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Showing Off and Going Out: China's Vanity Project Phenomenon

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Showing Off and Going Out: China's Vanity Project Phenomenon

A thesis submitted in partial fulfillment for the degree of Bachelor of Arts in International
Relations from William & Mary

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Accepted for _Honors_

(Honors)

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May 2, 2022

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Abstract

In September 2018, Xi Jinping announced that BRI financing will not be spent on vanity projects. Despite and prior to this proclamation, using the AidData data set, I uncovered a vanity project phenomenon in Chinese development financing. Chinese financed vanity projects, or development projects that do not aid a country's development needs, are present in 79 countries across the world, ranging from sports stadiums in the Democratic Republic of the Congo to community centers in the Pacific islands. In this thesis, I find that vanity projects are most likely to occur in fragile states with strong international political cooperation with China. This indicates that China uses these projects as a reward to its allies and to influence fragile states to continue cooperating with China.

Acknowledgements

This paper would not have been possible without so many people supporting me along the way. First, thank you Professor Oakes and Professor Smith for your advice and support throughout the research process. The research question for my thesis has changed many times since it was first conceived in 2020 and your consistent support has meant so much to me.

Thank you, Dr. Ammar Malik, at AidData, Professor Tierney, and Professor Cheng for providing me with suggestions and data when I felt stuck. This thesis would not have been possible without your expert feedback on Chinese development financing. A huge thank you to the whole AidData team for releasing AidData's Global Chinese Development Finance Dataset, Version 2.0 last September, this release fundamentally changed my research and made it possible for me to conceptualize vanity projects.

I would also like to express my gratitude for all who helped me run my regressions in R, specifically Professor Settle, Professor Oakes, Ann Duke, Sarah Larimer, and Madeleine Walker. Before 2022, I admittedly had no idea what R or a regression was. I never would have imagined that my regressions would be a fundamental part of my research.

A huge thank you to my other research mentors and colleagues in college, your advice, support, and grace when I felt overwhelmed really helped. Professor Runfola, Matt Crittenden, and the rest of the geoParsing team, the lessons I learned through our research shaped this paper even though the final product is not as geospatially based as I initially imagined. Rebecca Latourell, David Trichler, Gabrielle Hibbert, Ann Duke, and everyone else at the Blockchain Lab and Global Research Institute, your belief in my ability to learn new things (blockchain!) gave me hope when I felt defeated by my regressions. To Professor Pickering and Professor Konefal, my two major advisors, your encouragement to take on this commitment means so much to me, I am so glad I decided to do a thesis. Thank you to the Global Research Institute and the Charles Center for sending me to Laos in 2019, you truly ignited my intellectual curiosity for Chinese development finance. And a large shoutout to Paige Groome for the many lovely theses writing sessions in Swem.

Finally, thank you to all my family and friends for being with me every step of the way and always offering to look at drafts.

1. Introduction

On September 7th, 2013, Chinese President Xi Jinping completely changed how development finance is conceptualized and operationalized with his announcement of the Silk Road Economic Belt, now known as the Belt and Road Initiative (BRI) or One Belt One Road (OBOR), at a speech in Kazakhstan.[1] To some, this was a continuation of China's 1999 "going out" or "going global" strategy which sought to increase the international capabilities and competitiveness of domestic firms, a strategy positively impacted by China joining the World Trade Organization in 2001.[2] But to most, the BRI represented a huge change.

According to the Chinese government, the BRI seeks to create a global community of responsibility, shared interests, and destiny through the promotion of political trust, economic integration, and cultural inclusiveness.[3] The BRI, a primarily infrastructure investment initiative, strives to stimulate economic growth through connective infrastructure along global trade routes, assuming that these activities will have positive spillover effects for nearby sectors and local communities.[4] The essence of BRI ideology is that through integrated economic development, the People's Republic of China (PRC, China) can promote a peaceful, cooperative international

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[1] Ministry of Foreign Affairs of PRC, "President Xi Jinping Delivers Important Speech and Proposes to Build a Silk Road Economic Belt with Central Asian Countries," Belt and Road Portal, September 7, 2013, https://eng.yidaiyilu.gov.cn/qwyw/hyygd/1849.htm.
Muyang Chen, "Official Aid or Export Credit: China's Policy Banks and the Reshaping of Development Finance," GCI Working Paper (Boston University's Global Development Policy Center Global China Initiative, June 2018), http://www.bu.edu/gdp/files/2018/07/GCI-Muyang-Chen-2018.pdf.
[2] Nargiza Salidjanova, "Going Out: An Overview of China's Outward Foreign Direct Investment" (US-China Economic & Security Review Commission, March 30, 2011), https://www.uscc.gov/sites/default/files/Research/GoingOut.pdf.
[3] Government of China's Office of the Leading Group for Promoting the Belt and Road Initiative, "Special the Belt and Road: The Silk Road Economic Belt + the 21st-Century Maritime Silk Road," Belt and Road Portal, accessed April 26, 2022, https://eng.yidaiyilu.gov.cn/ztindex.htm.
[4] Richard Bluhm et al., "Connective Financing: Chinese Infrastructure Projects and the Diffusion of Economic Activity in Developing Countries," Working Paper (AidData at William & Mary, August 2020), http://docs.aiddata.org/ad4/pdfs/WPS103_Connective_Financing__Chinese_Infrastructure_Projects_and_the_Diffusion_of_Economic_Activity_in_Developing_Countries.pdf.

community and increase living standards of local communities participating in BRI activities.[5]

However, there is a growing body of empirical data and academic literature debating whether the

BRI fulfills these stated positive impacts, or is primarily harmful to the recipient country.[6]

Regardless of international opinion, the BRI has continually grown in both the size of its

investments and international recognition. In March 2017, a United Nations (UN) Security Council

resolution recognized the role of the BRI in strengthening regional economic cooperation.[7] As of

2021, 139 countries in the world have formally joined the initiative and official Chinese banks

have pledged over one trillion USD.[8] This growth is expected to continue, as the official

incorporation of the BRI into the Chinese constitution in October 2017 signaled that this is a long-

term initiative.[9] At the same time, Xi Jinping formally expanded the scope of the BRI, announcing

that the BRI would be green, healthy, intelligent, and peaceful; in other words, the BRI would

prioritize environmental protection, the development of public health resources, human capital

initiatives, and security agreements.[10]

The BRI's seemingly unstoppable growth has prompted a wide body of literature

attempting to understand the strategy underlying the initiative, or if there is an even a strategy

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[5] OECD, "The Belt and Road Initiative in the Global Trade, Investment and Finance Landscape," in *OECD Business and Finance Outlook 2018*, by OECD, OECD Business and Finance Outlook (OECD, 2018), 61–101, https://doi.org/10.1787/bus_fin_out-2018-6-en.

[6] Kristen A. Cordell, "The Evolving Relationship between the International Development Architecture and China's Belt and Road," Brookings, October 12, 2020, https://www.brookings.edu/articles/the-evolving-relationship-between-the-international-development-architecture-and-chinas-belt-and-road/.

[7] "Chinese Landmark Concept Put into UN Security Council Resolution," Belt and Road Portal, March 18, 2017, https://eng.yidaiyilu.gov.cn/qwyw/rdxw/9704.htm.

[8] David Sacks, "Countries in China's Belt and Road Initiative: Who's In And Who's Out," Council on Foreign Relations, March 24, 2021, https://www.cfr.org/blog/countries-chinas-belt-and-road-initiative-whos-and-whos-out. China Power Team, "How Will the Belt and Road Initiative Advance China's Interests?" Center for Strategic and International Studies' China Power Initiative, August 26, 2020, https://chinapower.csis.org/china-belt-and-road-initiative/.

[9] Xinhua, "'Belt and Road' Incorporated into CPC Constitution," October 24, 2017, http://www.xinhuanet.com/english/2017-10/24/c_136702025.htm.

[10] Belt and Road Portal, "Special the Belt and Road: The Silk Road Economic Belt + the 21st-Century Maritime Silk Road."

underlining the initiative. Academic and policy literature has focused on the BRI's impacts on human and economic development, investigating topics like the role of Confucius Institutes as a tool of soft power and transportation infrastructure to reduce economic inequality.[11]

In September 2021, the AidData research lab at William & Mary released the AidData's *Global Chinese Development Finance Dataset, Version 2.0*, a data set that includes over 13,000 Chinese development financed projects across 145 countries from 2000 to 2017. In reviewing this comprehensive data set, I noticed a phenomenon missing in BRI literature: Chinese-funded projects that are not explicitly intended to offer economic or welfare benefits. These projects, which provide few development benefits, have been overlooked by scholars and raise questions about their purpose. Why did China build a civic center in Fiji? An opera and ballet theater in Kyrgyzstan? Six football stadiums in the Democratic Republic of the Congo?

This thesis investigates this phenomenon, coined "vanity projects," and attempts to uncover China's motivation to fund non-welfare-based and non-economic based projects. Utilizing a mixed methods approach, I first conduct a large-N quantitative analysis of fourteen independent variables for all 145 countries in the original AidData data set, then perform a geospatial analysis of the identified vanity projects at a sub-national level and carry out of a qualitative analysis of selected cases.

I found that vanity projects are most likely to occur in fragile states with strong international political cooperation with China. These states consistently vote with China at the UN General Assembly, receive more Chinese financed projects, and have strong civil liberties.

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[11] Samuel Brazys and Alexander Dukalskis, "Grassroots Image Management: Confucius Institutes and Media Perceptions of China," Working Paper (AidData at William & Mary, January 10, 2019), http://docs.aiddata.org/ad4/pdfs/WPS69_Grassroots_Image_Management.pdf.
Bluhm et al., "Connective Financing: Chinese Infrastructure Projects and the Diffusion of Economic Activity in Developing Countries."

However, there is difference between politically fragile states and cases of state failure—defined as successful or attempted regime changes—as the latter is less likely to receive vanity projects. Notably, there is no singular reason explaining the vanity project phenomenon, an expected finding considering the diversity of states in the data set and the high number of different Chinese financing entities involved.

2. Literature Review

In September 2018, Xi Jinping announced that BRI financing is "not to be spent on any vanity projects but in places where they count the most."[12] However, many academic articles have observed that Beijing does fund vanity projects. In a 2021 analysis of the BRI in Uganda, Ogwang and Vanclay wrote "many projects funded by these arrangements are vanity projects that are not consistent with the country's real development needs."[13] A 2020 analysis of the BRI as a tool of diplomacy reported that "China's politically directed investments resulted in vanity projects."[14] Each of these articles have something in common: the concept of vanity projects is noted but never studied systematically.[15]

Chinese vanity projects are projects for an intended entity's benefit, but scholars have used other terms to describe these investments. A 2018 analysis of the United Kingdom labels vanity projects as "extravagant pet projects" pursued by the prime minister for "hubris"—projects that

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[12] "China's Xi Says Funds for Africa Not for 'Vanity Projects,'" *Reuters*, September 3, 2018, sec. Industry, Materials and Utilities, https://www.reuters.com/article/china-africa-idUSL3N1VO018.

[13] Tom Ogwang and Frank Vanclay, "Resource-Financed Infrastructure: Thoughts on Four Chinese-Financed Projects in Uganda," *Sustainability* 13, no. 6 (March 16, 2021): 3259, https://doi.org/10.3390/su13063259.

[14] Suisheng Zhao, "China's Belt-Road Initiative as the Signature of President Xi Jinping Diplomacy: Easier Said than Done," *Journal of Contemporary China* 29, no. 123 (May 3, 2020): 319–35, https://doi.org/10.1080/10670564.2019.1645483.

[15] To clarify, these authors have positively contributed to literature on the BRI. More than that, they are some of the few who have mentioned vanity projects in their published work.

were at times connected to Chinese companies.[16] A 2019 analysis of democracy and development by Roessler alluded to the phenomenon, writing that these projects "include the use of public resources for private purposes (e.g., palaces, Swiss bank accounts, vanity projects)."[17]

Despite the lack of literature analyzing vanity projects, there seems to be a consensus that these are so-called development projects that do not aid the country's development needs.[18] The term appears to be popularized, to the extent a term barely present in literature can be popularized, following Xi Jinping's September 2018 speech where he utilizes the term.[19]

While the purpose of vanity projects has not been well studied, scholars have extensively explored Chinese motivations for the Belt and Road Initiative and the categories of projects it funds. Some explanations focus on public diplomacy, or soft power, efforts to bolster perceptions of China abroad.[20] Others focus on connecting Chinese aid to conceptions of state legitimacy, or public perceptions of a government's legitimacy to rule.[21] Some analysis focuses on specific

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[16] Douglas Murphy, "Castles Made of Sand: How London Lost on Boris Johnson's Extravagant Pet Projects," *World Policy Journal* 35, no. 2 (June 1, 2018): 3–8, https://doi.org/10.1215/07402775-7085544.

[17] Martin Roessler, "Political Regimes and Publicly Provided Goods: Why Democracy Needs Development," *Public Choice* 180, no. 3–4 (September 2019): 301–31, https://doi.org/10.1007/s11127-019-00638-y.

[18] I first found this term, explicitly defined in this way, in a 2014 World Bank study. See: Håvard Halland et al., "Resource Financed Infrastructure: A Discussion on a New Form of Infrastructure Financing" (World Bank Group, 2014), http://dx.doi.org/10.1596/978-1-4648-0239-3.

[19] Reuters, "China's Xi Says Funds for Africa Not for 'Vanity Projects.'"

[20] Samantha Custer et al., "Ties That Bind: Quantifying China's Public Diplomacy and Its 'Good Neighbor' Effect" (Williamsburg, VA: AidData at William & Mary, June 2018).
Samantha Custer et al., "Silk Road Diplomacy" (Williamsburg, VA: AidData at William & Mary, December 2019), https://docs.aiddata.org/ad4/pdfs/Silk_Road_Diplomacy_Report.pdf.
Robert A Blair, Robert Marty, and Phillip Roessler, "Foreign Aid and Soft Power," Working Paper (AidData at William & Mary, August 2019), http://docs.aiddata.org/ad4/pdfs/WPS86_Foreign_Aid_and_Soft_Power__Great_Power_Competition_in_Africa_in_the_Early_21st_Century.pdf.

[21] Robert A Blair and Phillip Roessler, "The Effects of Chinese Aid on State Legitimacy in Africa: Cross-National and Sub-National Evidence from Surveys, Survey Experiments, and Behavioral Games," Working Paper (Williamsburg, VA: AidData at William & Mary, July 2018), http://docs.aiddata.org/ad4/pdfs/WPS59_The_Effects_of_Chinese_Aid_on_State_Legitmacy_in_Africa.pdf.

sectors of Chinese aid, like health.[22] Others on transportation and railways.[23] Sometimes Chinese finance is similar to multilateral Western finance, other times it seems predatory, inspiring the widely debated idea of "debt-trap diplomacy."[24] Thus, scholars of the BRI point to Beijing's desire to achieve geostrategic goals (e.g. increase China's global influence), economic development of the recipient state, public and elite perceptions of China, and grow China's trade network. That said, there is little scholarly consensus regarding the motivations behind China's Belt and Road Initiative—but many are worried.[25]

3. Theory

This thesis conceptualizes vanity projects as those that do not have a specific economic or welfare purpose. The following methodology section will operationalize vanity projects by clearly explaining my data collection steps.

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[22] Karen A. Grépin et al., "China's Role as a Global Health Donor in Africa: What Can We Learn from Studying under Reported Resource Flows?," *Globalization and Health* 10, no. 1 (December 30, 2014): 84, https://doi.org/10.1186/s12992-014-0084-6.
Andreas Fuchs et al., "Mask Wars: China's Exports of Medical Goods in Times of COVID-19," *SSRN Electronic Journal; AidData Working Paper 108*, June 2021, https://doi.org/10.2139/ssrn.3661798.
[23] Jessica Dicarlo, "Grounding Development Finance and Safeguards through Land Compensation on the Laos-China Belt and Road Corridor," GCI Working Paper (Boston University's Global Development Policy Center Global China Initiative, n.d.), https://www.bu.edu/gdp/files/2021/01/GCI_WP_013_Jessica_DiCarlo.pdf.
Yunnan Chen, "The Political Economy of Railway Development in Ethiopia's Railway Sector and Implications for Technology Transfer," GCI Working Paper (Boston University's Global Development Policy Center Global China Initiative, January 2021), https://www.bu.edu/gdp/files/2021/01/GCI_WP_014_Yunnan_Chen.pdf.
[24] Alysha Gardner et al., "Bargaining with Beijing: A Tale of Two Borrowers" (AidData at William & Mary, Center for Global Development, February 2021), https://www.cgdev.org/sites/default/files/bargaining-beijing-tale-two-borrowers-revised-feb2021.pdf.
Kai Gehring, Lennart C. Kaplan, and Melvin H.L. Wong, "China and the World Bank - How Contrasting Development Approaches Affect the Stability of African States," *SSRN Electronic Journal, AidData at William & Mary*, September 2019, 120, https://doi.org/10.2139/ssrn.3467991.
[25] Krishna Chaitanya Vadlamannati et al., "Building Bridges or Breaking Bonds? The Belt and Road Initiative and Foreign Aid Competition," *SSRN Electronic Journal, AidData at William & Mary*, April 2019, 50, https://doi.org/10.2139/ssrn.3329502.

3a. Conceptualization of Vanity Projects

A Chinese financed vanity project is a project which does not aid the country's development needs. A vanity project is not a Chinese-funded economic project which seeks to expand a region's economy. For instance, a hotel falls under this designation as it improves the tourism sector; a railroad facilitates the movement of goods, services, and people, thus expanding an economy; and a hydropower dam provides clean energy which can be exported or utilized internally by a state. Nor is a vanity project a welfare project which is conceptualized as one that seeks to improve human development, such as meeting the UN Sustainable Development Goals (SDGs). Thus, constructing a school is a welfare project because quality education is an SDG. While not necessarily pursing an economic or welfare purpose, Chinese language or cultural projects are also not vanity projects. These projects have a strict public diplomacy agenda and aim to spread soft power. These projects are well-studied and have a clear geostrategic purpose.

3b. Hypotheses

Based on my conceptualization of vanity projects, I crafted fourteen hypotheses displayed in Table 1.[26] These fourteen hypotheses consider a range of factors thought to be influential in international development: regime type, state stability, civil and political freedoms, political

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[26] Based on data availability, some of the hypotheses were edited. For instance, hypothesis thirteen was originally centered around public sentiment towards China. There is no open-source data available on this topic for each year between 2000 and 2017, so the hypothesis was edited to instances of protests in a state. This is not a perfect proxy for public sentiment and further research about Chinese financed vanity projects should consider including a better proxy. One way to study this could be a sentiment analysis of media sources in the region where a vanity project is located.

Further, there was an additional hypothesis regarding elite sentiment of China. Similar to public sentiment, there is no data publicly available for each year between 2000 and 2017. There is no specific proxy variable for elite sentiment. Instead, there are multiple variables that involve elites. Variable three, instances of state failure, and variable five, instances of federal elections, both involve political elites and the changing power structure within a state. At the sub-national level, there is an analysis of the political implications of project locations, specifically whether projects are located in a country's political capital and/or in the head of state's home region. Further analysis on this topic should include accurate data on elite sentiment of China.

cooperation, voluntary and adverse regime changes, civil and violent unrest, international competition for spheres of influence, economic changes, public and elite sentiment, and general Chinese development financing. The hypotheses were developed to reflect and integrate each of these factors. I wanted to make sure when searching for an explanation behind vanity projects, I did not leave one of the major factors out of my analysis.

Variable	Null Hypothesis (H₀)	Alternative Hypothesis (H₁)
IV1: State's democracy level (regime type)	A state's democracy levels do not impact the quantity of Chinese financed vanity project in a state year to year.	A state's democracy levels do impact the quantity of Chinese financed vanity project in a state year to year.
IV2: State's fragility level	Changes in a state's fragility does not impact the quantity of Chinese financed vanity project in a state year to year.	Changes in a state's fragility does impact the quantity of Chinese financed vanity project in a state year to year.
IV3: Instances of state failure	Instances of state failure do not impact the quantity of Chinese financed vanity project in a state year to year.	Instances of state failure do impact the quantity of Chinese financed vanity project in a state year to year.
IV4: Political violence in the state	Occurrences of political violence do not impact the quantity of Chinese financed vanity project in a state year to year.	Occurrences of political violence do impact the quantity of Chinese financed vanity project in a state year to year.
IV5: Occurrences of federal elections	Occurrences of federal elections do not impact the quantity of Chinese financed vanity project in a state year to year.	Occurrences of federal elections do impact the quantity of Chinese financed vanity project in a state year to year.
IV6: State's level of political rights	A state's political rights do not impact the quantity of Chinese financed vanity project in a state year to year.	A state's political rights do impact the quantity of Chinese financed vanity project in a state year to year.
IV7: State's level of civil liberties	A state's civil liberties do not impact the quantity of Chinese financed vanity project in a state year to year.	A state's civil liberties do impact the quantity of Chinese financed vanity project in a state year to year.
IV8: Voting with the United States at the UNGA	Voting with the United States at the United Nations General Assembly does not impact the quantity of Chinese financed vanity project in a state year to year.	Voting with the United States at the United Nations General Assembly does impact the quantity of Chinese financed vanity project in a state year to year.
IV9: Voting with China at the UNGA	Voting with the China at the United Nations General Assembly does not impact the quantity of Chinese financed vanity project in a state year to year.	Voting with the China at the United Nations General Assembly does impact the quantity of Chinese financed vanity project in a state year to year.
IV10: Overall quantity of Chinese development financing projects	The overall quantity of Chinese development financing projects does not impact the quantity of Chinese financed vanity project in a state year to year.	The overall quantity of Chinese development financing projects does impact the quantity of Chinese financed vanity project in a state year to year.
IV11: Changes in GDP	Changes in gross domestic product does not impact the quantity of Chinese financed vanity project in a state year to year.	Changes in gross domestic product does impact the quantity of Chinese financed vanity project in a state year to year.
IV12: Changes in GDP per capita	Changes in gross domestic product per capita does not impact the quantity of Chinese financed vanity project in a state year to year.	Changes in gross domestic product per capita does impact the quantity of Chinese financed vanity project in a state year to year.
IV13: Instances of protests in a state	Occurrences of protests do not impact the quantity of Chinese financed vanity project in a state year to year.	Occurrences of protests do impact the quantity of Chinese financed vanity project in a state year to year.
IV14: Overall amount of US development financing	The overall amount of United States development financing projects does not impact the quantity of Chinese financed vanity project in a state year to year.	The overall amount of United States development financing projects does impact the quantity of Chinese financed vanity project in a state year to year.

Table 1: Hypotheses about the impact of selected independent variables.

4. Methodology

In September 2021, William & Mary's AidData research team released the most comprehensive open-source data set on Chinese development financing available publicly.[27] The data set, covering 2000 to 2017, records over 13,000 Chinese development financing projects worth 843 billion USD in 145 countries. AidData explains the motivation behind its research as a response to "China and other so-called 'emerging' donors and creditors [fundamentally changing] the international development finance landscape; however, many of these actors do not participate in existing global reporting systems."[28]

The Tracking Underreported Financial Flows methodology, first developed by AidData in April 2013, is a technique to identify aid and credit allocations by states who do not openly publish these financial and material disbursements.[29] To accomplish this, researchers parse information published by governments, intergovernmental organizations, companies, nongovernmental organizations, journalists, and research institutions. When available, the methodology favors data from official sources.

4a. Data on Vanity Projects

My classification of vanity projects is based on data from the AidData data set. This decision was made due to the wide breadth of the data set, its open-source nature, and academic

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[27] Ammar A Malik et al., "Banking on the Belt and Road" (AidData at William & Mary, September 2021), https://docs.aiddata.org/ad4/pdfs/Banking_on_the_Belt_and_Road__Insights_from_a_new_global_dataset_of_1342 7_Chinese_development_projects.pdf.

[28] Samantha Custer et al., "Tracking Chinese Development Finance: An Application of AidData's TUFF 2.0 Methodology" (Williamsburg, VA: AidData at William & Mary, 2021), https://docs.aiddata.org/ad4/pdfs/AidData_TUFF_methodology_2_0.pdf.

[29] "AidData's Global Chinese Development Finance Dataset, Version 2.0," AidData, 2021, https://www.aiddata.org/data/aiddatas-global-chinese-development-finance-dataset-version-2-0.

credibility. To curate my final data set I created five-step inclusion criteria to evaluate each Chinese development financing project. As an additional check on the quality of the data set, I chose ten data points I knew were vanity projects and ensured that my selection criteria captured all these projects.[30] Figure 1 below outlines my inclusion criteria to identify projects that do (and do not) represent vanity projects.

