income classifications should not; if the Ease of Doing Business ranking does not drive FDI, then it is much less surprising that income classifications do not either. According to this interpretation, even the cognitive effects of classifications on investor behavior are minimal. Yet another interpretation of these findings is that these reflect the evaluations of different types of investors: firm owners responsible for FDI may differ from sovereign risk analysts. These findings could also be explained if firm owners do, in fact, respond to classifications, but in opposite directions. If some investors are attracted to the high rewards associated with LICs while others are attracted to the low risk associated with MICs, then classification

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<sup>55</sup>See Jayasuriya (2011).

effects could exist but cancel each other out. My study is not able to distinguish between these. Nonetheless, a conclusion that investors do not exhibit a cognitive bias simply speaks to the limitations of the classification effect rather than negating its power over other users.

I find strong evidence in favor of hypothesis 3: Countries with higher classifications are significantly more likely than countries with lower classifications to receive favorable democracy scores. In particular, when a country crosses the LIC ceiling, it receives a higher democracy rating. It is plausible that I would observe this effect in the case of Freedom House’s political rights score, where there is substantial room for the subjective views of raters to enter their judgments. These results therefore add to scholarly concerns about the use of Freedom House ratings to measure democracy.

Regarding mechanisms, my findings suggest that the cognitive mechanism likely accounts for at least some portion of the classification effect. This is because the strategic mechanism does not account for the effects I detected in raters’ behavior. It is not possible given this design to explain what portion of the aid findings are attributable to a cognitive versus a strategic mechanism.<sup>56</sup> But there is some evidence, presented in the Supplementary Information, to support the strategic mechanism for this class of actors. As one U.S. Treasury official commented, “When we can show that most of our aid is benefiting Least Developed Countries, this helps our numbers.”<sup>57</sup> Though he focuses on a different development classification than the one under study here, his comment reveals that those responsible for allocating aid feel the need to justify their decisions using classifications.

### **3 Gaming the System**

Existing work shows that countries try to change their classifications by petitioning classifiers or undertaking reforms. When graduation is deterministic, as in the World Bank income classification system, no amount of persuasion behind closed doors can influence a classification. This section presents evidence that, consistent with hypothesis 4, countries manipulate their GNI per capita as they approach the thresholds that delineate categories. This observation corroborates other works revealing that governments sometimes “juke the stats.”<sup>58</sup>

Specifically, I test whether countries are more likely to revise their national income figures as they ap-

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<sup>56</sup>I address this in a companion paper by fielding a survey experiment to a sample of development experts.

<sup>57</sup>Author’s interview with U.S. Treasury official, August 2016, Washington, DC.

<sup>58</sup>See Magee and Doces (2015); Wallace (2016). It is also possible that IOs are complicit in statistical manipulation, favoring countries aligned with shareholders. See Dreher et al. (2008); Lang and Presbitero (2017).

proach an important threshold. I describe the intuition behind the exercise here and, due to space constraints, provide detail on the data, operationalization, and estimation in the Supplementary Information. National income figures describing the same year can change (substantially) from year to year. These revisions to previous estimates can occur for many benign reasons, but if countries revise their income data to influence their classifications, then we would expect them to be strategically timed as countries try to avoid or accelerate crossing certain cutoffs.<sup>59</sup> I am able to conduct this exercise because the World Bank makes available all previous versions of the World Development Indicators, allowing me to detect at what point in time substantial revisions to GNI are made. To operationalize “revisions to GNI data,” I calculate, for each version of the WDI, how much a country’s estimates of the previous three years of GNI differed from its estimates of those same years as reported by the previous version of the WDI, and I take the absolute value of the sum of these differences. I use a regression discontinuity framework to estimate whether and by how much countries increase their revision activity as they approach an income classification cutoff.<sup>60</sup>