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[30] Original iterations of the inclusion criteria excluded key projects. For instance, in one iteration the criteria excluded projects coded as "Official Development Aid" because I believed the category to indicate an alignment with international development initiatives, including the United Nations Sustainable Development Goals. This assumption was wrong, and the tracking of key data points highlighted this error. Further, my thesis analyzes projects geographically and temporally. If a data point does not have this data, it cannot be analyzed in my thesis.
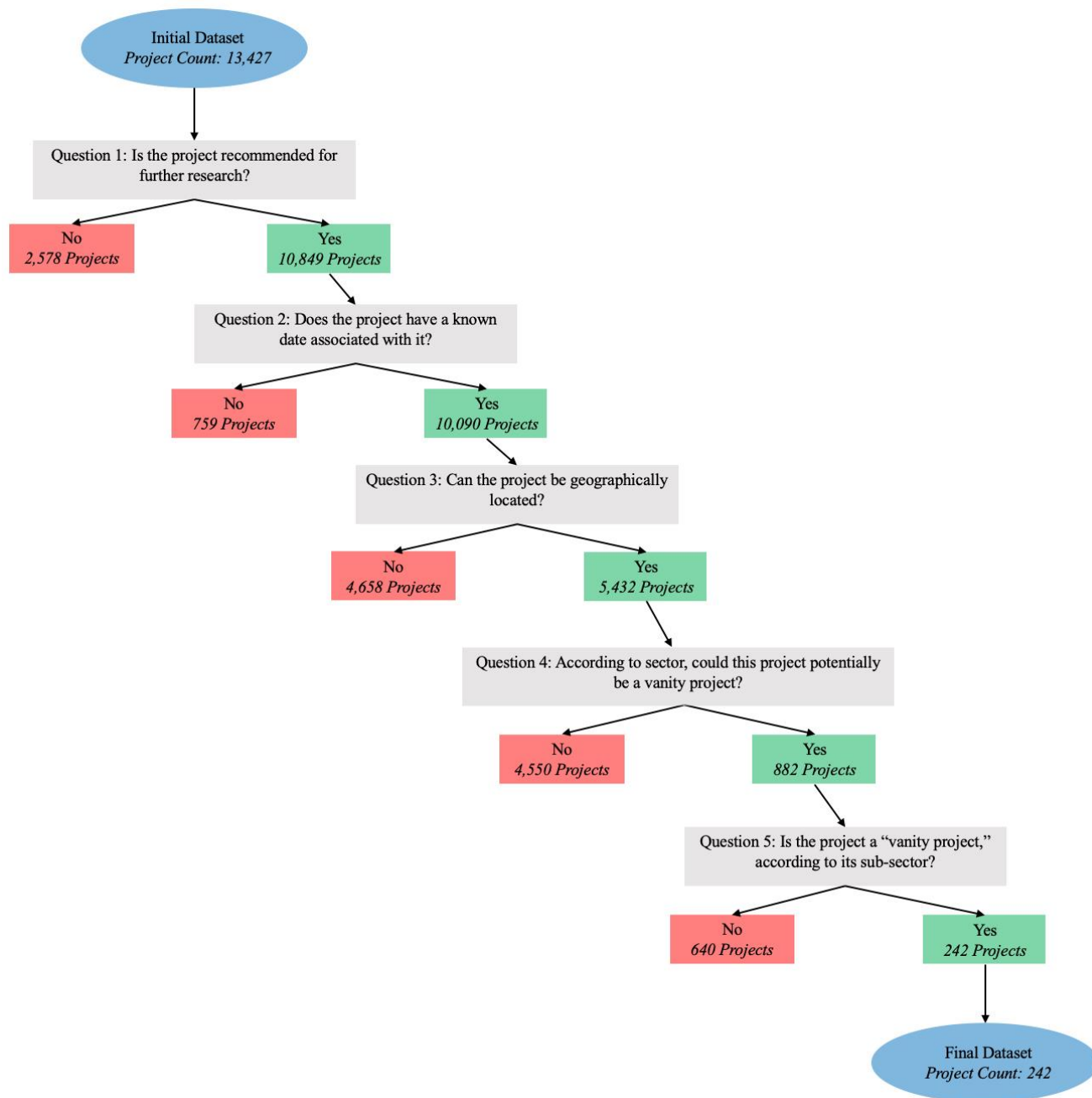
Figure 1: Decision tree of inclusion criteria

The AidData data set includes a field called "Recommend for Aggregates." The accompanying codebook describes this field as:

This field identifies projects that AidData recommends including in analysis that requires the aggregation of projects supported by official financial (or in-kind) commitments from China, including analysis of monetary amounts and project counts. It is useful for identifying formally approved, active, and completed Chinese government-financed projects – and excluding all cancelled projects, suspended projects, and projects that never reached the formal approval (official commitment) stage. The field is set to 'Yes' for all projects with a status designation of Pipeline: Commitment, Implementation, and Completion that have not also been designated as umbrella agreements. It is set to 'No' for all cancelled projects, suspended projects, and projects that never reached the official commitment stage (i.e. those projects with a status designation of Pipeline: Pledge, Suspended, and Cancelled). Additionally, to avoid double-counting, the field is set to 'No' for all umbrella agreements.[31]

Following the codebook's recommendation, the first inclusion criterion rejects projects which are marked "No" in the "Recommended for Aggregates" column. This thesis does aggregate projects and thus, projects which are canceled, never formally approved, or umbrella (i.e., has sub projects which are also recorded in the data set) are irrelevant.

To analyze the causes of vanity projects, a confirmed date is required to be associated with each project. Every AidData project has a "Commitment Year" identified. This is defined by the codebook as "[capturing] the year in which an official financial commitment (or official commitment to provide in-kind support) was codified through the signing of a formal agreement."[32] However, some of these commitment years are estimated based on other known facts about the project. Estimated years are indicated by a "Yes" response in the "Commitment Year Estimated" column.

Temporal analysis for this thesis relies on the "Commitment Year" field as opposed to other temporally related fields because this column has the most complete data. For instance, the "Implementation Start Year" identifies when a project begins but is often left blank. Further, the "Commitment Year" field is more relevant as many of my hypotheses deal with interactions

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[31] "AidData's Global Chinese Development Finance Dataset, Version 2.0."
[32] "AidData's Global Chinese Development Finance Dataset, Version 2.0."

between China and a recipient nation that prompt the initiation of a vanity project. Thus, this inclusion criterion accepted projects marked as "No" in the "Commitment Year Estimated" field.

This thesis involves geospatial analysis at the sub-national level and thus requires data to have a known geographic location associated with it. Most of these locations are precise, but some of the locations are only identified at the first administrative level (ADM1), or the first federally acknowledged boundary.[33] Geographically locatable projects are noted in the AidData data set by having an entry in the "Geographic Location" column. Projects which are not geographically locatable include projects generically donated to a country, for instance, food aid given to the country at large.

Every AidData project is associated with "a sector name based upon the primary sectoral focus of the project."[34] These 24 sectors are from the OECD's sector categorization scheme.[35] Table 2 below shows the OECD sectors that potentially contain vanity projects and Table 3 shows the OECD sectors which do not contain vanity projects and why. Sectors deemed not pertinent were blanket rejected.

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[33] geoBoundaries, a global repository of boundary data based out of William & Mary, explains the different administrative division (ADM) levels. ADM0 represent the country's international boundary. ADM1 is the first order administrative unit, usually state or province boundaries. ADM2 is the second order administrative unit, usually municipality boundaries. This classification continues until the smallest geographical unit of administration. geoBoundaries, "Comprehensive Global Administrative Zones (CGAZ)," William & Mary geoLab, accessed April 26, 2022, https://www.geoboundaries.org/downloadCGAZ.html.

[34] "AidData's Global Chinese Development Finance Dataset, Version 2.0.".

[35] "Purpose Codes: Sector Classification," OECD, accessed January 26, 2022, https://www.oecd.org/development/financing-sustainable-development/development-finance-standards/purposecodessectorclassification.htm.

OECD Sector Name & Code	Comments
Government and civil society (150)	This OECD sector is comparable to UN SDG 16 Peace, Justice, and Strong Institutions. The UN defines this goal as to "promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels." While most of the projects in this sector are not vanity projects, it is still labelled as a yes because some miscellaneous civil society projects sorted into this sector are vanity projects.
Other social infrastructure and services (160)	This category is a catch-all sector for projects that do not specifically fit into the other sectors. It is a sector that potentially contains vanity projects because of its broad range.
Other multisector (430)	This category is a catch-all sector for projects that do not specifically fit into the other sectors. It is a sector that potentially contains vanity projects because of its broad range.
Other commodity assistance (530)	This category is a catch-all sector for projects that do not specifically fit into the other sectors. It is a sector that potentially contains vanity projects because of its broad range.
Unallocated/unspecified (998)	This category is a catch-all sector for projects that do not specifically fit into the other sectors. It is a sector that potentially contains vanity projects because of its broad range.

Table 2: Table of sector codes that do potentially include vanity projects[36]

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[36] United Nations, "THE 17 GOALS | Sustainable Development," accessed April 26, 2022, https://sdgs.un.org/goals.

OECD Sector Name & Code	Comments
Education (110)	This OECD sector does not contain any vanity projects because the sector is directly aligned with the United Nations (UN) Sustainable Development Goal (SDG) 4 Quality Education. The UN defines this goal as to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."
Health (120)	This OECD sector does not contain any vanity projects because the sector is directly aligned with the UN SDG 3 Good Health and Well-being. The UN defines this goal as to "ensure healthy lives and promote well-being for all at all ages."
Population policies/programs and reproductive health (130)	This OECD sector does not contain any vanity projects because the sector is a combination of UN SDG 3 Good Health and Well-being and UN SDG 5 Gender Equality. The UN defines these goals as to "ensure healthy lives and promote well-being for all at all ages" and to "achieve gender equality and empower all women and girls."
Water supply and sanitation (140)	This OECD sector does not contain any vanity projects because the sector is directly aligned with the UN SDG 6 Clean Water and Sanitation. The UN defines this goal as to "ensure availability and sustainable management of water and sanitation for all."
Transport and storage (210)	This OECD sector does not contain any vanity projects because the sector is aligned with the infrastructure portion of UN SDG 9 Industry, Innovation, and Infrastructure. The UN defines this goal as to "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation."
Communications (220)	This OECD sector does not contain any vanity projects because the sector is aligned with the infrastructure portion of UN SDG 9 Industry, Innovation, and Infrastructure. The UN defines this goal as to "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation."
Energy (230)	This OECD sector does not contain any vanity projects because the sector is directly aligned with the UN SDG 7 Affordable and Clean Energy. The UN defines this goal as to "ensure access to affordable, reliable, sustainable, and modern energy for all."
Banking and financial services (240)	This OECD sector deals directly with financial services and businesses, and thus, has an explicit economic purpose.
Business and other services (250)	This OECD sector deals directly with financial services and businesses, and thus, has an explicit economic purpose.
Agriculture, forestry, and fishing (310)	This OECD sector does not contain any vanity projects because the sector is aligned with agriculture portion of the UN SDG 2 Zero Hunger. The UN defines this goal as to "end hunger, achieved food security and improved nutrition, and promote sustainable agriculture."
Industry, mining, and construction (320)	This OECD sector does not contain any vanity projects because the sector is aligned with the industrialization portion of UN SDG 9 Industry, Innovation, and Infrastructure. The UN defines this goal as to "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation."
Trade policies and regulation (330)	This OECD sector deals directly with international trade, and thus, has an explicit economic purpose.
General environmental protection (410)	This OECD sector does not contain any vanity projects because the sector is aligned with the UN SDG 13 Climate Action. The UN defines this goal as to "take urgent action to combat climate change and its impacts."
General budget support (510)	This OECD sector deals directly with government budgets, and thus, has an explicit economic purpose.
Developmental food aid/food security assistance (520)	This OECD sector does not contain any vanity projects because the sector is directly aligned with the UN SDG 2 Zero Hunger. The UN defines this goal as to "end hunger, achieved food security and improved nutrition, and promote sustainable agriculture."
Action relating to debt (600)	This OECD sector deals directly with financial services and businesses, and thus, has an explicit economic purpose.
Emergency response (720)	While this OECD sector does not directly align with UN SDGs, its purposes is always a reaction to an emergency. Thus, it is not premeditated aid and occurs, usually, along with aid from other international actors.
Reconstruction relief and rehabilitation (730)	While this OECD sector does not directly align with UN SDGs, its purposes is always a reaction to an emergency. Thus, it is not premeditated aid and occurs, usually, along with aid from other international actors.
Disaster prevention and preparedness (740)	This OECD sector does not contain any vanity projects because the sector is aligned with the UN SDG 13 Climate Action. The UN defines this goal as to "take urgent action to combat climate change and its impacts." Many projects in this sector are related to climate change, and often disaster prevention is intertwined with climate change responses.

Table 3: Table of sector codes that do not potentially contain vanity projects[37]

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[37] United Nations, "THE 17 GOALS | Sustainable Development."

The remaining 882 projects were manually coded into six sub-sectors codes. Some projects fit into two categories and were placed into the one that best fit its activity. To ensure the accuracy of the coding, the data set was reviewed multiple times to ensure all vanity projects were captured. All projects not identified as the vanity project sub-sector were rejected from the data set.

Sub-Sector Name	Comments
Chinese Language or Culture (C)	While this sub-sector does not align directly with any UN SDGs, it has been sorted out as not vanity projects because each of these projects specifically seeks to promote aspects of Chinese language and culture. These soft power initiatives are a form of public diplomacy. The most common type of project in this category is Confucius Institutes.
Housing (H)	This sub-sector does not contain any vanity projects because it is directly aligned with part of the UN SDG 11 Sustainable Cities and Communities. Target 9.1, or the primary target of this goal is, "by 2030, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums." Projects in this category are all housing development projects.
Government Administration and Initiatives (G)	This sub-sector is comparable to UN SDG 16 Peace, Justice, and Strong Institutions. The UN defines this goal as to "promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels." Projects in this sub-sector include office supplies for government buildings, government communications, police, government-run surveillance systems, and more.
Economic Focused Endeavors (E)	This sub-sector is a broadly defined category for projects which have a primarily economic intent. Most of these projects fit under UN SDG 8 Decent Work and Economic Growth, however, this thesis does not restrict them to a specific development goal due to the wide variety of projects. Projects in this sub-sector include hotels, energy generation, convention centers, and more.
Welfare Focused Endeavors (W)	This sub-sector is a broadly defined category for projects which have a primarily welfare intent. Most of these projects fit under UN SDG 1 No Poverty, however, this thesis does not restrict them to a specific development goal due to the wide variety of projects. Projects in this sub-sector include orphanages, education, de-mining, public lighting, climate resiliency, and more.
Vanity Projects (V)	Projects selected as vanity projects do not have a primarily economic or welfare intent or seek to explicitly support China. Projects which did not fit into the above sub-sectors, and are thus identified as vanity projects, can be broken down into four categories: athletics, fine arts, recipient country's language, culture, or history, and miscellaneous.

Table 4: Table of manually coded sub-sector codes[38]

This thesis treats each geographic location of a project independently, in contrast to AidData, which focuses on independent financial flows above other factors. In the first geographic manipulation of the data, I manually identified nine projects which represented more than one

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[38] United Nations, "THE 17 GOALS | Sustainable Development."

geographic location. I then split each project up so that every data point in my thesis represents a unique geographic location. These 9 projects become 35 projects each with a unique location.

Next, since AidData's projects are sorted based on financial flows, some projects are under different data points because two different types of financial flows go to the same project. Each project in my data set must represent a unique purpose, therefore, multiple points representing the same event would disrupt this analysis. I identified 84 projects in the data set as matching other projects or having the same exact purpose as other projects. These 84 projects were condensed to 35 projects.

149 projects required no geographic manipulation, leaving 219 projects in the final data set. Each of these projects has a unique geographic location and purpose.
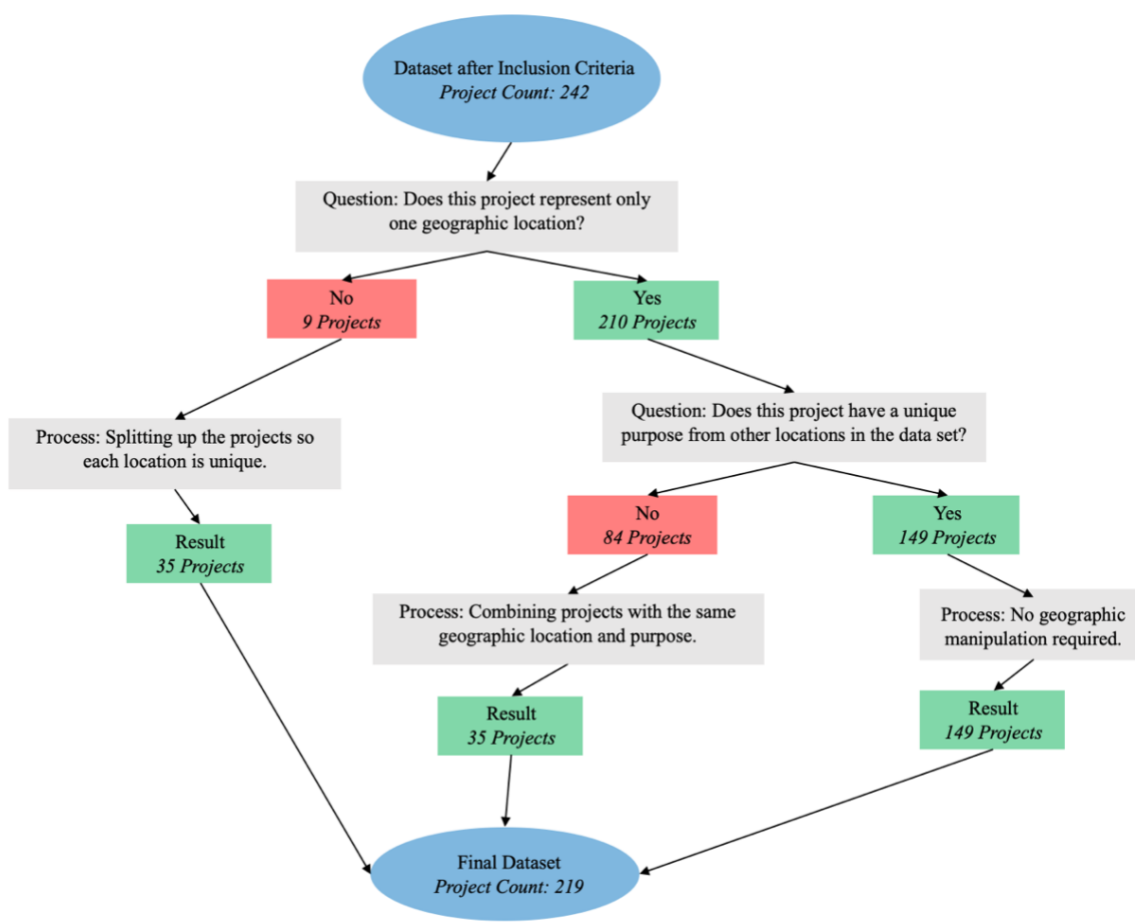
Figure 2: Diagram of geographic manipulation steps

Finally, for each of the 219 projects I identified the precise project location when possible, and the ADM1 and ADM2 levels of the project.[39] This extra data builds upon the original AidData geographical data. This geographic precision allows for sub-national analysis of vanity projects.

4b. Mixed-Methods Approach

To understand the vanity project phenomenon this thesis utilizes a mixed methods approach, combining quantitative, qualitative, and geospatial analysis. This approach allows for a large-N cross-national analysis of the vanity project data set and a sub-national analysis focusing on specific projects. This mixed methods approach is important as it studies potential reasons from different angles with different methodology.

Part one of the data analysis section explores the vanity project data set. This exploration maps aspects of the data spatially and graphically, often in comparison to the original data set. This first analysis section allowed me to comprehend the data and influenced decisions made later in the data analysis.

Secondly, I did a quantitative large-N analysis of the fourteen variables conceptualized in the proceeding theory section. The exact data utilized in this analysis is explained in the variable construction portion of this methodology, but the unit of analysis is each year in a state. To analyze these variables, I ran regressions in R to investigate statistical significance and the direction of correlation. I used the Poisson event count model for my regressions since my dependent variable is a count of vanity projects. I additionally ran an OLS regression as a robustness check.

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[39] The naming of the ADM1 and ADM2 levels is from the geoBoundaries 5.0 dataset so my table could be merged with shapefiles. Daniel Runfola et al., "GeoBoundaries: A Global Database of Political Administrative Boundaries," *PLOS ONE* 15, no. 4 (April 24, 2020): e0231866, https://doi.org/10.1371/journal.pone.0231866.

Running the model for all 145 states allowed me to make sure a condition did not come out as significant when the same condition was present in a state with no vanity projects. For the 86 of these states without vanity projects, the dependent variable was 0 for each year. This method gave me a maximum of 2,610 data points for each variable, or 18 years for all 145 countries.[40]

Thirdly, to complement my cross-national results, I conducted a sub-national geospatial analysis. This analysis focuses on understanding where vanity projects occur in a state.[41] In this section I wanted to better understand the potential interactions with public and elite sentiments because those variables were not precisely covered by the large-N analysis due to data availability. This objective is accomplished in this analysis by understanding where projects occur in relation to population and political centers. Finally, I conducted case studies to see if the conditions flagged as significant by my cross-national statistics models were present in a state.

4c. Variable Construction

The dependent variable is the count of vanity projects per year in a state. The dependent variable was modified once by leading it, with the goal of understanding potential temporal relationships between dependent and independent variables. The reason for doing this is it ensure the independent variables occurs before the dependent variable, as opposed to concurrently or after.

Independent variables one through four, which measure regime type and stability, use data from the Polity5 Project. The Polity5 data set "examines concomitant qualities of democratic and autocratic authority in governing institutions, rather than discreet and mutually exclusive forms of

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[40] In reality, every regression ran with a smaller N due to missing data and South Sudan not being founded until 2011.
[41] This analysis was possible because of the geographic manipulation I conducted when constructing the data set and discussed earlier in the methodology.

governance."[42] This approach allows Polity5 to study a wide range of regimes, from the fully

institutionalized to the transitional, mixed regimes. To measure regime type for variable one, I use

Polity5's primary data set.[43] The methodology scores countries from -10 to 10, with lower numbers

being the least democratic. To ease interpretation of my regression results, I recoded the data to

range from 1 to 21, with lower numbers still being the least democratic. For example, North Korea

was scored a 1 and Cabo Verde a 21 in 2001.

To measure state fragility, I use Polity5's State Fragility Index and Matrix.[44] Each country

is annually scored from 0 to 25, with 25 being the most fragile state. In the data set, Somalia is

scored as a 25 in 2008 and Mauritius as a 0 in 2017. To measure instances of state failure, variable

three, I use Polity5's PITF State Failure Problem Set and the Coups d'État data.[45] Variable three

counts the number of state failures, or attempted state failures, in each country each year. Events

identified by Polity5 include successful coups, attempted coups, ousting of the head of state by

foreign forces, and assassination of executives, among other things. Finally, the measure of levels

of political violence, variable four, is from Polity5's Major Episodes of Political Violence.[46] The

data separates violence into six categories, then rates the magnitude of violence in that category

from one, no violence, to ten, severe violence. The categories are episode(s) of international

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[42] Monty G Marshall and Ted Robert Gurr, "Polity5: Political Regime Characteristics and Transitions, 1800-2018" (Center for Systemic Peace and Societal-Systems Research Inc, April 23, 2020), http://www.systemicpeace.org/inscr/p5manualv2018.pdf.

[43] Marshall and Gurr, "Polity5: Political Regime Characteristics and Transitions, 1800-2018."

[44] Monty G Marshall and Gabrielle Elzinga-Marshall, "State Fragility Index" (Center for Systemic Peace and Societal-Systems Research Inc, 2018).

[45] Monty G Marshall, Ted Robert Gurr, and Barbara Harff, "PTF - State Failure Problem Set: Internal Wars and Failures of Government, 1955 - 2018," September 2, 2019, 16. "Political Instability Task Force (PITF) Consolidated Problem Set, Historical State Armed Conflicts and Regime Crises, 1955-2018" (Center for Systemic Peace and Societal-Systems Research Inc, 2018), http://www.systemicpeace.org/inscr/PITF%20Consolidated%20Case%20List%202018.pdf.

[46] Monty G Marshall, "Major Episodes of Political Violence and Conflict Regions, 1946-2018" (Center for Systemic Peace and Societal-Systems Research Inc, July 25, 2019), http://www.systemicpeace.org/inscr/MEPVcodebook2018.pdf.

violence, international warfare, civil violence, civil war, ethnic violence, and ethnic warfare involving that state in that year. My measure is the sum of these six categories.

To measure occurrences of federal elections, variable five, I used data from IPU Parline.[47] This data was supplemented by information from states' government websites. IPU Parline obtains its data directly from a state's national government. In my thesis, the values represent the number of federal elections occurring in the state that year. I defined federal elections as lower house, upper house, and head of state elections. For instance, the Maldives has a value of one in 2005 because the Maldives parliamentary election, called the People's Majilis, occurred, but no other elections did.

Independent variable six is level of political rights by Freedom House.[48] Values for each country in a year are on a 7-point scale, with 7 being the least free. To standardize my data, I recoded both variable six and seven making one the least free, thus reversing the scale. This allows the higher values to indicate that more freedoms are present. For instance, Guinea is scored as a 1 in 2008 and Saint Lucia as a 7 in 2000. Freedom House's overall rights score is a combination of the political rights and civil liberties scores. I separated these dimensions into two variables to isolate political freedoms from civil ones. A society's ability to elect a government is different from, for instance, press freedoms. The political rights category considers measures of the electoral process, political pluralism and participation, and functioning of government.

To study the level of civil liberties in a state each year, or how free a civil society is, for variable seven, I utilize Freedom House's civil liberties score.[49] The civil liberties score is a

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[47] "Parline: The IPU's Open Data Platform," Parline: the IPU's Open Data Platform, accessed April 26, 2022, https://data.ipu.org/.

[48] "Freedom in the World," Freedom House, accessed April 26, 2022, https://freedomhouse.org/countries/freedom-world/scores.

[49] Freedom House, "Freedom in the World."

measure of four categories: freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights. Similar to the political rights data after my recoding, countries are assigned a value between one and seven, with one being the least free. In this data set, Costa Rica is ranked as a 7 in 2003 and Myanmar a 1 in 2000.

To measure agreement with the United States at the UN General Assembly I used data published by the researchers Michael Bailey, Anton Strezhnev, and Erik Voeten on Harvard Dataverse.[50] The original data set assesses how each state has voted on roll call votes at the General Assembly since its founding. I use the focused data on how often a country agrees with another country. Agreement is defined as voting the same way on a vote, it does not necessarily mean the two states are working together. First, I looked at how often states votes with the United States. The values range from 0 to 1, with 0 being no agreeing votes with the United States and 1 being complete agreement with the United States on votes. For instance, the Marshall Islands voted with the United States 94% of the time in 2002 in contrast to Turkmenistan who voted with the United States 9.8% of the time in 2007. For variable nine, I used the same data to look at agreement with China at the UN General Assembly. Again, the values range from 0 to 1, with 0 being no agreeing votes with the China and 1 being complete agreement with the China on votes. As am example, Nauru voted with China 14% of the time in 2011 and Nepal voted with China 93% of the time in 2001.

For variable ten I investigated the total number of Chinese development financing projects in a country in a year using the AidData data set.[51] This is the same data set my dependent variable, vanity projects, is from. However, the vanity projects data set cultivated for this thesis included

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[50] Erik Voeten, Anton Strezhnev, and Michael Bailey, "United Nations General Assembly Voting Data" (Harvard Dataverse, May 6, 2021), https://doi.org/10.7910/DVN/LEJUQZ.
[51] Malik et al., "Banking on the Belt and Road."

geographical and time manipulation, as detailed earlier in the methodology. This independent variable did not include the same variation. Further research should apply the variation to both data sets equally to better conceptualize the breadth of Chinese development financing.

My Gross Domestic Product data, variable eleven, is from the World Bank and standardized in constant 2015 USD.[52] Actualized rates of change were generated from this with a one-year lag. For instance, the data point for Afghanistan in year 2000 is Afghanistan's 2000 GDP minus Afghanistan's 1999 GDP. Similarly, for GDP per capita, variable twelve, I also used World Bank data, which was standardized in constant 2015 USD.[53] GDP per capita gives a more accurate economic measurement based on a population. Once again, I manipulated the data to consider change from the previous year.

To measure protests, my proxy variable for public sentiment (variable thirteen), uses data from the Mass Mobilization Project, accessed through Harvard Dataverse.[54] The data set aggregates the number of protests in a country per year, conceptualizing a protest as an event involving 50 or more people publicly demonstrating against the government. For instance, there were 21 protests in Tunisia in 2011, many of which were part of the 2011 Arab Spring.

For variable fourteen, US development financing, I obtained data from USAID and the US Department of State's data repository on foreignassistance.gov.[55] The "Country Summary" data displays US development financing by country per year. I looked at the disbursement values in constant USD amount.

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[52] "GDP (Constant 2015 US$)," World Bank, accessed April 26, 2022, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?name_desc=false.
[53] "GDP per Capita (Constant 2015 US$)," World Bank, accessed April 26, 2022, https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?name_desc=false.
[54] David Clark and Patrick Regan, "Mass Mobilization Protest Data" (Harvard Dataverse, March 31, 2020), https://doi.org/10.7910/DVN/HTTWYL.
[55] "Country Summary," ForeignAssistance.gov, April 22, 2022, https://foreignassistance.gov/.

5. Analysis

As discussed in the methodology, this analysis section is split into three parts to conduct a holistic study of the potential variables influencing the occurrence of vanity projects in a given year in a state.

5a. Exploratory Analysis

This data set features 219 unique vanity projects. To review, a vanity project is a project which does not have a clear, internationally recognized development purpose, such as athletics and the fine arts.

All 219 projects in the data set are directly or indirectly financed by the Chinese government. The breakdown of the specific financiers is shown in Figure 3, which demonstrates how many projects each agency financed, not the amount each agency provided in the financing.

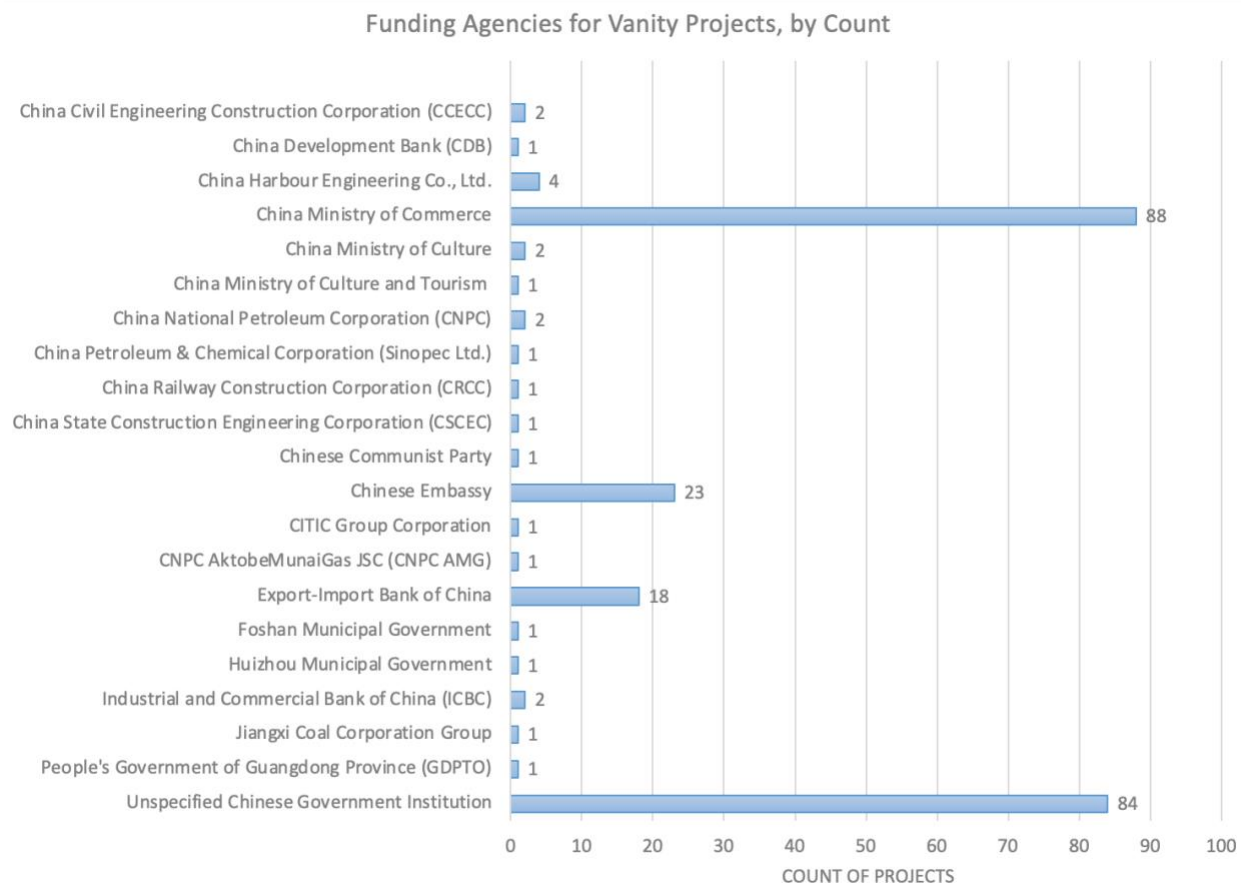Funding Agencies for Vanity Projects, by Count

Figure 3: Distinct Chinese entities funding vanity projects, broken down by number of projects and ordered alphabetically. When multiple funding agencies were involved in a project, they were all listed. For this reason, there are 237 projects, instead of 219. The reason for this decision was to accurately represent how much each agency participates in vanity projects.

Most vanity projects are funded by a few Chinese entities. Figure 4 groups Chinese funders who nominally invested in a few projects together. Nominal investment applies to agencies who invested in fewer than 100 projects, or less than 1% of the whole data set.

The result is striking. The China Ministry of Commerce (MOFCOM) finances 37% of vanity projects, despite funding only 14% of projects in the overall data set. AidData found that MOFCOM, a Chinese central government agency, "issues loans on extremely generous terms—with average concessionality rates (i.e., grant elements) that approach 75%."[56] MOFCOM tends

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[56] Malik et al., "Banking on the Belt and Road."

to focus on projects which "generate diplomatic and geostrategic benefits rather than commercial benefits."[57] The prevalence of MOFCOM funding in the vanity project data set supports this statement as the definition of vanity projects excludes development projects with commercial benefits. Similarly, Chinese embassy projects, or projects financed by embassies in recipient countries, tend to focus on diplomatic and non-commercial projects.

While MOFCOM and Chinese Embassies together finance 46.83% of vanity projects, it is important to note that unspecified or other Chinese entities together finance 44.32% of vanity projects. This latter number indicates the likelihood of many smaller Chinese entities contributing to the existence of vanity projects. Most endeavors in China are top down, or perceived to be such, but the wide breadth of agencies suggests that vanity projects are not necessarily a unified strategy adopted by the Chinese Community Party. But this is a slim possibility due to the expansive and controlling role of the Chinese Communist Party.

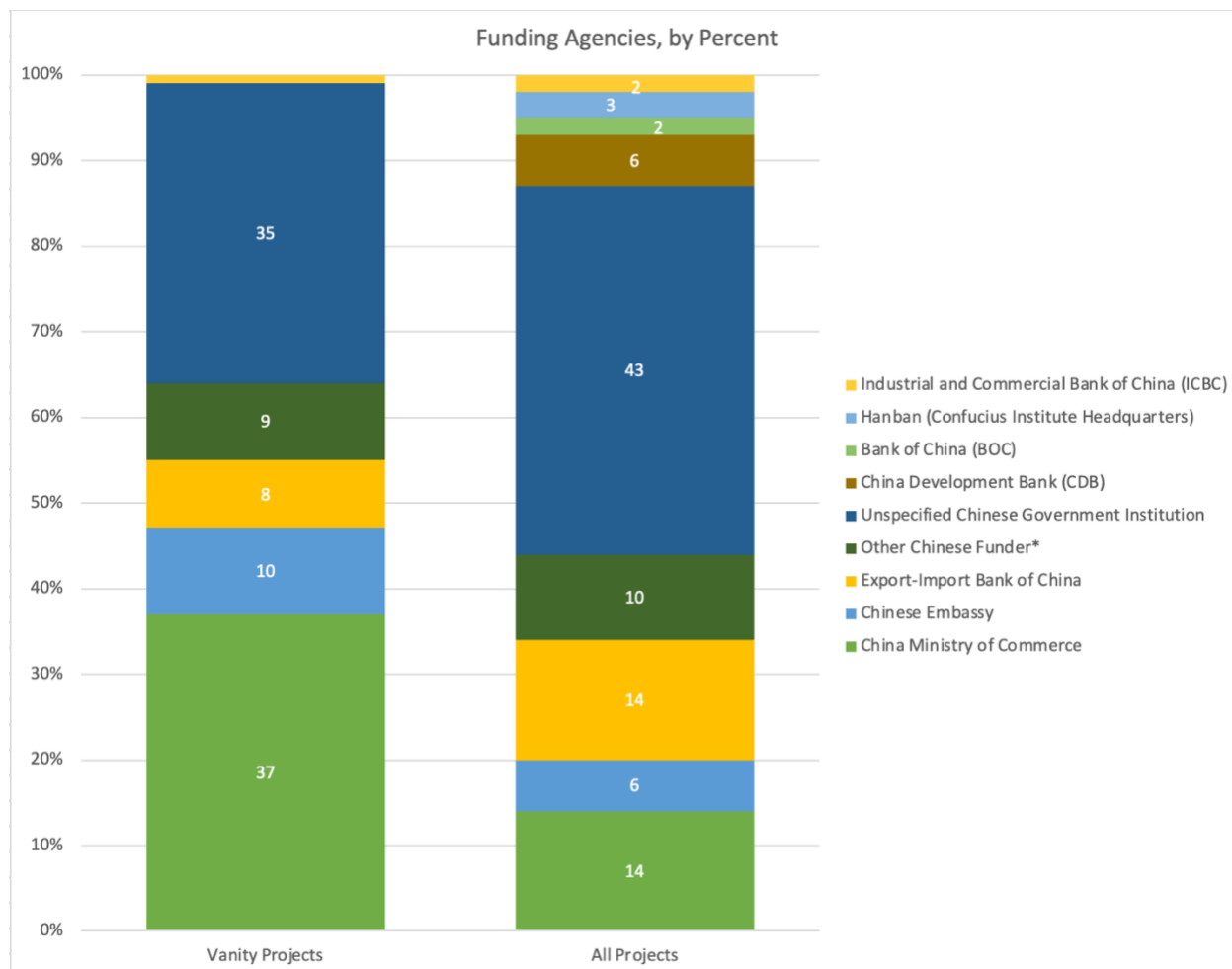[57] Malik et al., "Banking on the Belt and Road."

Figure 4: Distinct Chinese entities funding projects, by percent. Funding agencies who invested in less than 100 projects, or less than 1% of the entire sample, are grouped in the "Other Chinese Funder" category. Please note, the vanity project data has undergone geographic manipulation explained in the methodology, whereas the whole data set has not undergone this manipulation.

The AidData finding of MOFCOM primarily issuing grants, or loans with high concessionality that are categorized as grants, is supported by a flow type analysis of the identified vanity projects. As shown in Figure 5, 76.7% of vanity projects funded by grants, compared with only 55% of all projects. This statistic indicates that for most vanity projects, recipient nations do not incur a large financial expense. On initial glance, these descriptive financial statistics support my hypothesis that vanity projects are gifts given to recipient nations, potentially for diplomatic reasons.
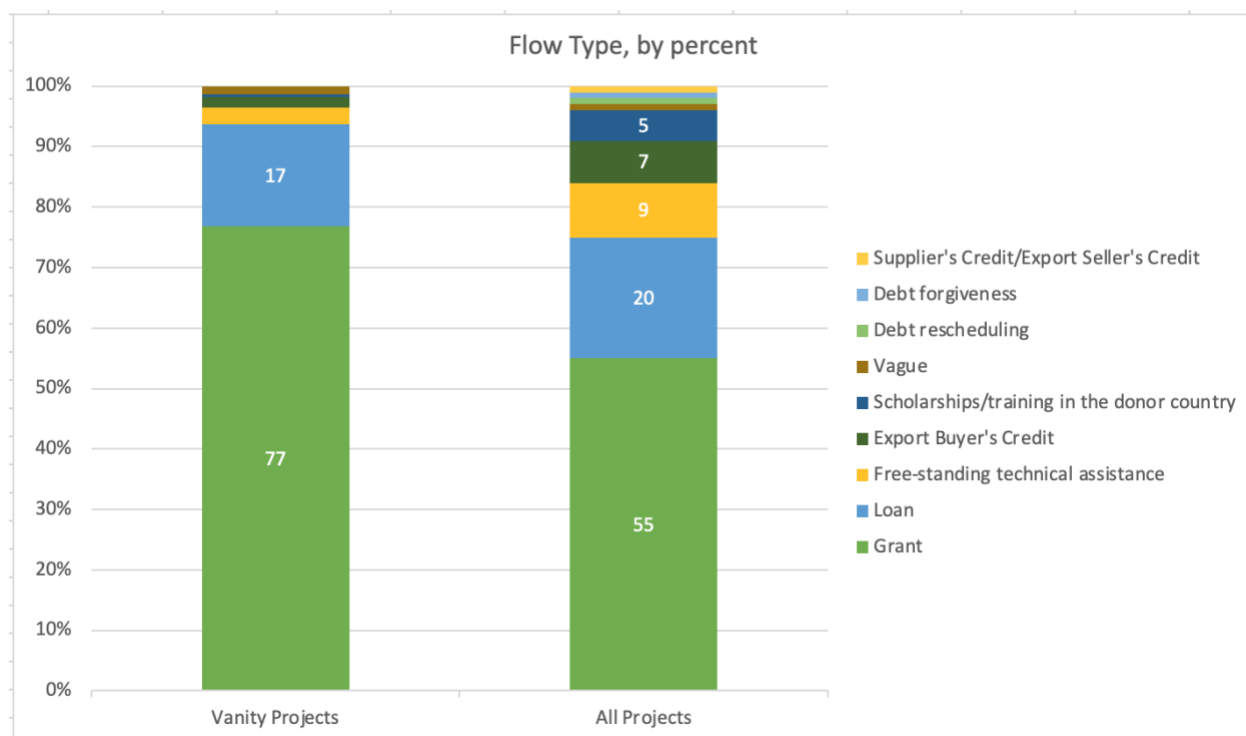
Figure 5: Flow types of projects, by percent. When multiple flow types were involved in a project, the larger flow type was listed. The reason for this decision was to best represent the predominant flow type for projects. Please note, the vanity project data has undergone geographic manipulation explained in the methodology, whereas the whole data set has not undergone this manipulation.

Looking more closely at the projects themselves, Figure 6 shows that 89% of vanity projects are known to be completed. In contrast, only 44% of all projects in the data set have been completed; there are proportionately more projects in the pre-completion phases (i.e., implementation, pipeline: commitment stages, and pipeline: pledge phase). Although this statistic does not tell the full story, as it does not reveal whether projects were finished on time, it reveals that China is committed to completing vanity projects.
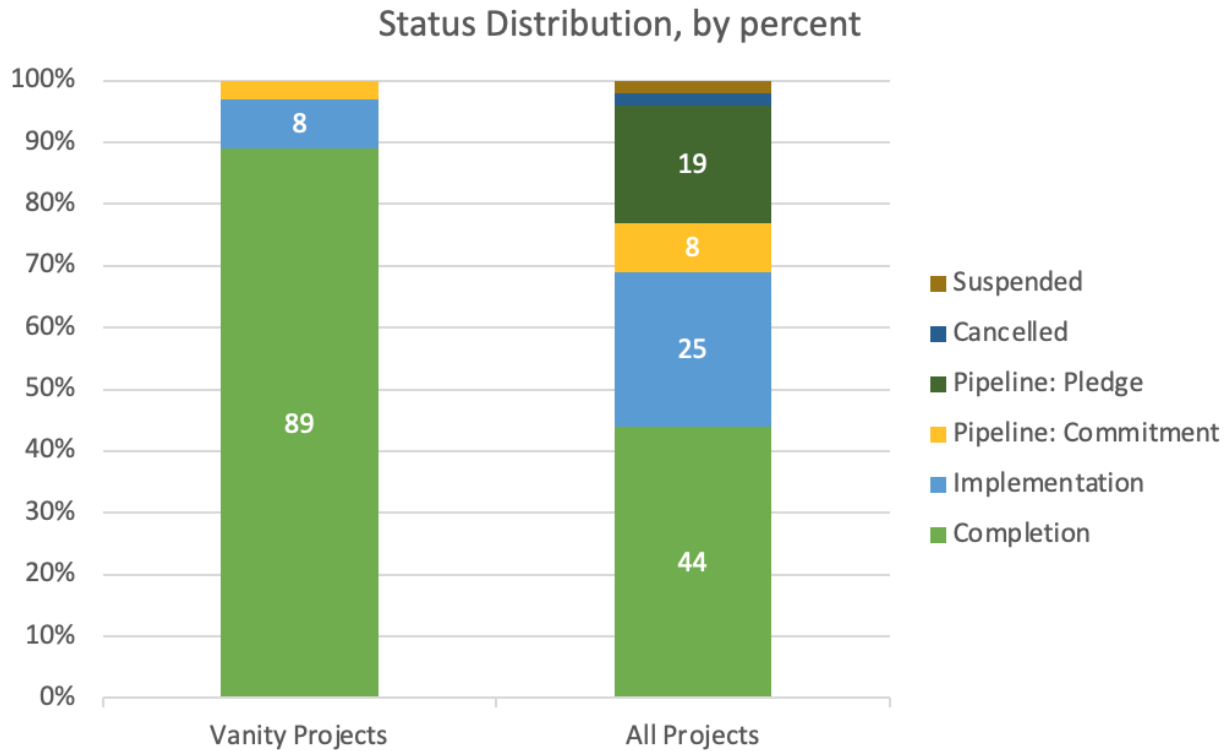
Figure 6: Status distribution of projects, by percent. Please note, the vanity project data has undergone geographic manipulation explained in the methodology, whereas the whole data set has not undergone this manipulation.

As explained in the methodology section, the vanity projects are separated into four categories based on their purpose. Of these categories, as shown in Figure 7, there is a high concentration, or 68% of projects, in the athletics category, which includes primarily sports stadiums.
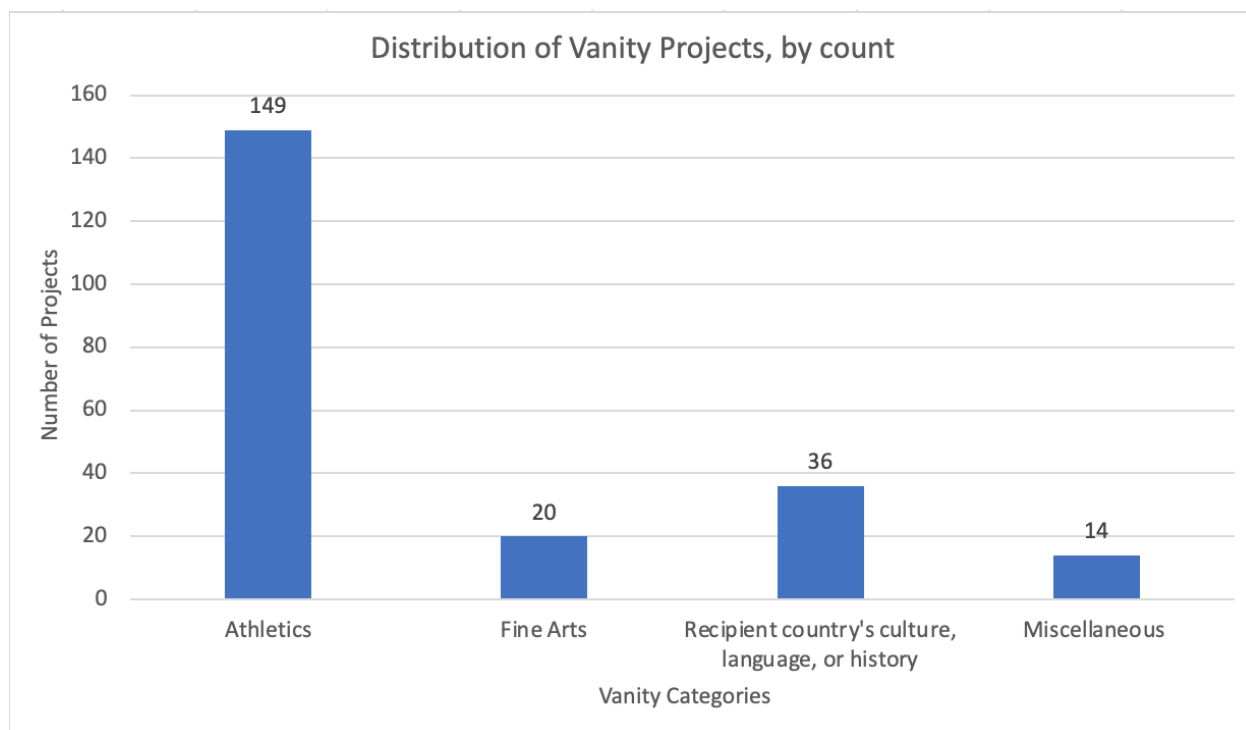
Figure 7: Categorization of vanity projects, by count.