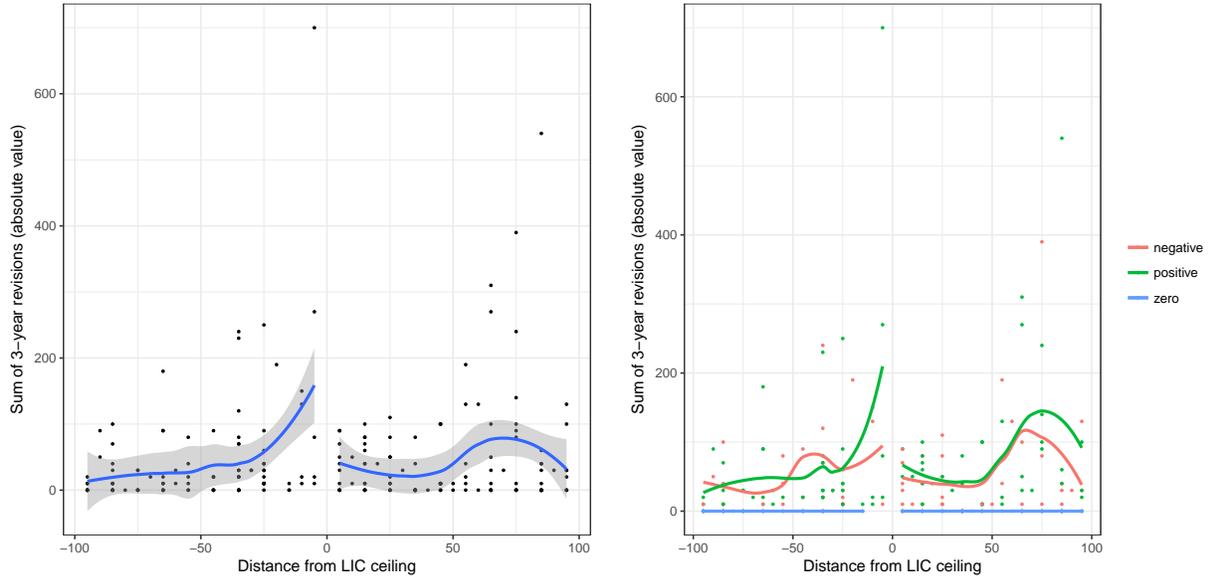
Revisions to GNI increase as countries approach the LIC ceiling and significantly fall as soon as they have passed the cutoff. Figure 2, Panel A plots the absolute value of revisions to GNI, positive and negative, while in Panel B, positive and negative revisions to GNI are plotted separately. It is clear that some countries add to their GNI as they near the cutoff, while others subtract from it, suggesting heterogeneous strategies in response to the cutoff. Point estimates appear in Table 4, Panel A. The data-driven Imbens-Kalyanaraman bandwidth is estimated to be 24. This proximity to the threshold is so close as to possibly obviate the need for strategic behavior, so I prefer bandwidths of 50, 100, and 150, which are far enough out for data manipulation to be helpful in making the difference one way or the other. The third specification, using the bandwidth of 100, suggests that countries revise their GNI per capita by about \$70 more just before the cutpoint, and the effect is statistically significant. While the other specifications are not statistically significant at conventional levels, with p-values between .1 and .2, the overall results are similarly negative. This is cautious evidence that countries are more likely to revise their GNI just before the LIC cutoff although the results are sensitive to the selection of bandwidth. (As shown in the Supplementary Information, these findings are also robust to dropping the outlier cases that are evident in Figure 2.) In contrast, there is no elevated GNI revision just

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<sup>59</sup>I prefer this approach to a McCrary statistical density test (used, e.g., by Kerner et al. (2015)) because it avoids making assumptions about whether figures are revised upwards or downwards, which is important because my theory allows for states to prefer higher *or* lower classifications. The Supplementary Information elaborates.

<sup>60</sup>While regression discontinuity designs are typically employed as causal inference strategies, this is not my approach. The Supplementary Information clarifies.

Figure 2: Revisions to GNIpc increase as a country approaches the LIC ceiling



*Note:* Figure plots the magnitude of revisions to recent national income estimates against the distance between a country’s most recent current estimate and the LIC ceiling. Revisions to national income data increase as a country approaches this ceiling. The figure plots the raw data, with each point representing a country-year observation. Loess smoothing lines fitted using bandwidths of 100. *Source:* World Development Indicators Archives.

before reaching the ceiling of the LMIC category (Table 4, Panel B).<sup>61</sup>

Table 4: Discontinuities in revisions to national income data

	Absolute revisions to GNIpc in previous 3 years			
	(1)	(2)	(3)	(4)
<b>A. LIC/LMIC Discontinuity</b>				
Above cutoff	-205.01 (175.55)	-107.68 (75.46)	-69.89** (31.49)	-28.47 (23.39)
Bandwidth	24	50	100	150
Observations	40	114	218	344
<b>B. LMIC/UMIC Discontinuity</b>				
Above cutoff	16.06 (114.97)	71.52 (119.64)	-0.358 (87.62)	88.34 (67.60)
Bandwidth	39	50	100	150
Observations	31	34	82	113

Standard errors in parentheses

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

*Note:* Estimates come from a local linear regression of the outcome on the above-cutoff indicator, the running variable (GNIpc distance to the cutoff), and the interaction. Model 1 uses the data-driven IK bandwidth. All standard errors are calculated using block bootstrapping, clustered by country.

<sup>61</sup>Curiously, classified countries evidently focus on the LIC/LMIC threshold, though I found that international observers respond more to the LMIC/UMIC threshold. This lack of equilibrium could result from imperfect information if classified countries have inaccurate beliefs about the specifics of international observers’ behaviors.

This analysis illustrates that some governments respond strategically to classifications. Some countries appear to inflate their GNI figures, seeking higher classifications, while others understate them, seeking lower ones. While future work should explore why various governments or leaders adopt different strategies, the point here is simply that classified countries see the power in classifications and try to manipulate them.

## 4 Conclusion

Far from simply describing the world, classifications structure it in tangible ways. This paper shows that when a country moves up in its development classification, it receives less aid and improved creditworthiness and democracy ratings. Countries that are dissatisfied with their current treatment may even go so far as to manipulate their data to move them to another category. The patterns I observe offer strong support for the proposed theoretical framework of classifications, indicating multiple mechanisms through which classifications shape global politics, even when they provide no private or expert information. I demonstrated that even highly informed elite actors appear to be susceptible to the heuristic effects of classifications and that foreign donors consider their need to justify their allocation of scarce resources to a donor public. More broadly, my theory implies that actors in principal-agent relationships and those who are sensitive to cognitive biases will be the most frequent “users” of a classification system.

My argument suggests the simplest classification systems will acquire the broadest audiences. They are both cognitively intuitive and easy enough to be understood by a less-informed principal. This may be true even if technical classifications more meaningfully capture the concept of interest. A UN Development Programme country director explained why these classifications prevail, commenting, “Why not drop these categories? They don’t mean anything. ... The way out is disaggregating everything but then it loses value. You want to use data to hit people’s attention, but if you make them read five pages of data rather than one slide, then you can’t do that. So you need the classification.”<sup>62</sup> Classifications are an unavoidable feature of global institutions.

How do international organizations wield this power and to what ends? Although the World Bank income classifications appear to have acquired global influence unintentionally, they may have been preserved strategically. Organizers of the Raise the MIC movement claim that the World Bank has resisted their demands because powerful donors do not wish to expose the extent of global poverty and the inadequacy of

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<sup>62</sup>Author’s interview with UNDP Country Director, July 2017, Kathmandu, Nepal.

their assistance.<sup>63</sup> Indeed, it is possible that classifications are simply one more way powerful countries use international organizations to achieve their goals. Alternatively, organizational theories could account for the choices made in developing and maintaining a classification, as bureaucracies try to extend their relevance and reach. Consistent with this view, the UN Committee for Development Policy, responsible for maintaining the Least Developed Country category, actively encourages other institutions to make greater use of its product.<sup>64</sup> These appeals, if successful, will exaggerate the effects I have described in this paper. Regardless, future work should investigate the strategies used by the classifiers to better understand the evolving role of international organizations in the global economy.

This study offers policy implications for bureaucrats in international organizations who wish to promote development. Even if classification systems are inevitable, when considering changing a country's categorization, staff should take into consideration the expected response of external actors in estimating the impact of such a move. Moreover, they should plan for the politicization of any classification they introduce, as my project illustrates that global development institutions, intentionally or unintentionally, affect how developing countries are perceived and treated in the international economy.

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<sup>63</sup> Author's interview with Denys Nazarov, Associate Director of Global Policy, AIDS Healthcare Foundation, April 7, 2017, phone interview.

<sup>64</sup> <https://www.un.org/development/desa/dpad/publication/recognition-and-application-of-the-least-developed-country-category-by-un-development-system-organizations/>

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