Notable projects in the athletics category include a 2009 loan by MOFCOM constructed the National Stadium near Praia, the capital of Cabo Verde. The 15,000-seat stadium is equipped with FIFA-certified synthetic grass, a running track, changing rooms, press and physiotherapy rooms, medical and security offices, and a public broadcasting system. The stadium hosted its first international soccer competition in 2014, and, as the national stadium of Cabo Verde, is expected to be a cornerstone of the island's sports program (Project ID 21687-56498). A 2011 grant by a Chinese Embassy was used to construct the Children's Square Playground in Sofia, the capital of Bulgaria. At the unveiling ceremony, Chinese Ambassador Guo Yezhou stated that "young people are the future and hope of the friendly relations between China and Bulgaria" (Project ID 66637). A 2015 grant by MOFCOM was used for the Thuwunna National Indoor Sports Stadium Renovation Project in Yangon, Myanmar. The project is still under construction but has employed multiple Chinese entities including China's Agency for International Economic Cooperation for

project design and Shanghai Construction Group for construction (Project ID 64172). A 2017 grant by MOFCOM was given for the for Multipurpose Sport Gymnasium Construction and Sports Facilities Refurbishment Project in Apia, the capital of Samoa. The multi-faceted construction project aims to construct the multi-Sport Center and renovate the Samoa Aquatic Centre, Apia Park Main Stadium, Apia Park Gymnasium, and Apia Park Tennis Court. These five stadiums were the primary venues when Samoa hosted the 2019 (XVI) Pacific Games. When Samoa won the bid to host the games, the state quickly sent a proposal to the Chinese government for help (Project ID 65361).
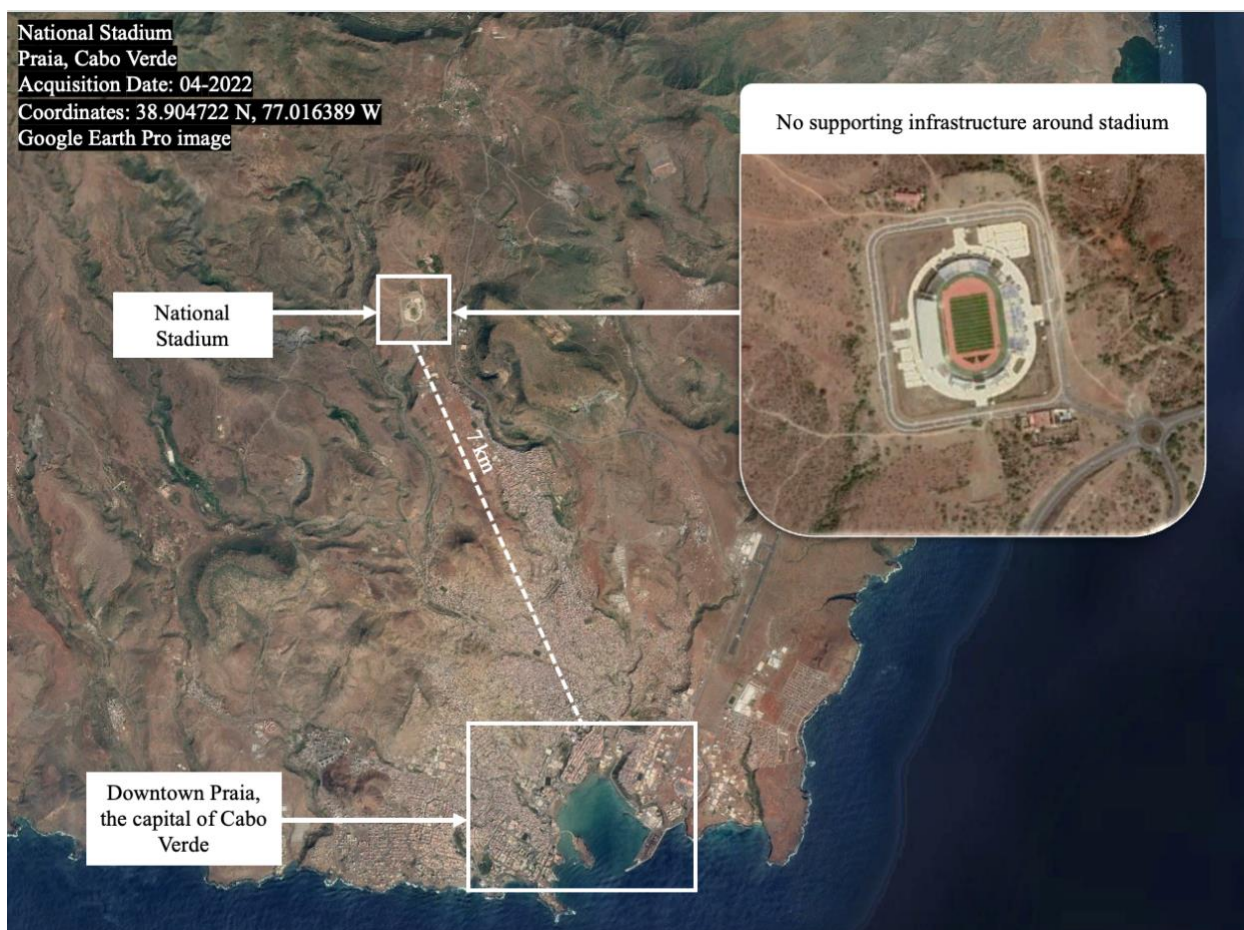

Figure 8: Satellite imagery annotation of Cabo Verde's National Stadium. A quick satellite imagery analysis presents a conundrum: the National Stadium is not in the capital's center and is not surrounded by any infrastructure. This seemingly odd location for a stadium was equally barren when the stadium was planned in 2009. It is possible planners were hoping infrastructure

would follow the stadium and the area would develop. However, this has not come to fruition since the stadium's completion in 2014.

The second largest category, composed of 36 projects, is recipient country's culture, language, or history. Some examples of projects in this category are a 2004 grant by MOFCOM constructed Patuxai Park, which translates to Victory Gate Park, in the center of Laos' capital Vientiane. Patuxai was originally built under Laos' constitutional monarchy to celebrate independence from France, but it now represents communism's victory in the country. The Chinese funded park surrounds the central monument and is now a top tourism location in the city (Project ID 33755).[58] A 2006 grant by an unspecified Chinese Government Institution created supporting infrastructure to increase accessibility to the Kigali Genocide Memorial Centre in Rwanda's capital. The memorial is the country's primary memorial to the 1994 Rwandan genocide and is the final resting place for over 250,000 victims (Project ID 1885).[59] A 2007 grant by an unspecified Chinese Government Institution renovated the National Museum in Sultan Park, Malé, the capital of the Maldives. The project, which opened to the public in 2010, serves as a platform for preserving of and teaching about the cultural heritage of the Maldives. Currently, the museum is ranked as one of the Maldives' top tourist attractions (Project ID 34999).[60] In 2017, an unspecified Chinese Government Institution provided fireworks for Jamaica's 55th anniversary of independence. These fireworks were the cornerstone of Jamaica's two main celebrations: the "Grand Gala" event at the National Stadium and the waterfront, both in the capital city of Kingston (Project ID 70402).[61]

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[58] Tony Dunnell, "Patuxai," Atlas Obscura, April 23, 2019, http://www.atlasobscura.com/places/patuxai.

[59] "Kigali Genocide Memorial – A Place for Remembrance and Learning," accessed April 26, 2022, https://kgm.rw/.

[60] "Everything You Need to Know About Visiting Malé," accessed April 26, 2022, https://travel.usnews.com/Maldives/Things_To_Do/Male_62543/.

[61] "About Us – Celebrating Jamaica 55," accessed April 26, 2022, https://jamaica55.gov.jm/about-us/.

Figure 9: Taken on May 23, 2019, at Patuxay park by the author, Caroline Morin. The sign shows the victory arch built by China in 2004 (Project ID 33755). Behind where I am standing is a sculpture of an elephant constructed out of china porcelain and a large TV showing ads about BRI projects in Laos run by Silk Road Media, both of which make it very clear that the area was funded by China. Prior to 2004, the arch stood alone in the middle of a busy Vientiane intersection.

The fine arts vanity category includes 20 projects. Some examples are a 2001 grant by MOFCOM modernized the Kyrgyz Opera and Ballet Theater in Bishkek, the capital of Kyrgyzstan. The building is named after the Kyrgyzstan actor, composer, and opera singer

Abdylas Maldybaev. The building now stands as a testament to the two states friendship and hosts many events each month (Project ID 40297).[62] A 2006 concessional loan by the Export-Import Bank of China enabled the construction of the National Academies for the Performing Arts (NAPA) in Port of Spain, the capital of Trinidad & Tobago. NAPA was part of the country's "Vision 2020" initiative to sustainably expand cultural initiatives in urban areas. NAPA was officially handed over to the Trinidad and Tobago government in 2009 but has been full of controversy. In 2014, the Occupational Safety and Health Administration closed NAPA for two years due to severe safety issues, including shattered glass panes, issues with air quality, unsafe roofs and ceilings, loose bolts, and more. China claims no sub-standard materials were used and the building is a "masterpiece." The international arts community has called NAPA "defective" citing a wide variety of reasons (Project ID 40005-59994).[63] A 2010 grant by MOFCOM constructed an opera house in the suburbs of Algiers, the capital of Algeria. Information about the opera house, which is Algeria's first, all centers on China's generosity and friendship with Algeria. Notably, the project experienced multiple delays and did not open until 2016 (Project ID 523).[64] A 2013 grant by MOFCOM constructed the Lebanese Higher Conservatory of Music in Dbaye, Lebanon. The project will include a 1,200-seat concert hall, a teaching building, equipment rooms, an underground garage, a reception hall, and more. Despite being agreed to in 2013, the project is still being implemented (Project ID 65712-65714-40971-65786).[65]

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[62] "Kyrgyz National Maldybaev Opera, Bishkek, Kyrgyzstan," Operabase, accessed April 26, 2022, https://www.operabase.com/companies/kyrgyzstan/kyrgyz-national-maldybaev-opera-720/en.
[63] "The Academy for the Performing Arts," The University of Trinidad and Tobago, accessed April 26, 2022, https://utt.edu.tt/index.php?wk=71&page_key=1222.
[64] Meng Qingsheng, "Algiers Opera House Helps Diversify Cultural Life," August 14, 2018, https://news.cgtn.com/news/3d3d414f7a67444e79457a6333566d54/share_p.html.
[65] "Lebanese National Higher Conservatory of Music," accessed April 26, 2022, https://conservatory.gov.lb/.
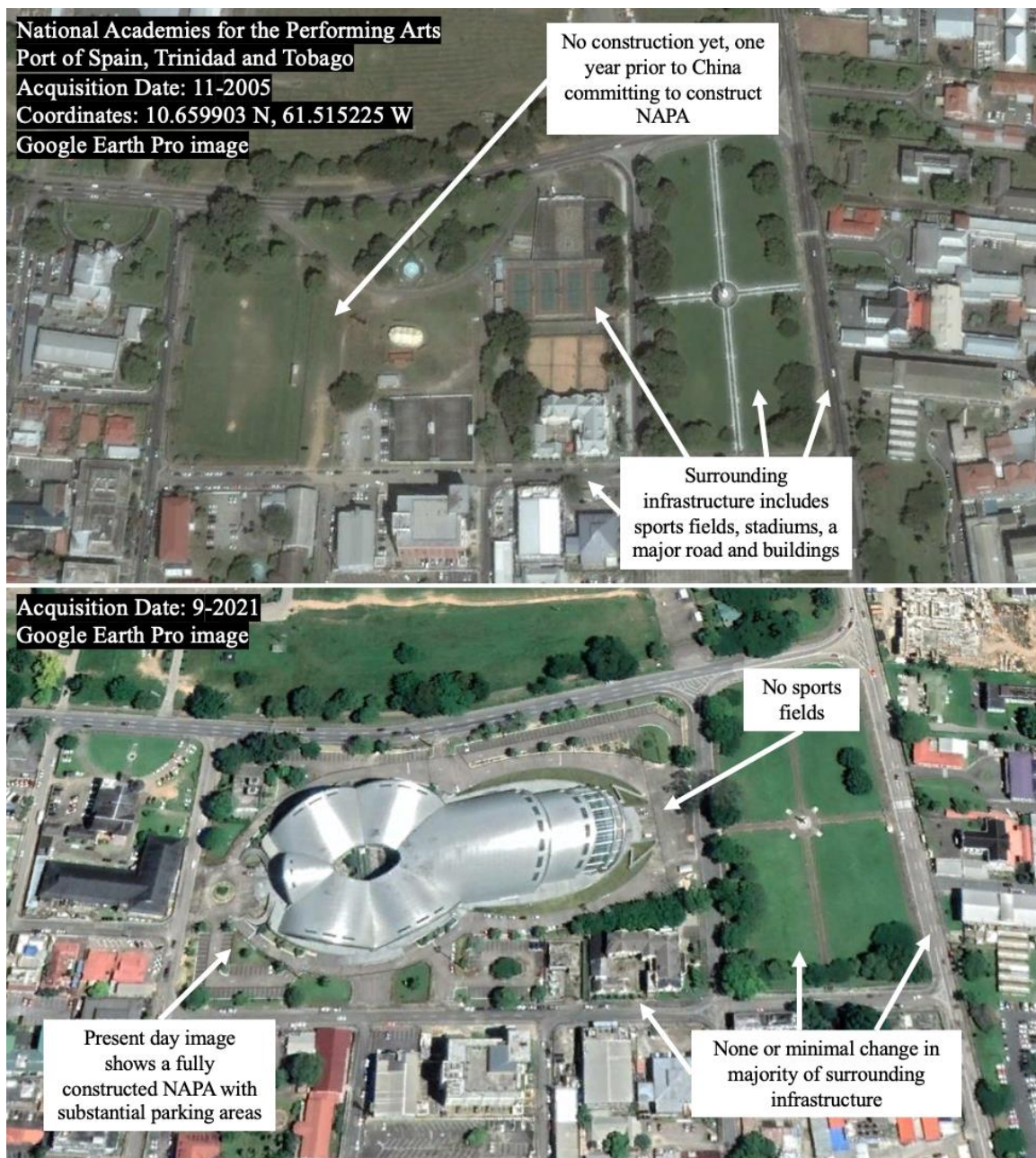
Figure 10: Satellite imagery annotation of the controversial NAPA, from 2005 and 2021.

Finally, the miscellaneous vanity category includes 16 projects. Some examples are a 2012 interest-free loan by MOFCOM to renovate the Friendship Hall in Khartoum, the capital of Sudan. The Friendship Hall includes a conference building, banquet hall, exhibition hall, and theater

(Project ID 30434).[66] A 2014 grant by a Chinese Embassy constructed the Grand' Anse Praslin Community Center in the Praslin, Seychelles. The community center serves as a primary gathering space for the local community (Project ID 55582). A 2015 grant by MOFCOM was used to renovate Los Diques Metropolitan Park in Cártago, Costa Rica. The project is still being implemented but seeks to increase trails, biodiversity, children's play areas, and more (Project ID 70440). A 2017 grant by the People's Government of Guangdong Province was allocated to renovating the Suva Civic Center, located in the capital of Fiji. The center is the city's premier entertainment venue to rent for events ranging from wedding receptions to conferences, and includes an auditorium, a dining hall, and more (Project ID 64288).[67]

The AidData data set includes official Chinese-financed projects from 2000 to 2017. Since the BRI did not begin until September 2013, most projects in the data set occur prior to the BRI's commencement. The prevalence of projects prior to the BRI's commencement, however, indicate that the BRI, in terms of vanity projects, may be more of a continuation as opposed to a change in action by the Chinese Community Party.

Figure 11 represents the commitment year for each vanity project. The graph shows a general upward trend, as expressed by the exponential trendline. There is variability in the data, including seemingly abrupt spikes and dips. Specifically, there is a large spike in the amount of vanity projects committed to in 2006.[68]

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[66] "Friendship Hall, Khartoum, Sudan," accessed April 26, 2022, https://www.archnet.org/sites/43.
[67] "Community Facilities | Suva City Council," accessed April 26, 2022, http://suvacity.org/community-facilities/.
[68] A limitation of this descriptive analysis is it relies on commitment years of projects, it does not indicate when projects begin implementation or reach completion.
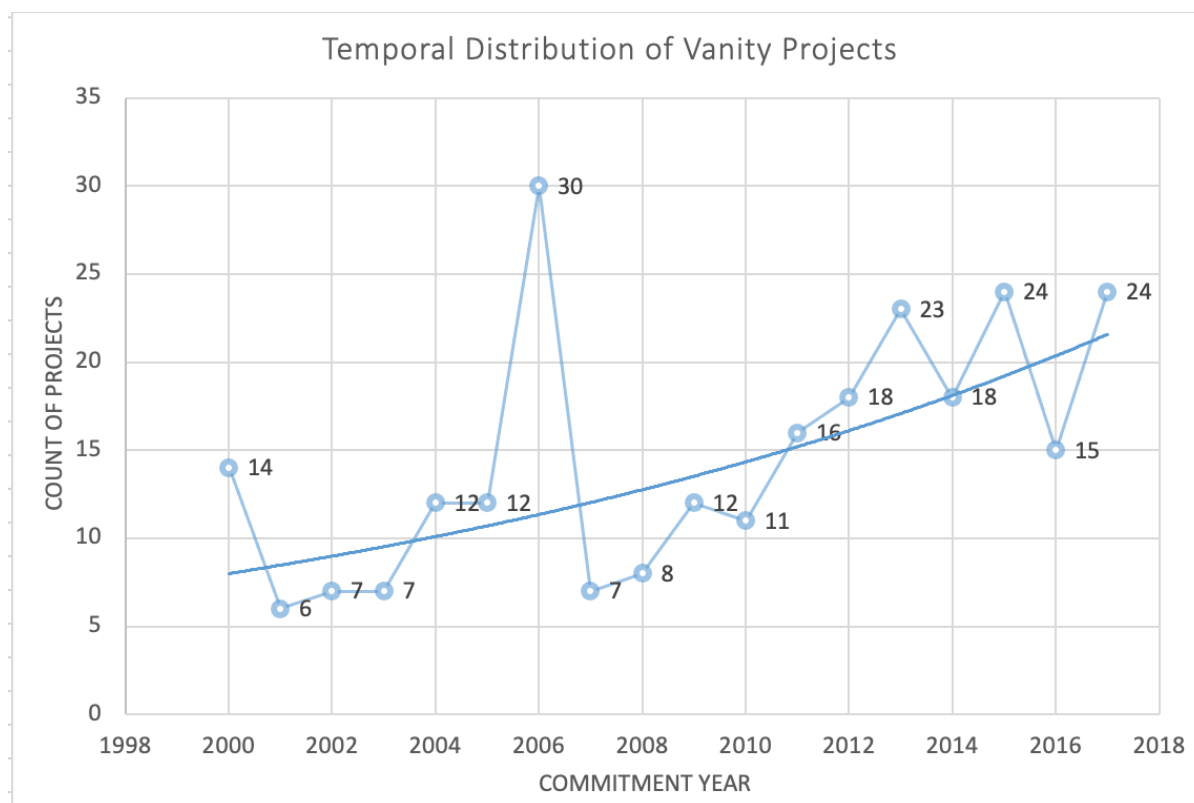
Figure 11: Temporal Distribution of vanity projects, by count.

The variability of the timing of vanity projects and the 2006 spike is not visible in the whole AidData data set. As shown in Figure 12, the data more closely hugs the exponential trendline. The upward trend is especially pronounced following the 2013 declaration of the Belt and Road Initiative. The difference in the variability of vanity projects in comparison to the whole data set is something to be investigated further.

Figure 12: Temporal Distribution of all projects in the AidData data set. This figure represents 10,081 projects in the AidData data set, or the projects which were both recommended for research purposes and have a known, firm commitment year. This is the full project list after the first two steps of the inclusion criteria, which was chosen due to the necessity of a confirmed year for temporal analysis. Please note, the vanity p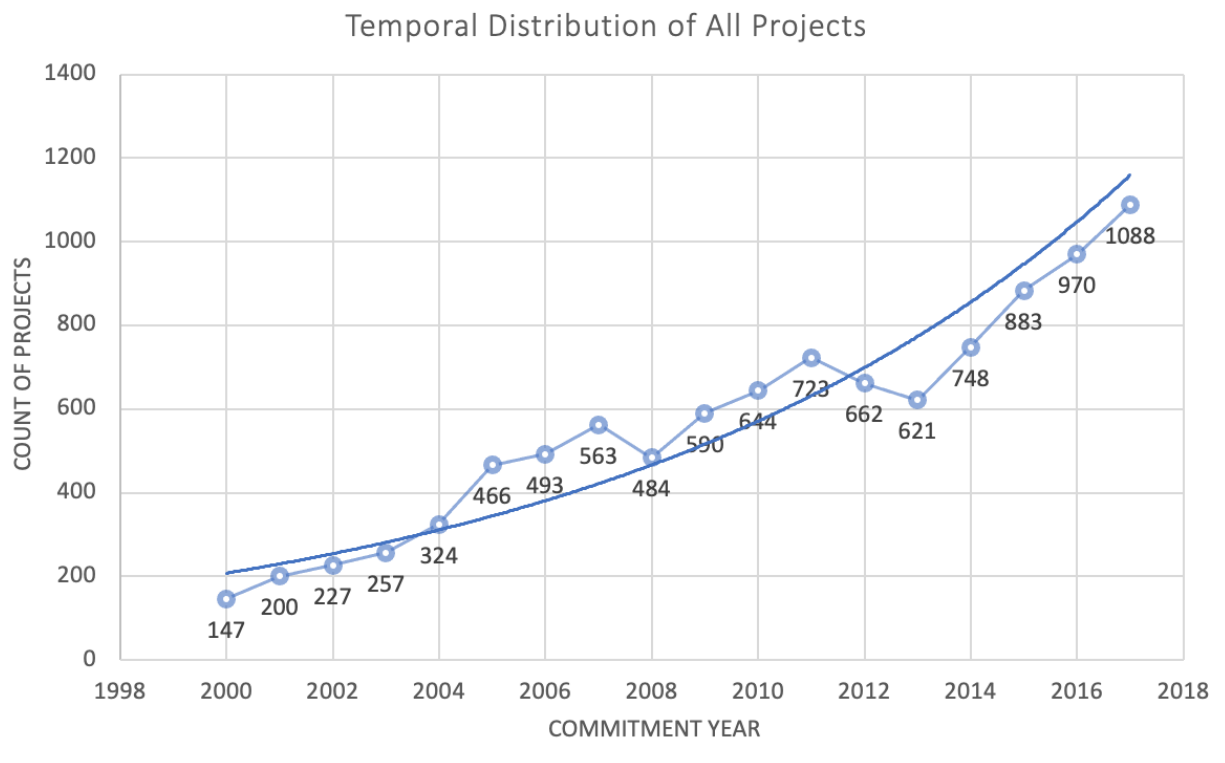roject data has undergone geographic manipulation explained in the methodology, whereas the whole data set has not undergone this manipulation.

To further explore the temporal distribution of projects, I investigated when each state with vanity projects completed two important diplomatic agreements with China: establishing diplomatic relations and formally agreeing to join the BRI. Between 1949 and 2021, all countries with vanity projects formally established diplomatic relations with China. There is no information on when Curacao established diplomatic relations, however, there is a Chinese Consulate-General located in the capital of Willemstad and the Netherlands, which handles all of Curacao's foreign relations, established diplomatic ties with China in 1954.[69]

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[69] "China and the Netherlands," Embassy of People's Republic of China in the Kingdom of Netherlands, 2016 2004, https://www.mfa.gov.cn/ce/cenl/eng/zhgx/zzgx/t137589.htm.

Four countries—Albania, Bulgaria, Mongolia, and Myanmar—established diplomatic relations with China in 1949, the year the People's Republic of China was founded.[70] Six countries—Costa Rica (2007), Dominica (2004), Grenada (2005), Malawi (2007), Nauru (2002), and South Sudan (2011)—established diplomatic relations with China in the twenty-first century. For all these states, China did not fund a vanity project until after diplomatic relations were established.
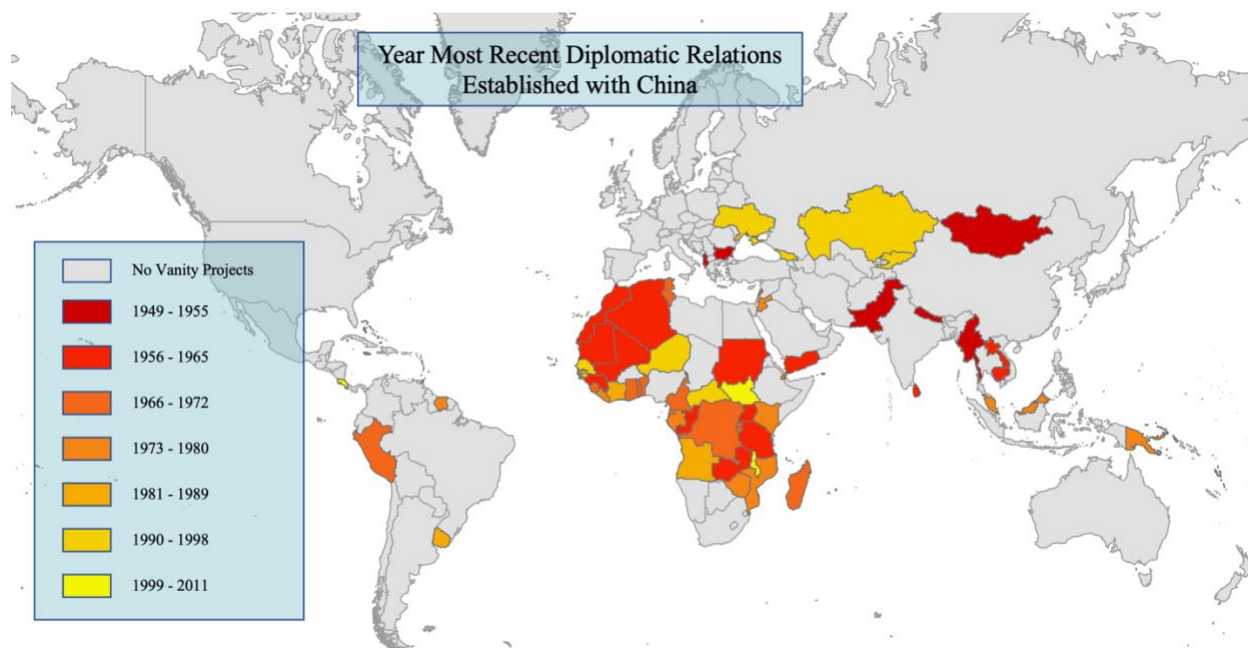
Map 1: The year when states most recently established diplomatic relations with China. The data is broken down in categories by the natural breaks (Jenks) classification generated by ESRI's ArcGIS Pro. Data credits for country boundaries go to geoBoundaries and year of establishing diplomatic relations to AidData.[71]

"Consulate-General of the People's Republic of China in Willemstad (Dutch Caribbean)," accessed April 26, 2022, http://willemstad.chineseconsulate.org/eng/.

Ministerie van Algemene Zaken, "Responsibilities of the Netherlands, Aruba, Curaçao and St Maarten - Caribbean Parts of the Kingdom - Government.Nl," onderwerp, Government of Netherlands (Ministerie van Algemene Zaken, October 16, 2019), https://www.government.nl/topics/caribbean-parts-of-the-kingdom/responsibilities-of-the-netherlands-aruba-curacao-and-st-maarten.

[70] "The People's Republic of China(1949-) History," China's Ministry of Foreign Affairs, accessed April 26, 2022, https://www.mfa.gov.cn/ce/celr//eng/gyzg/jgiejgi/jgkdsjg/t372963.htm.

[71] Malik et al., "Banking on the Belt and Road."

Runfola et al., "GeoBoundaries."

The second significant date I chose to look at to explore the data is when states signed a Memorandum of Understanding (MoU) with China to formally join the BRI. While most projects in the data set occurred prior to 2013, due to the temporal coverage of the data set, the date of a MoU being signed signifies growth in the diplomatic relationship between China and the recipient nation. As shown in Map 2, there is a wide range of dates when states joined the BRI. Of the four states that established diplomatic relations with China in 1949, only Mongolia signed on to the BRI in 2013, the year it was established. Notably, not all states which have signed MoUs have vanity projects.

Surprisingly, nine countries with vanity projects—Bahamas, Central African Republic, Curacao, Guinea-Bissau, Jordan, Malawi, Mauritius, Nauru, and Saint Lucia—have not signed a MoU with China to join the BRI as of March 2022. Of these nine, Curacao's foreign relations are controlled by the Netherlands which has also not signed a MoU on the BRI, and Malawi and Nauru established diplomatic relations with China after 2000. Five of these states—Bahamas, Central African Republic, Guinea-Bissau, Nauru, and Sanit Lucia—do not have any vanity projects after the inauguration of the BRI in 2013. The remaining four states—Curacao, Jordan, Malawi, and Mauritius—do have an official Chinese financed vanity project after 2013, indicating that formally agreeing to the BRI is not a pre-requisite to receive a vanity project.
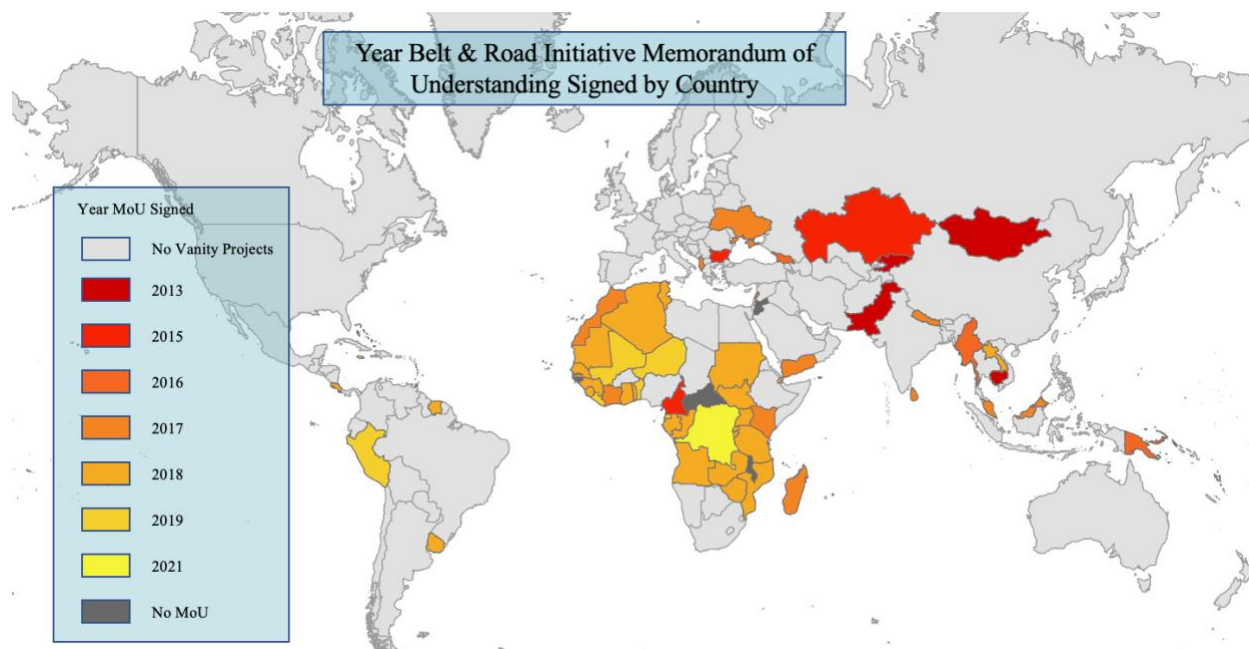
Map 2: When states with vanity projects signed a MoU to join the BRI. Data credits for country boundaries go to geoBoundaries and year of establishing diplomatic relations to AidData.[72]

Regional exploration of the data shows a similar pattern between vanity projects and the whole data set, with 50% of vanity projects and 47% of all projects located in Africa. It is important to note that AidData's six-region categorization encompasses vastly different areas in terms of area, population, GDP, and other indicators. An even distribution of projects across regions does not represent an even distribution of projects across the world. While only 11% of vanity projects are located in Oceania, considering the small population and area of the region, this record indicates a potentially higher number of projects per capita than other regions.

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[72] Malik et al., "Banking on the Belt and Road."
Runfola et al., "GeoBoundaries."
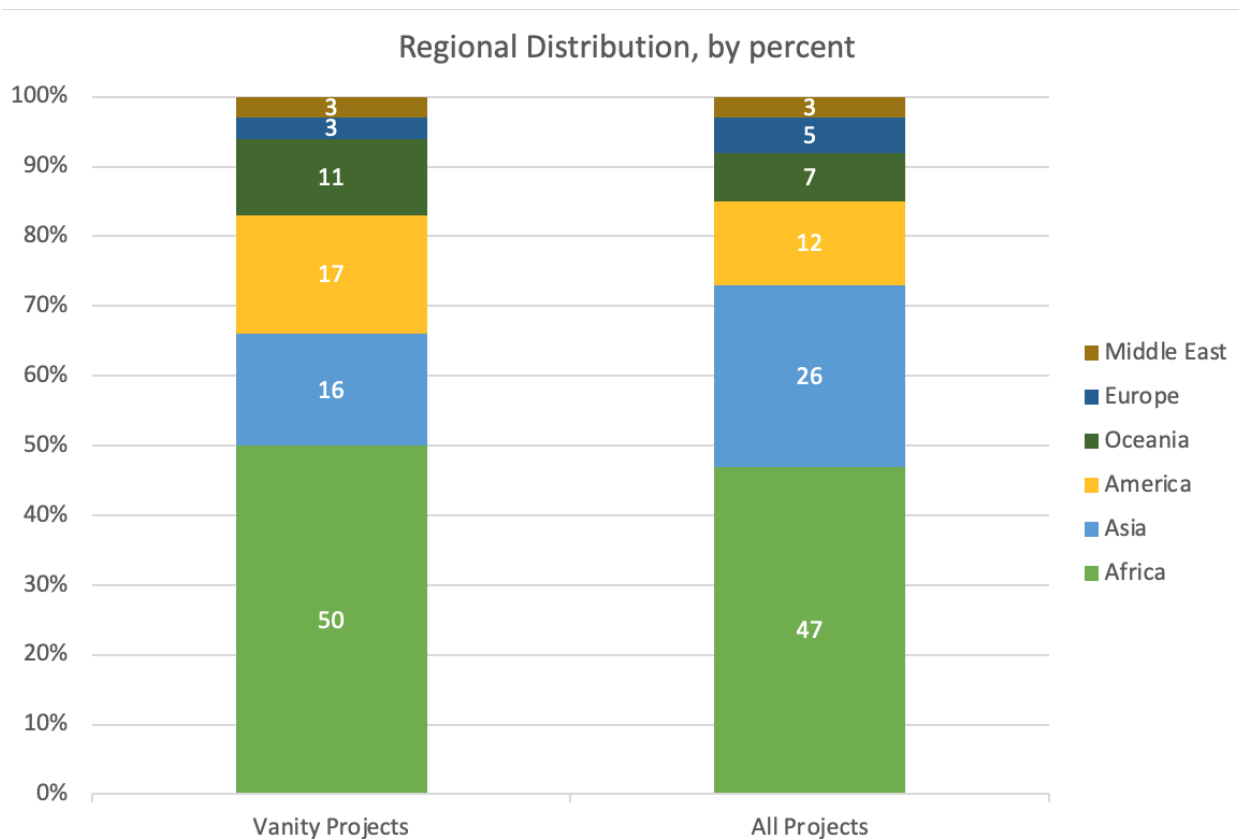
Figure 13: Regional distribution of projects, by percent. Please note, the vanity project data has undergone geographic manipulation explained in the methodology, whereas the whole data set has not undergone this manipulation.

Figure 14 and Map 3 illustrate the geographic distribution of vanity projects by country. Fifteen percent of projects, or 33 projects, are the only project in a country. Further, only twelve countries have five or more vanity projects. To identify why China is participating in these vanity projects, it may be fruitful to further investigate the states that have a higher concentration of projects. The 33 countries with only one project could be explained by many factors, and it is unlikely that enough evidence would be available to construct a singular theory. However, if a condition is present both in states with high and low concentrations of vanity project leading to the project occurring, that is strong evidence supporting the theory. As stated in the methodology, this

thesis employs a mixed methods approach to address these considerations by doing quantitative cross-national analysis and a more qualitative sub-national analysis.

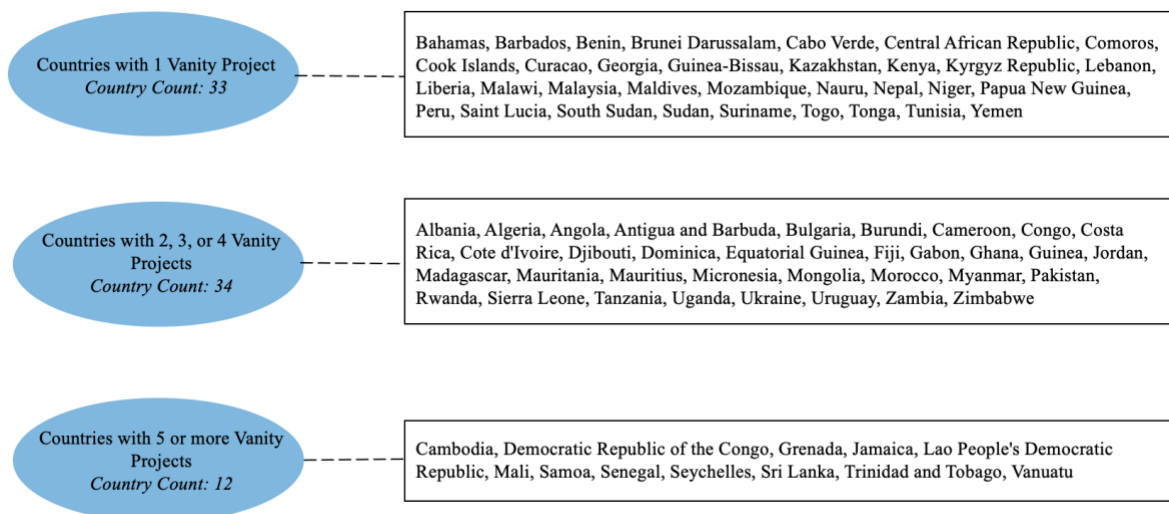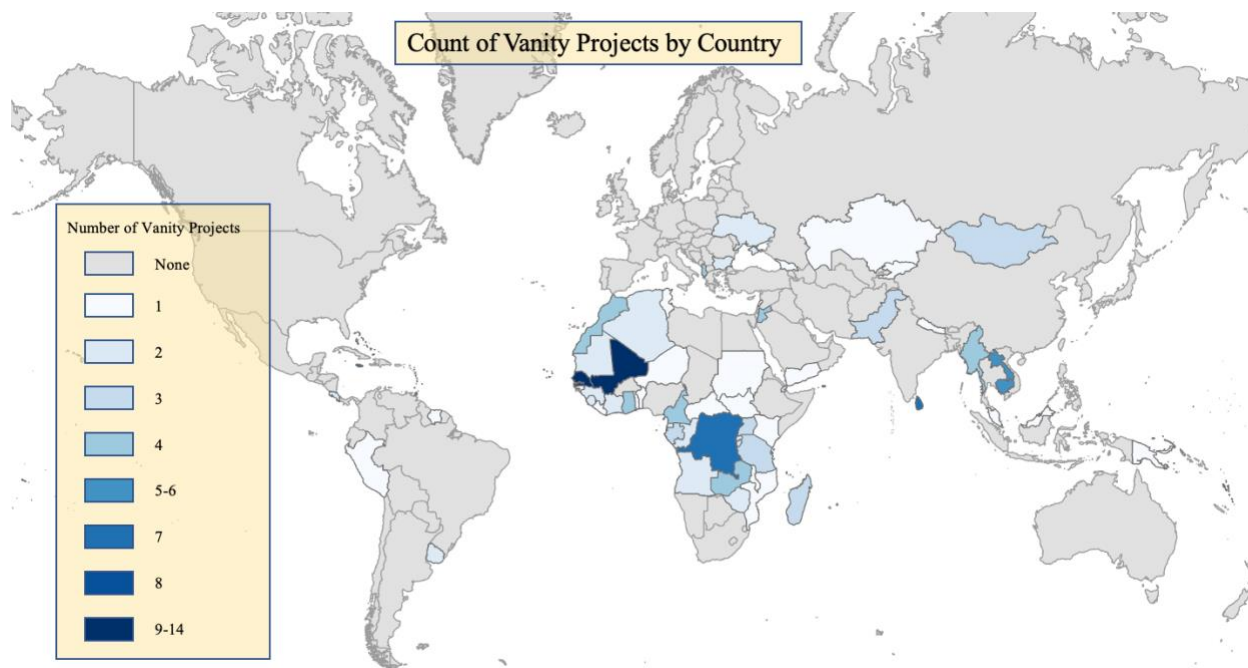| Countries with 1 Vanity Project *Country Count: 33*	Bahamas, Barbados, Benin, Brunei Darussalam, Cabo Verde, Central African Republic, Comoros, Cook Islands, Curacao, Georgia, Guinea-Bissau, Kazakhstan, Kenya, Kyrgyz Republic, Lebanon, Liberia, Malawi, Malaysia, Maldives, Mozambique, Nauru, Nepal, Niger, Papua New Guinea, Peru, Saint Lucia, South Sudan, Sudan, Suriname, Togo, Tonga, Tunisia, Yemen
Countries with 2, 3, or 4 Vanity Projects *Country Count: 34*	Albania, Algeria, Angola, Antigua and Barbuda, Bulgaria, Burundi, Cameroon, Congo, Costa Rica, Cote d'Ivoire, Djibouti, Dominica, Equatorial Guinea, Fiji, Gabon, Ghana, Guinea, Jordan, Madagascar, Mauritania, Mauritius, Micronesia, Mongolia, Morocco, Myanmar, Pakistan, Rwanda, Sierra Leone, Tanzania, Uganda, Ukraine, Uruguay, Zambia, Zimbabwe
Countries with 5 or more Vanity Projects *Country Count: 12*	Cambodia, Democratic Republic of the Congo, Grenada, Jamaica, Lao People's Democratic Republic, Mali, Samoa, Senegal, Seychelles, Sri Lanka, Trinidad and Tobago, Vanuatu

*Figure 14: States with vanity projects.*

Map 3: Geographical distribution of vanity projects. The data is broken down in categories by natural breaks (Jenks) classification generated by ArcGIS Pro. Data credits for country boundaries go to geoBoundaries.[73]

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[73] Runfola et al., "GeoBoundaries."

To conclude this initial analysis, I examined three demographic indicators for states with vanity projects. These three indicators—governance, GDP, and population—together provide an idea of the diversity of the states in the data set. Each indicator is geographically displayed for the 2010 value. 2010 was chosen due to its approximate middle location in the data set, which ranges from 2000 to 2017, and for the availability of data.

Map 4 displays the freedom status of states, or whether a state is free, partly free, or not free based on Freedom House's categorization of political rights and civil liberties, as explained in the methodology. There is a fairly even distribution across these three categories: 25 states are ranked as free, 29 states as partly free, 22 states as not free, and there is no data for three states.
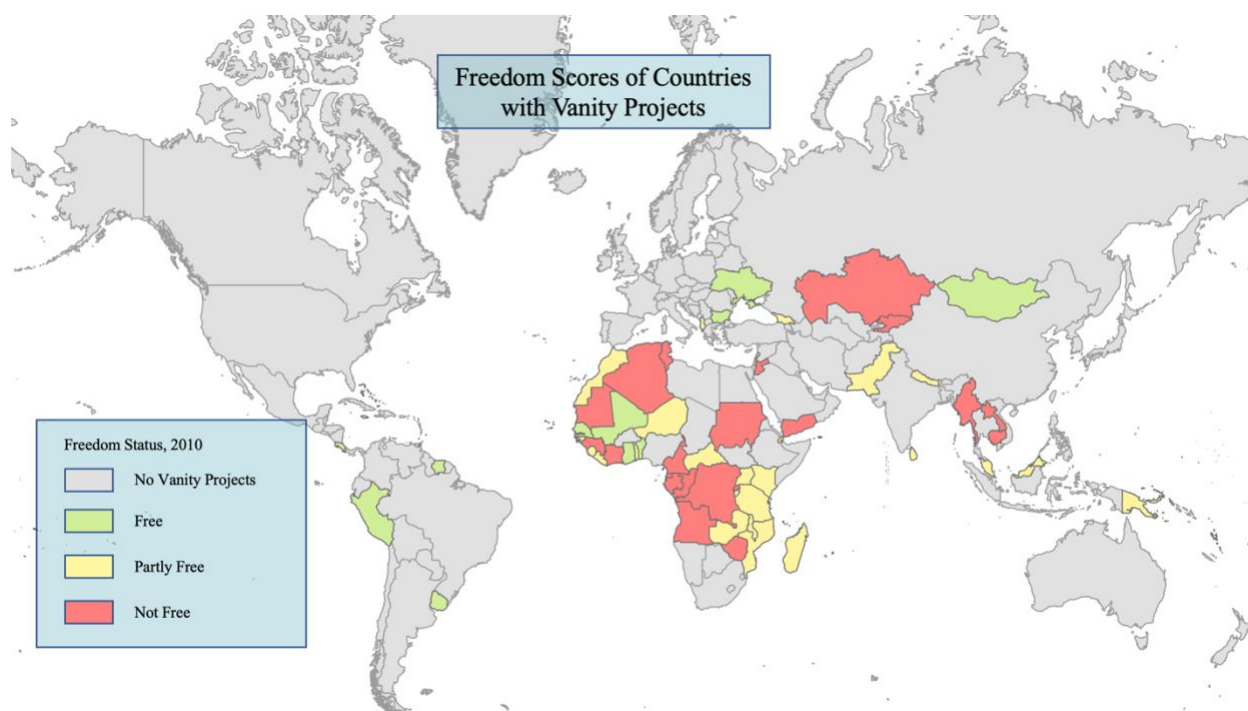
Map 4: Freedom categorization of countries with vanity projects, according to Freedom House's 2010 data. Data credits for country boundaries go to geoBoundaries and freedom rankings are from Freedom House.[74]

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[74] Runfola et al., "GeoBoundaries."
Freedom House, "Freedom in the World."

The World Bank gross domestic product (GDP) data from 2010, represented in Map 5, again illustrates the diversity of the data set as values range from 45 million USD (Nauru) to 232,654 million USD (Malaysia).
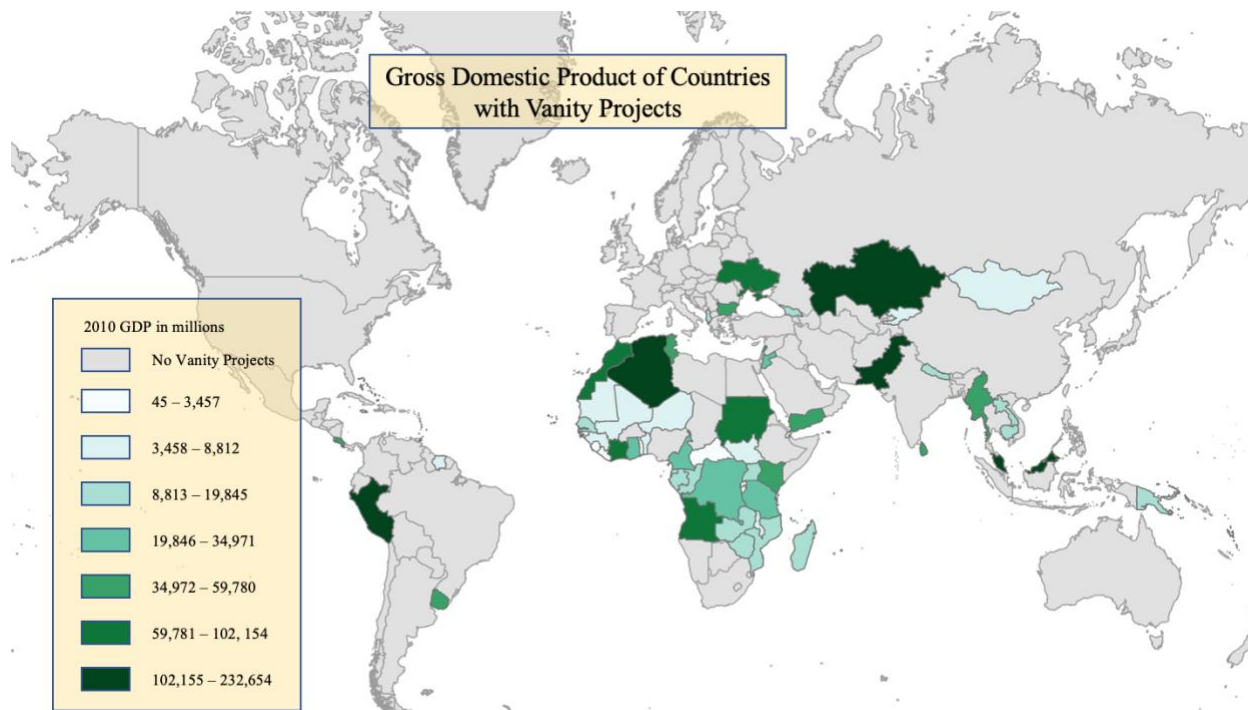
Map 5: Gross Domestic Product (GDP) of countries with vanity projects in 2010, according to the World Bank. The data is broken down in categories by natural breaks (Jenks) classification generated by ArcGIS Pro. Data credits for country boundaries go to geoBoundaries and GDP data is from the World Bank.[75]

The UN population data from 2010, represented in Map 6, shows the diversity of the data set as values range from 0.01 million (Nauru) to 179.42 million (Pakistan).

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[75] Runfola et al., "GeoBoundaries."
World Bank, "GDP (Constant 2015 US$)."
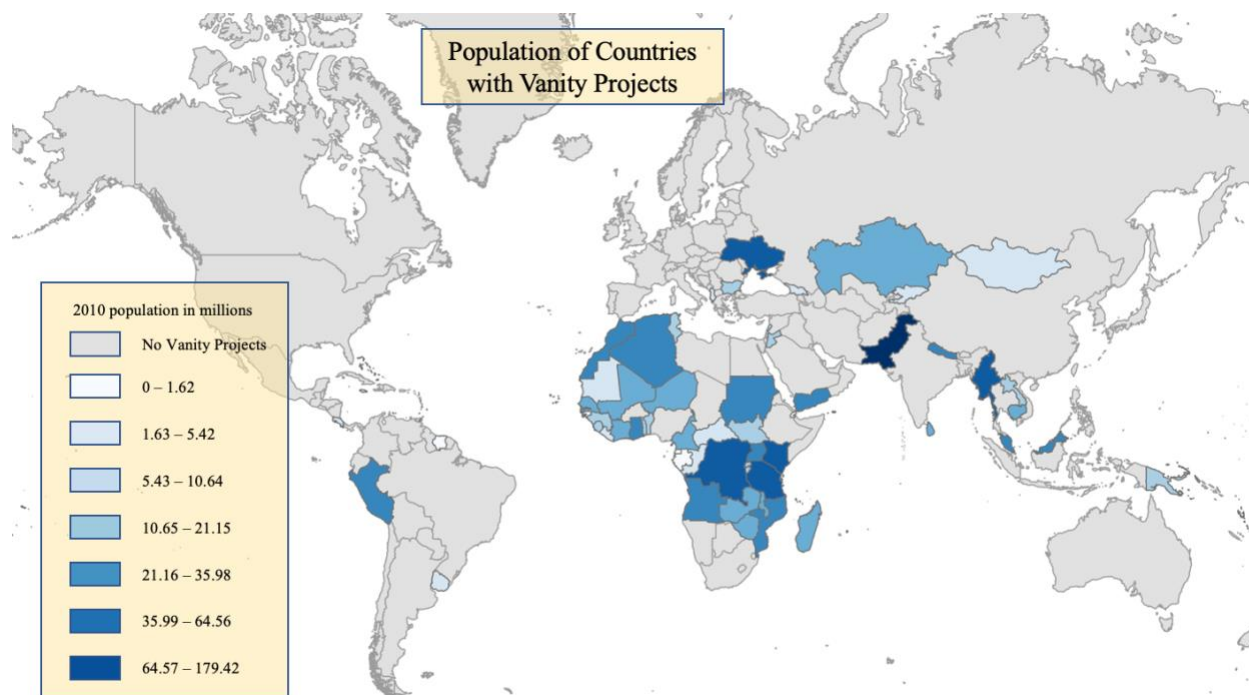
Map 6: Population in 2010 of countries with vanity projects, data is from the United Nations. The data is broken down in categories by natural breaks (Jenks) classification generated by ArcGIS Pro. Data credits for country boundaries go to geoBoundaries and population data is from the United Nations.[76]

These three demographic indicators emphasize the complexity of the empirical puzzle studied in this thesis: what independent variable could explain the phenomenon of vanity projects across 79 vastly different states?

5b. Cross-National Analysis of the Causes of Vanity Projects

For my cross-national analysis, I studied possible relationships between my fourteen independent variables and the dependent variable, the presence of vanity projects in a state. While correlation does not imply causation, a significant statistical result does imply the existence of a relationship.[77]

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[76] Runfola et al., "GeoBoundaries."

[77] To begin my cross-national analysis, I loaded the data into the R program, and cleaned it to allow the models to run. The largest changes I made were recoding variables one, six, and seven, as explained in the methodology, and

Before running my regression models, I ran a Pearson correlation test to examine the relationship between the independent variables.[78] Table 5 shows the results of the correlation. The closer the correlation coefficient is to 1 or -1, the stronger the correlation. I chose to remove variable six, political rights, from my regression models because it has a strong positive correlation with variable seven, civil liberties. This means when a state was ranked a one for limited political rights, they were also likely to be ranked a one for civil liberties. Both the political rights and civil liberties data are from Freedom House, so the high correlation results are not surprising. Further, variable six, political rights, has a significant correlation with variable one, Polity5 democracy levels. Since both variables measure indicators of democracy it is not surprising that they are correlated. Keeping variable six in the data set, meaning keeping collinearity in the independent variables, violates an assumption of linear regression, hence the decision to remove it.

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designating all variables as numeric objects. The supporting code is attached for replication purposes in the appendix.

[78] The common statistical model operates under the assumptions that the variables are normally distributed, which the data is. See also Boston University School of Public Health, "Correlation in R," January 6, 2016, https://sphweb.bumc.bu.edu/otlt/MPH-Modules/BS/R/R5_Correlation-Regression/R5_Correlation-Regression3.html.

Correlation

	IV1: Polity State Regime Level	IV2: State Fragility Levels	IV3: Instances of State Failure	IV4: Political Violence Levels	IV5: Instances of Federal Elections	IV6: Political Rights Levels	IV7: Civil Rights Levels
IV1: Polity State Regime Level	1.000						
IV2: State Fragility Levels	-0.384	1.000					
IV3: Instances of State Failure	-0.069	0.355	1.000				
IV4: Political Violence Levels	-0.004	0.379	0.687	1.000			
IV5: Instances of Federal Elections	0.007	-0.052	0.0055	-0.005	1.000		
IV6: Political Rights Levels	**0.845**	-0.509	-0.175	-0.136	0.002	1.000	
IV7: Civil Rights Levels	0.785	-0.594	-0.226	-0.237	0.009	**0.912**	1.0000
IV8: Voting with the US at the United Nations General Assembly	0.307	-0.299	0.002	-0.055	0.054	0.246	0.2411
IV9: Voting with China at the United Nations General Assembly	-0.339	0.324	0.013	0.040	-0.072	-0.275	-0.2723
IV10: Overall Number of Chinese Development Financing Projects	-0.121	0.278	0.078	0.155	-0.073	-0.191	-0.2269
IV11: Changes in Gross Domestic Product	0.115	-0.062	0.211	0.352	0.053	0.102	0.0639
IV12: Changes in Gross Domestic Product per capita	0.057	-0.208	-0.057	-0.027	0.015	0.081	0.1017
IV13: Instances of Protests	0.032	-0.002	0.056	0.011	-0.001	0.002	0.0012
IV14: Overall Amount of US Development Financing	-0.045	0.153	0.221	0.285	0.014	-0.106	-0.1455

	IV8: Voting with the US at the UNGA	IV9: Voting with China at the UNGA	IV10: Number of BRI Projects	IV11: Changes in GDP	IV12: Changes in GDP per capita	IV13: Instances of Protests	IV14: Amount of US Financing
IV1: Polity State Regime Level							
IV2: State Fragility Levels							
IV3: Instances of State Failure							
IV4: Political Violence Levels							
IV5: Instances of Federal Elections							
IV6: Political Rights Levels							
IV7: Civil Rights Levels							
IV8: Voting with the US at the United Nations General Assembly	1.000						
IV9: Voting with China at the United Nations General Assembly	-0.746	1.000					
IV10: Overall Number of Chinese Development Financing Projects	-0.025	0.133	1.000				
IV11: Changes in Gross Domestic Product	-0.005	-0.020	-0.022	1.000			
IV12: Changes in Gross Domestic Product per capita	0.036	-0.102	-0.125	0.279	1.000		
IV13: Instances of Protests	0.016	-0.024	0.046	-0.001	-0.026	1.000	
IV14: Overall Amount of US Development Financing	0.011	0.045	0.154	0.079	-0.042	0.072	1.0000

Table 5: Correlation coefficients for all variables. Strong correlations are shown in bold.

After dropping variable six from the analysis, I ran the other thirteen variables through a Poisson event count regression model.[79] This model best works when the dependent variable is a count variable, which my dependent variable, the count of vanity projects in a country per year, is. I ran the model two times, first with the dependent variable and next with the dependent leading. I chose to run a multiple linear regression of all thirteen variables to evaluate the relationship between variables, while controlling the other variables.[80]

Shown in Table 6, the model is an accurate measure of the data set because the deviance is lower than N.[81] The model shows the coefficient with the direction of the relationship between the variables and the standard error in parentheses. A positive correlation indicates that as the independent variable increases, or becomes more of the measured activities, the dependent variable, the number of vanity projects, will increase as well. The p value, or statistical significance, shows at what level of confidence I can reject the null hypothesis associated with the variable, and thus conclude that the independent variable has an impact on the dependent.

[79] Scott Long and Jeremy Freese, *Regression Models for Categorical Dependent Variables Using Stata*, 3rd ed. (Stata Press, 2014), https://web.s.ebscohost.com/ehost/ebookviewer/ebook/bmxlYmtfXzI3MTg4MTlfX0FO0?sid=949c902a-c31f-4d9a-bc61-ed5536b64a17@redis&vid=0&format=EK&lpid=navPoint-268&rid=0.

[80] R. on Stats and R, "Multiple Linear Regression Made Simple | R-Bloggers," October 4, 2021, https://www.r-bloggers.com/2021/10/multiple-linear-regression-made-simple/.

[81] Penn State Elberly College of Science, "15.4 - Poisson Regression | STAT 501," PennState: Statistics Online Courses, accessed April 26, 2022, https://online.stat.psu.edu/stat501/lesson/15/15.4.

Poisson Event Count Regression Model

	Vanity Projects (DV)	Vanity Projects Leading (DV)
IV1: Polity State Regime Level	0.0007 (0.026)	-0.025 (0.025)
IV2: State Fragility Levels	**0.052*** **(0.021)**	**0.057**** **(0.021)**
IV3: Instances of State Failure	**-0.801*** **(-0.357)**	-0.430 (0.310)
IV4: Political Violence Levels	**0.144^** **(0.086)**	0.086 (0.089)
IV5: Instances of Federal Elections	-0.142 (0.183)	-0.115 (0.182)
IV7: Civil Liberties Levels	**0.203^** **(0.107)**	**0.231*** **(0.107)**
IV8: Voting with the United States at the United Nations General Assembly	1.024 (0.992)	0.376 (1.031)
IV9: Voting with China at the United Nations General Assembly	**4.100*** **(1.676)**	**2.749^** **(1.651)**
IV10: Overall Number of Chinese Development Financing Projects	**0.043***** **(0.006)**	**0.032***** **(0.008)**
IV11: Changes in Gross Domestic Product	-3e-14 (4e-14)	**-3e-11**** **(9e-09)**
IV12: Changes in Gross Domestic Product per capita	-0.0002 (0.0001)	0.0001 (0.0002)
IV13: Instances of Protests	-0.001 (0.002)	-0.004 (0.003)
IV14: Overall Amount of United States Development Financing	-9e-11 (8e-11)	-3e-11 (6e-11)
N	1794	1708
Null Deviance	916	889
Residual Deviance	845	841

Standard error in parentheses
*** = p < 0.001, ** = p < 0.01, * = p < .05, ^=p<0.1

Table 6: Poisson Event Count regression results.

Before interpreting the results, I tested the robustness by running an ordinary least square (OLS) regressions, the most common type of linear regression model.[82] Again, I ran it as a multiple regression model. The results of the model are available in the Appendix. The model proved to be a poor fit for the data (see R-squared in the Appendix) as the model accounts for near zero of the

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[82] Long and Freese assert that "Although the linear regression model has often been applied to count outcomes, these estimates can be inconsistent or inefficient. In some cases, the linear regression model can provide reasonable results; however, it is much safer to use models specifically designated for count outcomes." This statement partially influenced why I chose to use the Poisson model. Long and Freese, *Regression Models for Categorical Dependent Variables Using Stata*.

variation in the dependent variable.[83] This suggests that the Poisson model was a more appropriate choice for my data.

Looking at the results in Table 6, significance level indicates the confidence with which I can reject the null hypothesis. With 99.9% confidence, I find that the more Chinese development financed projects there are in a state, the more likely a vanity project is to occur in this year or the next. Conventional knowledge indicates that more Chinese development financed projects would indicate a higher likelihood for Chinese financed vanity projects, especially considering the same data source was used for both variables.

Based on my statistical analysis, the more fragile a state is, the more likely a vanity project is to occur in this year or the following year. However, fragility is different than instances of state failures, China is unlikely to invest in a vanity project in failed states. Further, in terms of the domestic conditions of a recipient state, the more civil liberties in a state, the more likely a vanity project is to occur. At the international level, the more a state votes with China at the UNGA, the more likely a vanity project is to occur. Finally, the higher the positive change in GDP, the less likely a vanity project is to occur.

In the Poisson model, the generated coefficient predicts whether more or less vanity projects will occur, not the size of the impact of the correlation. Thus, a second calculation is needed to find the marginal effect of the independent variable on the dependent.[84] In R, I calculated the marginal effect of the Poisson model.[85] The results of the calculation are shown in

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[83] Penn State Elberly College of Science, "2.5 - The Coefficient of Determination, r-Squared | STAT 462," accessed April 26, 2022, https://online.stat.psu.edu/stat462/node/95/.

[84] Long and Freese, *Regression Models for Categorical Dependent Variables Using Stata*.

[85] Alan Fernihough, "Marginal Effects for Generalized Linear Models: The Mfx Package for R," n.d., 15.

Table 7 and the code is included is in the appendix. When computing the marginal effects of the variables, I held the other values at their mean.[86]

Poisson Marginal Effects

	Vanity Projects (DV)	Vanity Projects Leading (DV)
IV1: Polity State Regime Level	0.00002	-0.002
	(0.002)	(0.002)
IV2: State Fragility Levels	0.004	0.004
	(0.001)	(0.001)
IV3: Instances of State Failure	-0.056	-0.030
	(0.025)	(0.022)
IV4: Political Violence Levels	0.010	0.006
	(0.006)	(0.006)
IV5: Instances of Federal Elections	-0.010	-0.008
	(0.012)	(0.013)
IV7: Civil Liberties Levels	0.015	0.017
	(0.008)	(0.008)
IV8: Voting with the United States at the United Nations General Assembly	0.071	0.024
	(0.071)	(0.075)
IV9: Voting with China at the United Nations General Assembly	0.286	0.193
	(0.117)	(0.120)
IV10: Overall Number of Chinese Development Financing Projects	0.003	0.002
	(0.0005)	(0.0006)
IV11: Changes in Gross Domestic Product	-3e-15	-2e-12
	(3e-15)	(6e-13)
IV12: Changes in Gross Domestic Product per capita	-0.00001	0.00001
	(0.000008)	(0.00001)
IV13: Instances of Protests	-0.0001	-0.0003
	(0.0001)	(0.0002)
IV14: Overall Amount of United States Development Financing	-6e-12	-3e-12
	(5e-12)	(5e-12)
Discrete Change for the Following Variables	IV5	IV5

Standard error in parentheses

Table 7: Marginal Effect of Poisson model.

At a 99% confidence level, I can reject the null hypothesis for variable eleven and conclude that the higher the positive change in GDP, the less likely a vanity project is to occur the next year. However, the variable is statistically significant, it's the marginal effect on the dependent variable, the occurrence of vanity projects, is minimal (-2e12). Thus, changes in GDP do not sizably impact the occurrence of a vanity project.

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[86] Independent variable five, the occurrences of federal elections, was analyzed as a discrete change by the code.

The other significant independent variables—two, three, seven, nine, and ten—have larger marginal effects. While the largest effect is 0.286, for variable nine, this result is still significant. The majority of my dependent variable, vanity projects, are 0 or 1s due to breadth of data and relatively small number of vanity projects. Thus, a change in variable nine, voting with China at the UN General Assembly, has a significant impact on the dependent variable, the occurrence of vanity projects.

These statistical results emphasize the important of a recipient state's political strength. A fragile state with high civil liberties who votes with China at the UNGA, but has few or no cases of state failure, seems most likely to receive vanity projects. These results could be improved statistically if I investigated a) the interactions between independent variables and b) whether the predictions in the Poisson model are visible in my case studies. These two things should be included in further research. This thesis chose to focus on qualitative and geospatial analysis for the sub-national investigation of vanity projects.

5c. Sub-National Analysis

Before diving into my case studies, I wanted to investigate the location of projects and, specifically, whether any trends were visible. My cross-national statistics indicated that fragile states, which are politically aligned with China, are more likely to receive vanity projects. Variable nine's marginal effect indicates the significance of agreeing with China at the UNGA, which leads to the question: are more projects placed in politically strategic locations?

This level of analysis was possible because I expanded on AidData's locational data in my geographical manipulation, as previously explained in the methodology. For each project, I determined, when possible, the administrative divisions where the project is located and whether

it is in the political capital, the largest population center, and/or the head of state's birthplace. Notably, a limitation of this analysis is there is more data available in urban areas for most development indicators. If data was completely available, or I was confident the AidData data accounted for and remedied the lack information available in remote areas, this analysis would more fruitful.

Fifty nine percent of my identified vanity projects are located in a country's political capital. In Europe and Oceania, the percentage is even higher. The concentration of vanity projects in a political capital could indicate that vanity projects are targeted toward political elites, but there is still a lot of variation across the data set as the data is not resoundingly only located in political capitals. More in-depth analysis should be conducted to test whether a project's geographic location is tied towards influencing political elites.
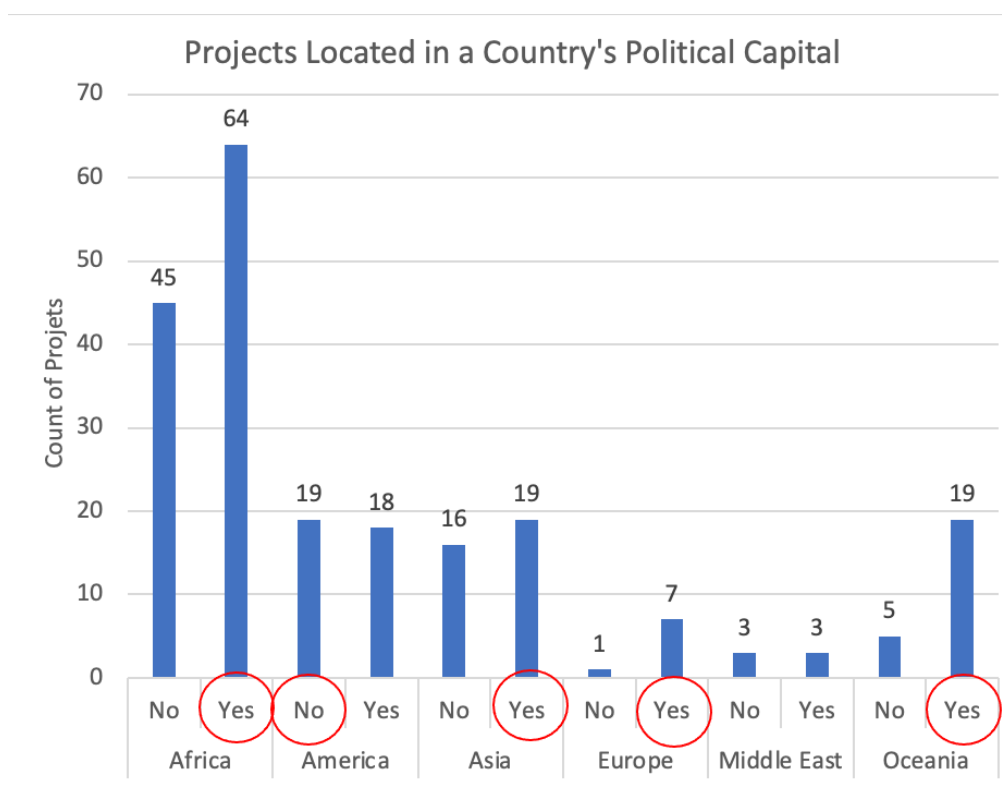

Figure 15: Bar chart of whether projects are in a country's political capital, separated by region.

In Figure 16, I examined whether vanity projects are in the most populous city in a state. If few projects were in the primary population centers, this could indicate that the projects are more for the political elites than the larger population. However, in most states the political capital is the most populated place in the country. With this in mind, it is not surprising that the geographic distribution is similar to that depicted in Figure 15.
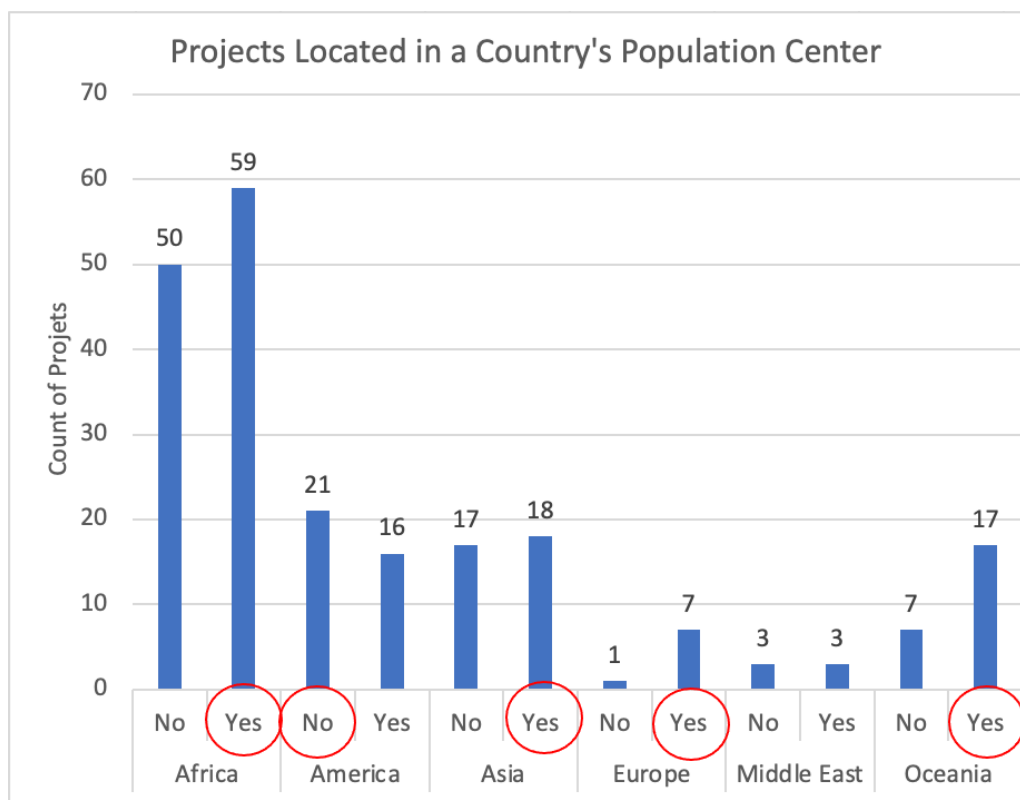

Figure 16: Bar chart of whether projects are in a country's population center, separated by region.

Narrowing in on the potential geographical influence of political elites, I focused on biographical information about the head of states. Dreher, et al. found that in Africa, political leaders' birth regions receive more Chinese aid, especially in years with competitive elections, whereas there is no birth region bias in allocation of World Bank aid.[87]

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[87] Axel Dreher et al., "African Leaders and the Geography of China's Foreign Assistance," *Journal of Development Economics* 140 (September 2019): 44–71, https://doi.org/10.1016/j.jdeveco.2019.04.003.

To test whether this result was observable in Chinese financed vanity projects, I used the 2021 Political Leaders' Affiliation Database assembled by Dreher, et al.[88] The database contains information on birthplaces and ethnicities of leaders from 177 countries starting in 1989.[89]

Figure 17 and Figure 18 display whether a leader's birthplace is in the same administrative division as a vanity project.[90] The charts show no strong evidence of Dreher, et al.'s finding of birth-region bias in Chinese finance. This result is surprising given that the Africa region is where approximately 50% of vanity projects are located and was the focus of Dreher, et al.'s analysis. This analysis could be further elaborated on by looking at the overlap between head of states' ethnic homeland and the location of vanity projects.

If there was a concentration of vanity projects in the head of states' birth regions, this would strongly point to the relative importance and influence of federal level political factors. While vanity projects may be gifts for international cooperation, this potential action of gratitude is not consistently applied and largely directed at heads of state.

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[88] Axel Dreher, "The Political Leaders' Affiliation Database (PLAD)" (Harvard Dataverse, 2020), https://doi.org/10.7910/DVN/YUS575.

[89] The administrative divisions listed are from GADM. I changed the names of administrative divisions to match those of geoBoundaries for consistency in my data.

[90] As a reminder, in the United States, for instance, ADM1 would be the state of Virginia and ADM2 would be Fairfax County.
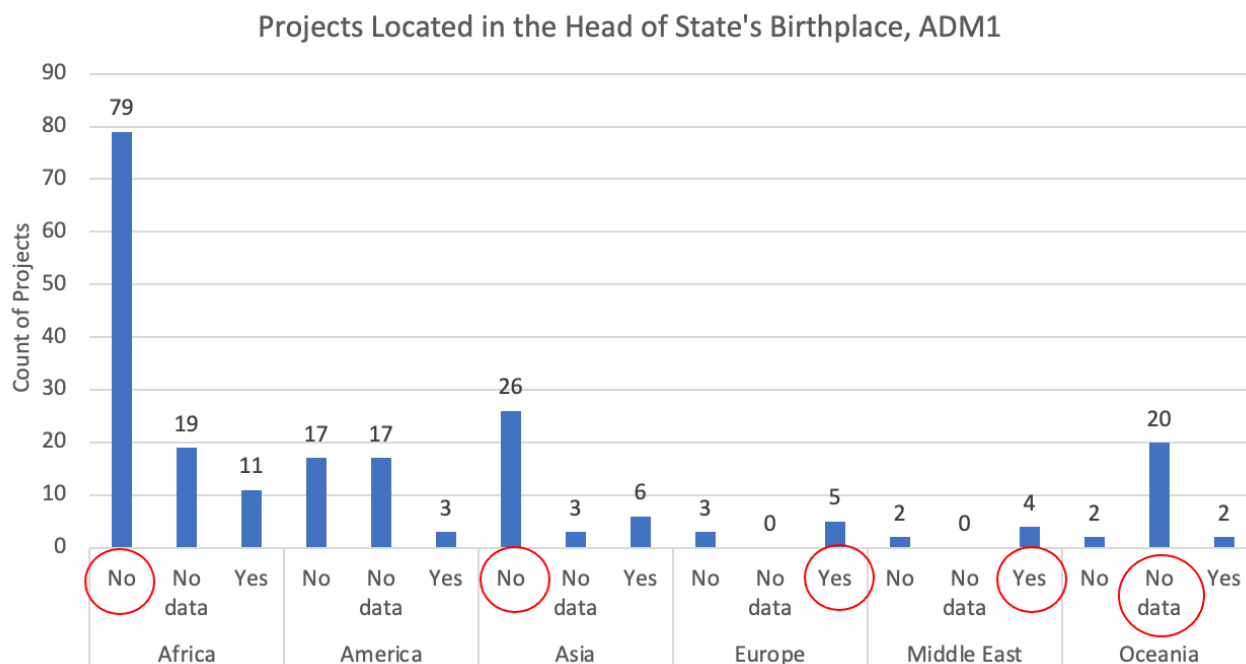
Figure 17: Bar chart showing whether a vanity project is located in the head of state's birthplace at the first administrative division level, by region.
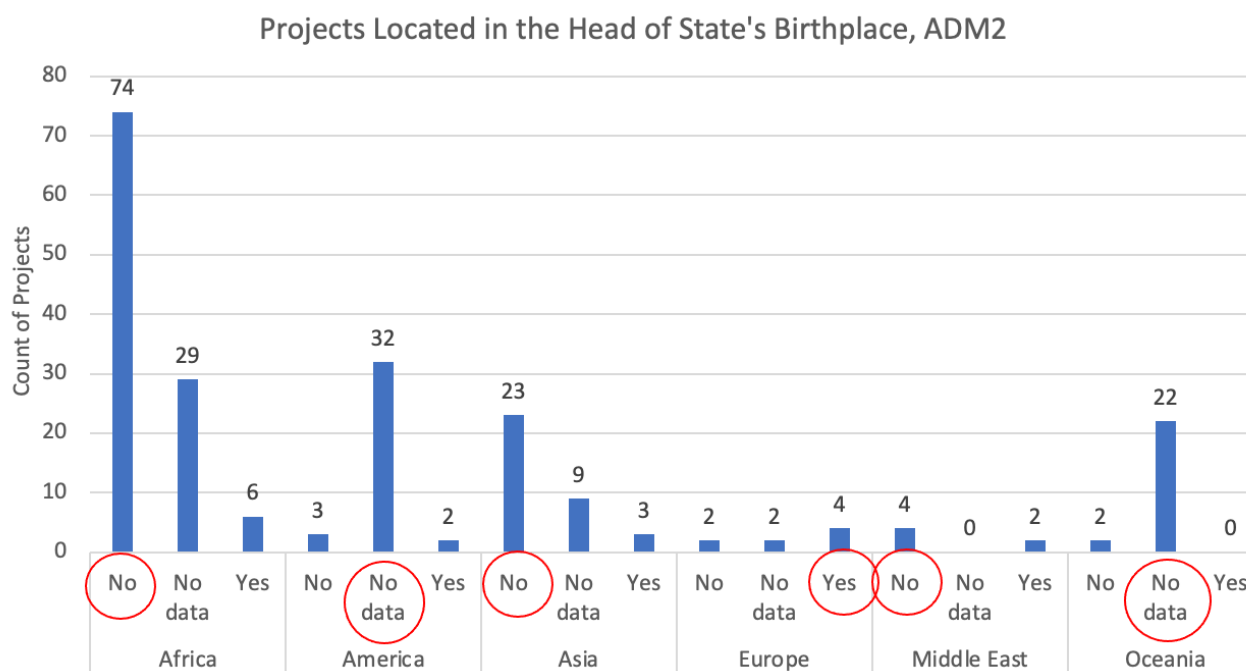

Figure 18: Bar chart showing whether a vanity project is located in the head of state's birthplace at the second administrative division level, by region.

Case Study: Chile

The first case study is Chile, a highly democratic and stable state with high civil liberties, some international cooperation with China, but few recorded Chinese development finance projects and no vanity projects. As shown in Table 8, Chile has some of the indicators that lead to the likelihood of a vanity project occurring, but not all.

This South American state has become increasingly democratic since its return to democracy in 1990 after the ousting of the repressive dictator General Augusto Pinochet by the voting populous.[91] Chileans are not afraid to voice dissent and protests are common, but these protests occur largely within legal limits and there are no records of political violence or state failure in the studied time frame. Instead, civilians are welcomed to voice dissent both in public and in the media. This history does not mean Chile is a perfect democracy, in 2017, Freedom House reported corruption, police violence, environmental concerns, and land rights issues with indigenous groups.[92]

The Chilean economy is characterized by a high level of foreign trade, specifically the exportation of mined minerals, including copper, and a preference for trade liberalization.[93] These policies have led to an average GDP growth rate of almost 5% per year.[94]

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[91] "Chile," in *The World Factbook* (Central Intelligence Agency, April 18, 2022), https://www.cia.gov/the-world-factbook/countries/chile/.

[92] "Chile: Freedom in the World 2017 Country Report," Freedom House, accessed April 26, 2022, https://freedomhouse.org/country/chile/freedom-world/2017.

[93] CIA World Factbook, "Chile," April 18, 2022.

[94] World Bank, "GDP (Constant 2015 US$)."

Indicator	Comments
Chile General info	Population: 17.06 million (2010); GDP per capita: 12,808 USD (2010); GDP: 201,494 million in 2015 USD (2010); Labor Sectoral Distribution: 11% in agriculture, 23% in industry, & 66% in services (2010); Area: 756,102 sq km; Relatively homogenous, 89% are White and non-Indigenous, 99.5% speak Spanish, and 60% are Roman Catholic
Vanity Projects	No projects
Regime Type and Stability	Presidential system with a directly elected Chamber of Deputies (lower chamber) and directly elected Senate (upper chamber); a stable electoral democracy with low fragility
Regime Changes	Consistent elections and no records of state failure in time frame
Violent and Non-Violent Unrest	No records of significant political violence; 434 total protests in the time frame
International Political Interactions with China	Year established diplomatic relations with China: 1970; year Memorandum of Understanding signed agreeing to the BRI: 2018; from 2000 to 2017, on average voted with the US 35% and China 85% of the time at the UNGA
Civil Rights	High political and civil liberties
Overall Chinese Development Financing Projects	32 projects total; no projects prior to 2005

Table 8: Information and Indicators about Chile.

Statistical analysis indicated that voting with China at the UN General Assembly had the largest marginal effect on increasing the likelihood of a state having a vanity project. While Chile on average voted with China 85% of the time, it still does not have any vanity projects. This pattern could indicate the importance having multiple significant indicators present, such as a larger number of Chinese development financing projects and high state fragility, which are not present in this case.

Not captured in my statistical analysis is the fact that AidData has recorded fewer overall projects in the Western Hemisphere, potentially indicating that the region is a smaller strategic priority for China. If this were the case, there would be no vanity projects in the region, however, as revealed by a later case study, Grenada, a stable, highly democratic state in the Caribbean has multiple projects.

Map 7: ADM1 level of Chile, there are no vanity projects in the country.

Case Study: Democratic Republic of the Congo

The Democratic Republic of the Congo (DRC) is a fragile, autocratic state. While the state does politically support China internationally, the frequent regime changes and high levels of unrest make it an unlikely candidate for vanity projects. Yet as represented in Map 8, the country is saturated with Chinese financed soccer stadiums and other projects.
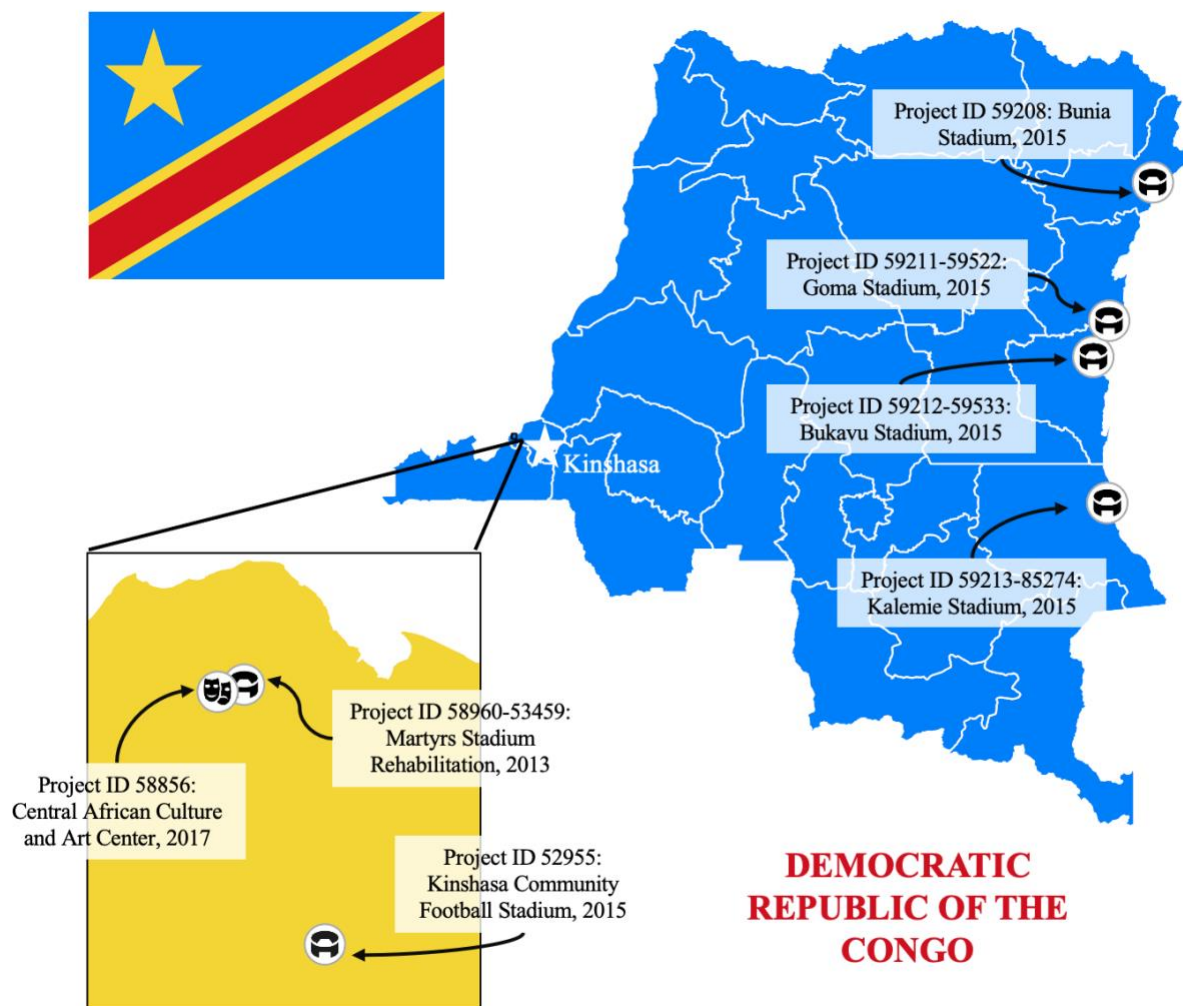
Map 8: Vanity projects in the Democratic Republic of the Congo.

For decades there has been heavy armed ethnic conflict across the country, some of the conflict is led by unified rebel armies against the autocratic federal regime.[95] Most recently, President Joseph Kabila refused to leave office in 2016 causing a further decline in democracy and an increase in turbulence.[96] Socio-economically the country experiences food insecurity amplified

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[95] "Political Instability Task Force (PITF) Consolidated Problem Set, Historical State Armed Conflicts and Regime Crises, 1955-2018."

[96] "Democratic Republic of the Congo: Freedom in the World 2017 Country Report," Freedom House, accessed April 26, 2022, https://freedomhouse.org/country/democratic-republic-congo/freedom-world/2017.

by civil unrest, infectious disease outbreaks (notably, Ebola), high poverty rates, and more.[97] Its

economy is depending on mineral exports, most recently, cobalt.

While the DRC meets some of the indicators for vanity projects—high state fragility and

strong political cooperation with China—these factors should be negated by the widespread

violence and persistence of state failures. Thus, the presence of vanity projects is perplexing and

again seems to indicate that specific geostrategic motivations are driving this investment, which

cannot be observed at a cross-national level.

| Indicator	Comments
DRC General info	Population: 64.56 million (2010); GDP per capita: 334 USD (2010); GDP: 26,094 million in 2015 USD (2010); Labor Sectoral Distribution: 70% in agriculture, 9% in industry, & 21% in services (2010); Area: 2,344,858 sq km; Ethnically, linguistically, and culturally diverse (over 200 ethnic groups)
Vanity Projects	Seven vanity projects: all committed after 2013; 6 athletics & 1 fine arts category; 2 are completed & 5 are in implementation; 3 in state's capital
Regime Type and Stability	Presidential-Parliamentary system with a directly elected National Assembly (lower chamber) and indirectly elected Senate (upper chamber); sharp decrease in democracy in 2016; consistent high fragility (ranging from 22 to 25, with 25 being the max)
Regime Changes	Occurrences of state failures each year since 2013
Violent and Non-Violent Unrest	Civil war (magnitude 5) across the whole span of time and ethnic violence (magnitude 1) 2013 to 2015; a few recorded protests each year
International Political Interactions with China	Year established diplomatic relations with China: 1972; year Memorandum of Understanding signed agreeing to the BRI: 2021; from 2000 to 2017, on average voted with the US 29% and China 89% of the time at the UNGA
Civil Rights	Low political and civil liberties
Overall Chinese Development Financing Projects	249 projects total; general growth in number of projects over time

Table 9: Information and Indicators about DRC.

Case Study: Grenada

Similar to Chile, Grenada is a Western Hemisphere state with a strong, stable democracy,

many civil liberties and a record of international political cooperation with China. Unlike Chile,

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[97] "Congo, Democratic Republic of The," in *The World Factbook* (Central Intelligence Agency, April 18, 2022), https://www.cia.gov/the-world-factbook/countries/congo-democratic-republic-of-the/.

Grenada has received a higher number of overall Chinese development financing projects, a high proportion of which are vanity projects. The vanity projects are shown in Map 9.
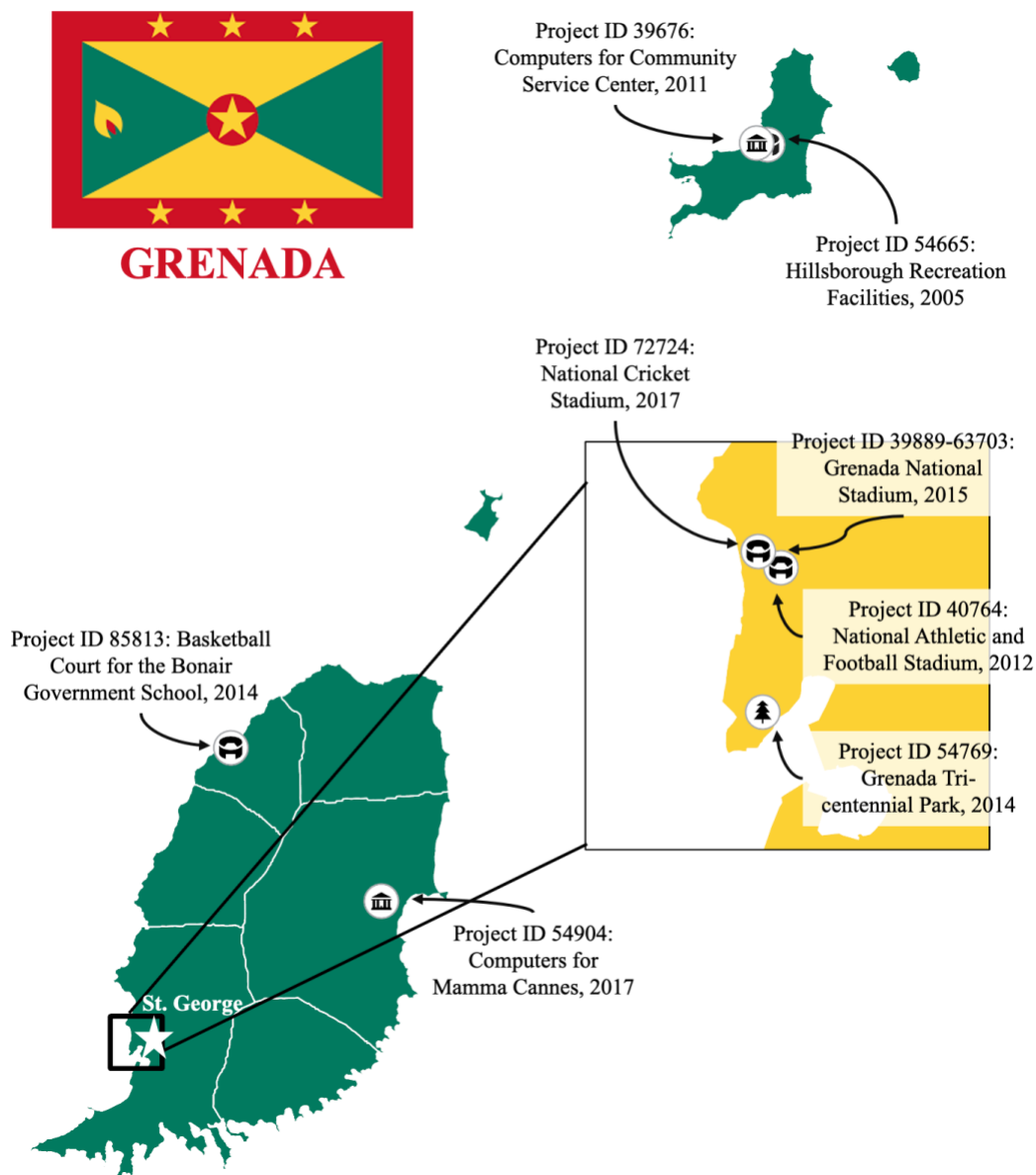
Map 9: Vanity projects in Grenada.

Since Grenada established diplomatic relations with China in 2005, it has been steadily receiving a few development projects each year, as represented in Table 10. The data does not explain why this small island nation with minimal resources seems to be a higher geostrategic

priority to China than Chile. However, Grenada is not an outlier as other Caribbean states have received high numbers of vanity projects, including Jamaica. What quantitative analysis does not reveal is that the indicators for maximum likelihood of a vanity project occurring are only part of the story. Grenada and other Caribbean states that share characteristics with Chile may be more likely to receive a vanity project because they are a higher geostrategic priority. Further analysis of vanity projects should investigate whether China's geostrategic ambitions are connected to the disbursement of vanity projects.

Grenada has been a stable democratic state since its revolution was concluded with the invasion of the United States in 1983, who sought to oust the revolutionary and Cuban-supported government.[98] Like many other Caribbean states, its economy is reliant on tourism.

Indicator	Comments
Grenada General info	Population: 0.11 million (2010); GDP per capita: 7,258 USD (2010); GDP: 856 million in 2015 USD (2010); Area: 344 sq km; Ethnically, 82% of African descent, linguistically, English & French Patois are spoken, and culturally, 49% are Protestant and 36% are Catholic
Vanity Projects	Eight vanity projects: in years 2005 through 2017; 5 athletics, 2 Miscellaneous, and 1 Recipient country's culture, language, or history categories; 7 are completed and 1 is in Pipeline: Commitment; 4 in state's capital
Regime Type and Stability	Parliamentary system under a Constitutional Monarchy with a directly elected House of Representatives (lower chamber) and appointed Senate (upper chamber); a stable electoral democracy
Regime Changes	Consistent elections and no records of state failure in time frame
Violent and Non-Violent Unrest	No records of significant violent or peaceful unrest
International Political Interactions with China	Year established diplomatic relations with China: 2005; year Memorandum of Understanding signed agreeing to the BRI: 2018; from 2000 to 2017, on average voted with the US 34% and China 87% of the time at the UNGA
Civil Rights	High political and civil liberties
Overall Chinese Development Financing Projects	93 projects total; no projects prior to 2005; less than 10 projects each year except 2005 (26 projects)

Table 10: Information and Indicators about Grenada.

Case Study: Lao PDR (Laos)

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[98] "Grenada," in *The World Factbook* (Central Intelligence Agency, April 14, 2022), https://www.cia.gov/the-world-factbook/countries/grenada/.

The one-party communist Laos is a partly stable regime with limited freedoms, but a history of international political support of China and the recipient of many Chinese development finance projects. Laos' geographic proximity, combined with its support of China and lack of unrest, makes it a highly likely case for vanity projects. Thus, it is not surprising that the state has five projects. Notably, as shown in Map 10, all projects are located in the political capital and largest city in the state.
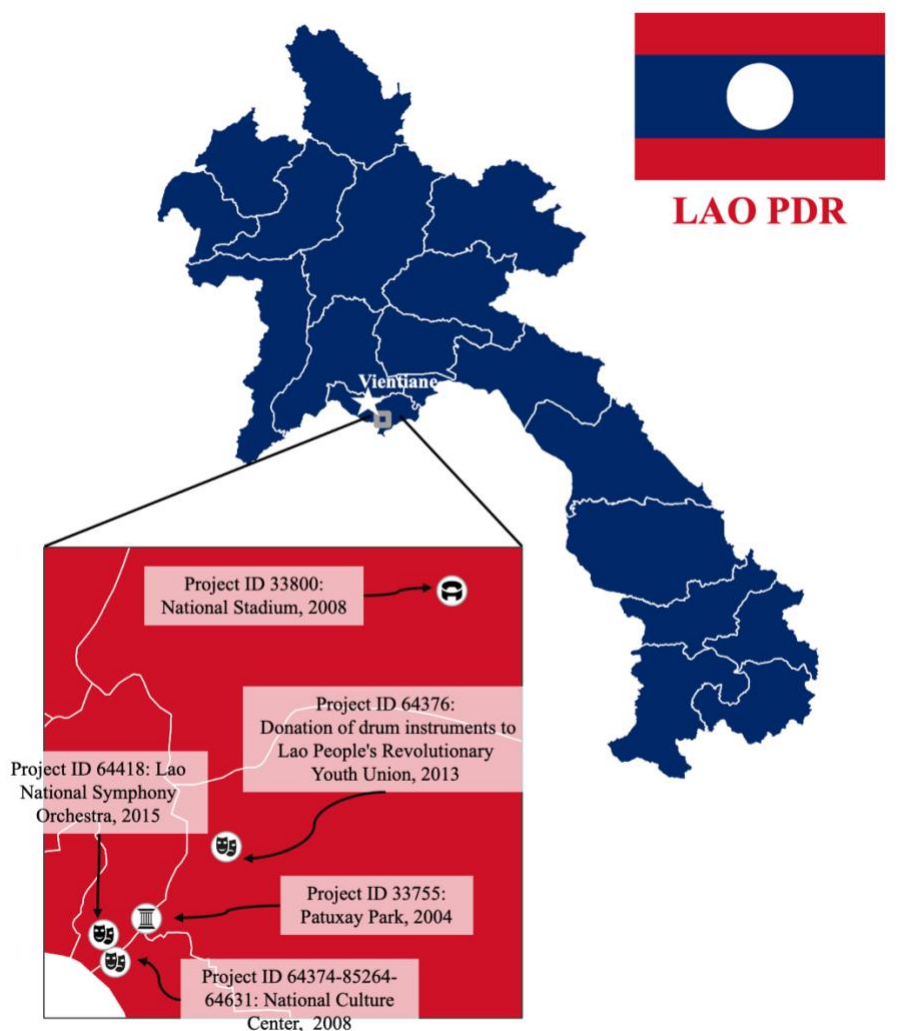
Map 10: Vanity projects in Laos.

The communist Pathet Lao gained control of the government in 1975, and has been closely aligned with its communist neighbors, Vietnam and China, since.[99] In the studied time frame, Laos has been increasingly dependent on foreign investment and aid, primarily from its Communist allies. This aid has helped decrease widespread poverty and increase the state's economy. However, the economy remains dependent on resource exportation.[100]

While there are estimated to be a million Lao refugees or migrants in Thailand alone, there has been minimal new displacement because of violence since the commencement of communism in 1975.[101] Migration, instead, reflects the rejection of the autocratic regime and minimal economic opportunities. Notably, there is no outward political opposition the Communist party and no independent civil society, everything is heavily regulated and monitored by the state.[102]

As a fragile state dependent on international support and closely aligned with China, the presence of vanity projects confirms my hypothesis that vanity projects are given to states closely aligned with or cementing ties with China.

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[99] "Laos | JFK Library," accessed April 26, 2022, https://www.jfklibrary.org/learn/about-jfk/jfk-in-history/laos.

[100] "Laos," in *The World Factbook* (Central Intelligence Agency, April 19, 2022), https://www.cia.gov/the-world-factbook/countries/laos/.

[101] CIA World Factbook, "Laos," April 19, 2022.

[102] "Laos: Freedom in the World 2017 Country Report," Freedom House, accessed April 26, 2022, https://freedomhouse.org/country/laos/freedom-world/2017.

Indicator	Comments
Laos General info	Population: 6.25 million (2010); GDP per capita: 1,170 USD (2010); GDP: 9,899 million in 2015 USD (2010); Labor Sectoral Distribution: 66% in agriculture, 11% in industry, & 23% in services (2010); Area: 236,800 sq km; Ethnically, linguistically, and culturally diverse (over 200 ethnic groups) but 53% of people are estimated to be Lao ethnically, speak Lao, and 61% are Buddhist
Vanity Projects	Five vanity projects: projects in years 2004 to 2015; 1 athletics, 2 fine arts, & 2 Recipient country's culture, language, or history; all are completed; all in state's capital
Regime Type and Stability	Communist system (one-party system) with a directly elected unicameral National Assembly; state fragility steadily decreasing, from 16 to 12 over time; rated as severely undemocratic
Regime Changes	Consistent elections and no records of state failure in time frame
Violent and Non-Violent Unrest	No records of significant violent or peaceful unrest
International Political Interactions with China	Year established diplomatic relations with China: 1961; year Memorandum of Understanding signed agreeing to the BRI: 2018; from 2000 to 2017, on average voted with the US 23% and China 93% of the time at the UNGA
Civil Rights	Low political and civil liberties
Overall Chinese Development Financing Projects	240 total projects; steady increase in number of projects since 2008

Table 11: Information and Indicators about Laos.

Case Study: Nigeria

Nigeria is a fragile semi-democratic African state with continued violence and cases of state failure. Nigeria politically cooperates with China internationally and is the recipient of many Chinese development financing projects. However, its status as a failed state, or one with the record of many state failures, an indicator which statistically decreases the likelihood of a vanity project occurring, appears to be the overwhelming contributor the zero vanity projects in the state.

Map 11: ADM1 level of Nigeria, there are no vanity projects in the country.

Nigeria is the largest sub-Saharan economy and is expected by 2050 to be the world's fourth most populous country.[103] In 1999, Nigeria transitioned to a civilian government and began institutionalizing democracy. The democratic process has been plagued by a petroleum-dependent economy, corruption, and ethnic and religious tensions.[104] Federal elections continue to feature intimidation, voting irregularities, and violence preventing hundreds of thousands from voting, but notably this is the longest period of democracy since independence.[105]

Starting in 2006, ethnic militias began systematic attacking oil infrastructure in the delta region in response to the exploitation of resources.[106] Since 2011, the Nigerian-based Boko Haram

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[103] "Nigeria," in *The World Factbook* (Central Intelligence Agency, April 19, 2022), https://www.cia.gov/the-world-factbook/countries/nigeria/.

[104] CIA World Factbook, "Nigeria," April 19, 2022.

[105] "Nigeria: Freedom in the World 2017 Country Report," Freedom House, accessed April 26, 2022, https://freedomhouse.org/country/nigeria/freedom-world/2017.

[106] "Political Instability Task Force (PITF) Consolidated Problem Set, Historical State Armed Conflicts and Regime Crises, 1955-2018."

terrorist group advocating for Islamic law has increasingly gained power in the state's northeast.[107]

The political failures combined with violence has led to widespread poverty, large unemployment

numbers, and displaced populations.[108]

Indicator	Comments
Nigeria General info	Population: 158.5 million (2010); GDP per capita: 2,292 USD (2010); GDP: 387,074 million in 2015 USD (2010); Labor Sectoral Distribution: 41% in agriculture, 10% in industry, & 49% in services (2010); Area: 923,768 sq km; Ethnically, linguistically, and culturally diverse (over 250 ethnic groups) but ethnically, 30% of people are Hausa, 16% are Yoruba, and 15% are Igbo, and, culturally, 54% are Muslim
Vanity Projects	No projects
Regime Type and Stability	Presidential system with a directly elected House of Representatives (lower chamber) and directly elected Senate (upper chamber); a growingly democratic state with high fragility, a notable increase in 2015
Regime Changes	Consistent elections and 1 state failure each year since 2006
Violent and Non-Violent Unrest	Civil war (magnitude 3) since 2009 and ethnic violence (magnitude ranging from 1 to 4) across whole time frame; 2334 total protests, but 2306 of those were in 2016 and 2017
International Political Interactions with China	Year established diplomatic relations with China: 1971; year Memorandum of Understanding signed agreeing to the BRI: 2018; from 2000 to 2017, on average voted with the US 30% and China 90% of the time at the UNGA
Civil Rights	Some political and civil liberties
Overall Chinese Development Financing Projects	104 total projects; general growth in number of projects

Table 12: Information and Indicators about Nigeria.

A difference between Nigeria and a fragile state may be Nigeria's federal government lacks

power in many regions of the country. The widespread violence continually halts social services,

notably girls' education, and the oil economy. China may be less incentivized to give a vanity

project to the state due to this high level of uncertainty caused by the multitude of recorded state

failures. Alternatively, Chinese development finance may be more targeted to meet Nigeria's more

pressing concerns. However, if this were the case, then the DRC would not feature so many vanity

projects.

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[107] "Boko Haram," National Counterterrorism Center, accessed April 26, 2022,
https://www.dni.gov/nctc/groups/boko_haram.html.
[108] CIA World Factbook, "Nigeria," April 19, 2022.

<u>Case Study: Palau</u>

The Pacific Island state of Palau has no Chinese financed vanity projects, or Chinese development financed projects in general. More than that, as shown in Table 13, Palau does not even recognize the People's Republic of China, instead it has diplomatic ties with Taiwan. These indicators do not confirm the absence of projects but may be the reason for their absence.

Indicator	Comments
Palau General info	Population: 0.02 million (2010); GDP per capita: 10,220 USD (2010); GDP: 232 million in 2015 USD (2010); Labor Sectoral Distribution: 2% in agriculture, 12% in industry, & 86% in services (2008); Area: 459 sq km; Relatively homogenous, 73% of citizens are Palauan (Micronesian with Malayan and Melanesian admixtures), 65% speak Palauan, and 45% are Roman Catholic
Vanity Projects	No projects
Regime Type and Stability	Presidential system with a directly elected House of Delegates (lower chamber) and directly elected Senate (upper chamber); a stable electoral democracy with low fragility
Regime Changes	Consistent elections and no records of state failure in time frame
Violent and Non-Violent Unrest	No records of significant violent or peaceful unrest
International Political Interactions with China	Year established diplomatic relations with China: N/A, recognizes Taiwan; year Memorandum of Understanding signed agreeing to the BRI: N/A; from 2000 to 2017, on average voted with the US 82% and China 39% of the time at the UNGA
Civil Rights	High political and civil liberties
Overall Chinese Development Financing Projects	1 project in 2009

Table 13: Information and Indicators about Palau.

Since gaining independence in 1994, Palau has participated in and renewed a Compact of Free Association (COFA) with the United States, through which Palau grants the US military access to the country in return for financial assistance.[109] Palauans' per capita income is nearly double that of the neighboring Micronesia most likely because of COFA.[110] Palau's strong allegiance to the United States is visible at the United Nations, where Palau votes with the United

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[109] "Palau," in *The World Factbook* (Central Intelligence Agency, April 19, 2022), https://www.cia.gov/the-world-factbook/countries/palau/.
[110] CIA World Factbook, "Palau."

States States 82% of the time, and with China only 39% of the time. Beyond its connection to the US, Palau's economy is tourism-dependent, and the state is at a high risk of being impacted by climate change. The lack of Chinese financed vanity projects is expected given these characteristics. However, the case of Palau is not the norm among Pacific islands as both Samoa and Vanuatu have received a large number of vanity projects.

Map 12: ADM1 level of Palau, there are no vanity projects in the country.

6. Conclusion

Fragile, not failed, states with high political cooperation with China and strong civil liberties are the most likely to receive vanity projects. However, as demonstrated by the case studies, the factors that were significant in the large-N analysis are not necessarily the only predictors of when a vanity project occurs.

My findings are limited by the scope of my dependent variable. The AidData data is the most expansive open-source data on Chinese financing, but even it does not encompass everything. In the future when the data set is updated to incorporate more states, this analysis should be repeated. Further research should also apply the geographical manipulation used in my vanity project data set to the full AidData data to allow for more robust comparisons between the two data sets.

Also, in future analysis of vanity projects, researchers should consider how best to measure public and elite sentiment towards China for each year in the selected time frame. A better measurement of these indicators could provide further insight on the political motivations for vanity projects. For instance, if there is data that the public does not support Chinese development financing projects, that would indicate vanity projects are primarily driven by political elites.

To increase the robustness of my statistical analysis further research should test whether predicted marginal effects are visible in the selected case studies. If these results are not visible, the case studies should be expanded on to comprehend this difference. One reason for this difference, which should be included in the regression analysis, is interactions between the independent variables that impact how the independent variables interact with the dependent variable.

To conclude, through my analysis of Chinese financed vanity projects, China uses the projects as a reward for states supporting China in the international system. Further, China uses the projects as gifts to influence fragile states and ensure that the international political cooperation with China continues. In 2018, Xi Jinping may have proclaimed that the Belt and Road Initiative features no vanity projects, but I hypothesize that China is continuing to engage in the disbursement of vanity projects to its allies.

Bibliography

"About Us – Celebrating Jamaica 55." n.d. Accessed April 26, 2022.
    https://jamaica55.gov.jm/about-us/.

"AidData's Global Chinese Development Finance Dataset, Version 2.0." 2021. AidData. 2021.
    https://www.aiddata.org/data/aiddatas-global-chinese-development-finance-dataset-
    version-2-0.

Blair, Robert A, Robert Marty, and Phillip Roessler. 2019. "Foreign Aid and Soft Power."
    Working Paper 86. AidData at William & Mary.
    http://docs.aiddata.org/ad4/pdfs/WPS86_Foreign_Aid_and_Soft_Power__Great_Power_
    Competition_in_Africa_in_the_Early_21st_Century.pdf.

Blair, Robert A, and Phillip Roessler. 2018. "The Effects of Chinese Aid on State Legitimacy in
    Africa: Cross-National and Sub-National Evidence from Surveys, Survey Experiments,
    and Behavioral Games." Working Paper 59. Williamsburg, VA: AidData at William &
    Mary.
    http://docs.aiddata.org/ad4/pdfs/WPS59_The_Effects_of_Chinese_Aid_on_State_Legitm
    acy_in_Africa.pdf.

Bluhm, Richard, Axel Dreher, Andreas Fuchs, Bradley C Parks, Austin M Strange, and Michael
    J Tierney. 2020. "Connective Financing: Chinese Infrastructure Projects and the
    Diffusion of Economic Activity in Developing Countries." Working Paper 103. AidData
    at William & Mary.
    http://docs.aiddata.org/ad4/pdfs/WPS103_Connective_Financing__Chinese_Infrastructur
    e_Projects_and_the_Diffusion_of_Economic_Activity_in_Developing_Countries.pdf.

"Boko Haram." n.d. National Counterterrorism Center. Accessed April 26, 2022.
    https://www.dni.gov/nctc/groups/boko_haram.html.

Boston University School of Public Health. 2016. "Correlation in R." January 6, 2016.
    https://sphweb.bumc.bu.edu/otlt/MPH-Modules/BS/R/R5_Correlation-
    Regression/R5_Correlation-Regression3.html.

Brazys, Samuel, and Alexander Dukalskis. 2019. "Grassroots Image Management: Confucius
    Institutes and Media Perceptions of China." Working Paper 69. AidData at William &
    Mary. http://docs.aiddata.org/ad4/pdfs/WPS69_Grassroots_Image_Management.pdf.

Chen, Muyang. 2018. "Official Aid or Export Credit: China's Policy Banks and the Reshaping of
    Development Finance." GCI Working Paper 001. Boston University's Global
    Development Policy Center Global China Initiative.
    http://www.bu.edu/gdp/files/2018/07/GCI-Muyang-Chen-2018.pdf.

Chen, Yunnan. 2021. "The Political Economy of Railway Development in Ethiopia's Railway
    Sector and Implications for Technology Transfer." GCI Working Paper 14. Boston

University's Global Development Policy Center Global China Initiative. https://www.bu.edu/gdp/files/2021/01/GCI_WP_014_Yunnan_Chen.pdf.

"Chile." 2022. In *The World Factbook*. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/chile/.

"Chile: Freedom in the World 2017 Country Report." n.d. Freedom House. Accessed April 26, 2022. https://freedomhouse.org/country/chile/freedom-world/2017.

"China and the Netherlands." 2004. Embassy of People's Republic of China in the Kingdom of Netherlands. 2016 2004. https://www.mfa.gov.cn/ce/cenl/eng/zhgx/zzgx/t137589.htm.

China Power Team. 2020. "How Will the Belt and Road Initiative Advance China's Interests?" Center for Strategic and International Studies' China Power Initiative. August 26, 2020. https://chinapower.csis.org/china-belt-and-road-initiative/.

"Chinese Landmark Concept Put into UN Security Council Resolution." 2017. Belt and Road Portal. March 18, 2017. https://eng.yidaiyilu.gov.cn/qwyw/rdxw/9704.htm.

Clark, David, and Patrick Regan. 2020. "Mass Mobilization Protest Data." Harvard Dataverse. https://doi.org/10.7910/DVN/HTTWYL.

"Community Facilities | Suva City Council." n.d. Accessed April 26, 2022. http://suvacity.org/community-facilities/.

"Congo, Democratic Republic of The." 2022. In *The World Factbook*. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/congo-democratic-republic-of-the/.

"Consulate-General of the People's Republic of China in Willemstad (Dutch Caribbean)." n.d. Accessed April 26, 2022. http://willemstad.chineseconsulate.org/eng/.

Cordell, Kristen A. 2020. "The Evolving Relationship between the International Development Architecture and China's Belt and Road." Brookings. October 12, 2020. https://www.brookings.edu/articles/the-evolving-relationship-between-the-international-development-architecture-and-chinas-belt-and-road/.

"Country Summary." 2022. ForeignAssistance.Gov. April 22, 2022. https://foreignassistance.gov/.

Custer, Samantha, Axel Dreher, Thai-Binh Elston, Andreas Fuchs, Ghose Siddarta, Joyce Jiahui Lin, Ammar A Malik, et al. 2021. "Tracking Chinese Development Finance: An Application of AidData's TUFF 2.0 Methodology." Williamsburg, VA: AidData at William & Mary. https://docs.aiddata.org/ad4/pdfs/AidData_TUFF_methodology_2_0.pdf.

Custer, Samantha, Brooke Russell, Matthew DiLorenzo, Mengfan Cheng, Siddartha Ghose, Harsh Desai, Jacob Sims, and Jennifer Turner. 2018. "Ties That Bind: Quantifying China's Public Diplomacy and Its 'Good Neighbor' Effect." Williamsburg, VA: AidData at William & Mary.

Custer, Samantha, Tanya Sethi, Jonathan A Solis, Joyce Jiahui Lin, Siddhartha Ghose, Rodney Knight, and Austin Baehr. 2019. "Silk Road Diplomacy." Williamsburg, VA: AidData at William & Mary. https://docs.aiddata.org/ad4/pdfs/Silk_Road_Diplomacy_Report.pdf.

"Democratic Republic of the Congo: Freedom in the World 2017 Country Report." n.d. Freedom House. Accessed April 26, 2022. https://freedomhouse.org/country/democratic-republic-congo/freedom-world/2017.

Dicarlo, Jessica. n.d. "Grounding Development Finance and Safeguards through Land Compensation on the Laos-China Belt and Road Corridor." GCI Working Paper 013. Boston University's Global Development Policy Center Global China Initiative. https://www.bu.edu/gdp/files/2021/01/GCI_WP_013_Jessica_DiCarlo.pdf.

Dreher, Axel. 2020. "The Political Leaders' Affiliation Database (PLAD)." Harvard Dataverse. https://doi.org/10.7910/DVN/YUS575.

Dreher, Axel, Andreas Fuchs, Roland Hodler, Bradley C. Parks, Paul A. Raschky, and Michael J. Tierney. 2019. "African Leaders and the Geography of China's Foreign Assistance." *Journal of Development Economics* 140 (September): 44–71. https://doi.org/10.1016/j.jdeveco.2019.04.003.

Dunnell, Tony. 2019. "Patuxai." Atlas Obscura. April 23, 2019. http://www.atlasobscura.com/places/patuxai.

"Everything You Need to Know About Visiting Malé." n.d. Accessed April 26, 2022. https://travel.usnews.com/Maldives/Things_To_Do/Male_62543/.

Fernihough, Alan. n.d. "Marginal Effects for Generalized Linear Models: The Mfx Package for R," 15.

"Freedom in the World." n.d. Freedom House. Accessed April 26, 2022. https://freedomhouse.org/countries/freedom-world/scores.

"Friendship Hall, Khartoum, Sudan." n.d. Accessed April 26, 2022. https://www.archnet.org/sites/43.

Fuchs, Andreas, Lennart C. Kaplan, Krisztina Kis-Katos, Sebastian Schmidt, Felix Turbanisch, and Feicheng Wang. 2021. "Mask Wars: China's Exports of Medical Goods in Times of COVID-19." *SSRN Electronic Journal; AidData Working Paper 108*, June. https://doi.org/10.2139/ssrn.3661798.

Gardner, Alysha, Joyce Jiahui Lin, Scott Morris, and Bradley Parks. 2021. "Bargaining with Beijing: A Tale of Two Borrowers." AidData at William & Mary, Center for Global Development. https://www.cgdev.org/sites/default/files/bargaining-beijing-tale-two-borrowers-revised-feb2021.pdf.

"GDP (Constant 2015 US$)." n.d. World Bank. Accessed April 26, 2022. https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?name_desc=false.

"GDP per Capita (Constant 2015 US$)." n.d. World Bank. Accessed April 26, 2022. https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?name_desc=false.

Gehring, Kai, Lennart C. Kaplan, and Melvin H.L. Wong. 2019. "China and the World Bank - How Contrasting Development Approaches Affect the Stability of African States." *SSRN Electronic Journal, AidData at William & Mary*, September, 120. https://doi.org/10.2139/ssrn.3467991.

geoBoundaries. n.d. "Comprehensive Global Administrative Zones (CGAZ)." William & Mary GeoLab. Accessed April 26, 2022. https://www.geoboundaries.org/downloadCGAZ.html.

Government of China's Office of the Leading Group for Promoting the Belt and Road Initiative. n.d. "Special the Belt and Road: The Silk Road Economic Belt + the 21st-Century Maritime Silk Road." Belt and Road Portal. Accessed April 26, 2022. https://eng.yidaiyilu.gov.cn/ztindex.htm.

"Grenada." 2022. In *The World Factbook*. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/grenada/.

Grépin, Karen A., Victoria Y. Fan, Gordon C. Shen, and Lucy Chen. 2014. "China's Role as a Global Health Donor in Africa: What Can We Learn from Studying under Reported Resource Flows?" *Globalization and Health* 10 (1): 84. https://doi.org/10.1186/s12992-014-0084-6.

Halland, Håvard, John Beardsworth, Bryan Land, and James Schmidt. 2014. "Resource Financed Infrastructure: A Discussion on a New Form of Infrastructure Financing." World Bank Group. http://dx.doi.org/10.1596/978-1-4648-0239-3.

"Kigali Genocide Memorial – A Place for Remembrance and Learning." n.d. Accessed April 26, 2022. https://kgm.rw/.

"Kyrgyz National Maldybaev Opera, Bishkek, Kyrgyzstan." n.d. Operabase. Accessed April 26, 2022. https://www.operabase.com/companies/kyrgyzstan/kyrgyz-national-maldybaev-opera-720/en.

Laerd Statistics. n.d. "Pearson Product-Moment Correlation." Accessed April 26, 2022. https://statistics.laerd.com/statistical-guides/pearson-correlation-coefficient-statistical-guide.php.

"Laos." 2022. In *The World Factbook*. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/laos/.

"Laos | JFK Library." n.d. Accessed April 26, 2022. https://www.jfklibrary.org/learn/about-jfk/jfk-in-history/laos.

"Laos: Freedom in the World 2017 Country Report." n.d. Freedom House. Accessed April 26, 2022. https://freedomhouse.org/country/laos/freedom-world/2017.

"Lebanese National Higher Conservatory of Music." n.d. Accessed April 26, 2022. https://conservatory.gov.lb/.

Long, Scott, and Jeremy Freese. 2014. *Regression Models for Categorical Dependent Variables Using Stata*. 3rd ed. Stata Press. https://web.s.ebscohost.com/ehost/ebookviewer/ebook/bmxlYmtfXzI3MTg4MTlfX0FO0?sid=949c902a-c31f-4d9a-bc61-ed5536b64a17@redis&vid=0&format=EK&lpid=navPoint-268&rid=0.

Malik, Ammar A, Bradley Parks, Brooke Russell, Joyce Jiahui Lin, Katherine Walsh, Kyra Solomon, Sheng Zhang, Thai-Binh Elston, and Seth Goodman. 2021. "Banking on the Belt and Road." AidData at William & Mary. https://docs.aiddata.org/ad4/pdfs/Banking_on_the_Belt_and_Road__Insights_from_a_new_global_dataset_of_13427_Chinese_development_projects.pdf.

Marshall, Monty G. 2019. "Major Episodes of Political Violence and Conflict Regions, 1946-2018." Center for Systemic Peace and Societal-Systems Research Inc. http://www.systemicpeace.org/inscr/MEPVcodebook2018.pdf.

Marshall, Monty G, and Gabrielle Elzinga-Marshall. 2018. "State Fragility Index." Center for Systemic Peace and Societal-Systems Research Inc.

Marshall, Monty G, and Ted Robert Gurr. 2020. "Polity5: Political Regime Characteristics and Transitions, 1800-2018." Center for Systemic Peace and Societal-Systems Research Inc. http://www.systemicpeace.org/inscr/p5manualv2018.pdf.

Marshall, Monty G, Ted Robert Gurr, and Barbara Harff. 2019. "PTF - State Failure Problem Set: Internal Wars and Failures of Government, 1955 - 2018," September, 16.

Ministry of Foreign Affairs of PRC. 2013. "President Xi Jinping Delivers Important Speech and Proposes to Build a Silk Road Economic Belt with Central Asian Countries." Belt and Road Portal. September 7, 2013. https://eng.yidaiyilu.gov.cn/qwyw/hyygd/1849.htm.

Murphy, Douglas. 2018. "Castles Made of Sand: How London Lost on Boris Johnson's Extravagant Pet Projects." *World Policy Journal* 35 (2): 3–8. https://doi.org/10.1215/07402775-7085544.

"Nigeria." 2022. In *The World Factbook*. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/nigeria/.

"Nigeria: Freedom in the World 2017 Country Report." n.d. Freedom House. Accessed April 26, 2022. https://freedomhouse.org/country/nigeria/freedom-world/2017.

OECD. 2018. "The Belt and Road Initiative in the Global Trade, Investment and Finance Landscape." In *OECD Business and Finance Outlook 2018*, by OECD, 61–101. OECD Business and Finance Outlook. OECD. https://doi.org/10.1787/bus_fin_out-2018-6-en.

Ogwang, Tom, and Frank Vanclay. 2021. "Resource-Financed Infrastructure: Thoughts on Four Chinese-Financed Projects in Uganda." *Sustainability* 13 (6): 3259. https://doi.org/10.3390/su13063259.

"Palau." 2022. In *The World Factbook*. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/palau/.

"Parline: The IPU's Open Data Platform." n.d. Parline: The IPU's Open Data Platform. Accessed April 26, 2022. https://data.ipu.org/.

Penn State Elberly College of Science. n.d. "2.5 - The Coefficient of Determination, r-Squared | STAT 462." Accessed April 26, 2022a. https://online.stat.psu.edu/stat462/node/95/.

———. n.d. "15.4 - Poisson Regression | STAT 501." PennState: Statistics Online Courses. Accessed April 26, 2022b. https://online.stat.psu.edu/stat501/lesson/15/15.4.

"Political Instability Task Force (PITF) Consolidated Problem Set, Historical State Armed Conflicts and Regime Crises, 1955-2018." 2018. Center for Systemic Peace and Societal-Systems Research Inc. http://www.systemicpeace.org/inscr/PITF%20Consolidated%20Case%20List%202018.pdf.

"Purpose Codes: Sector Classification." n.d. OECD. Accessed January 26, 2022. https://www.oecd.org/development/financing-sustainable-development/development-finance-standards/purposecodessectorclassification.htm.

Qingsheng, Meng. 2018. "Algiers Opera House Helps Diversify Cultural Life." August 14, 2018. https://news.cgtn.com/news/3d3d414f7a67444e79457a6333566d54/share_p.html.

Reuters. 2018. "China's Xi Says Funds for Africa Not for 'Vanity Projects,'" September 3, 2018, sec. Industry, Materials and Utilities. https://www.reuters.com/article/china-africa-idUSL3N1VO018.

Roessler, Martin. 2019. "Political Regimes and Publicly Provided Goods: Why Democracy Needs Development." *Public Choice* 180 (3–4): 301–31. https://doi.org/10.1007/s11127-019-00638-y.

Runfola, Daniel, Austin Anderson, Heather Baier, Matt Crittenden, Elizabeth Dowker, Sydney Fuhrig, Seth Goodman, et al. 2020. "GeoBoundaries: A Global Database of Political Administrative Boundaries." *PLOS ONE* 15 (4): e0231866. https://doi.org/10.1371/journal.pone.0231866.

Sacks, David. 2021. "Countries in China's Belt and Road Initiative: Who's In And Who's Out." Council on Foreign Relations. March 24, 2021. https://www.cfr.org/blog/countries-chinas-belt-and-road-initiative-whos-and-whos-out.

Salidjanova, Nargiza. 2011. "Going Out: An Overview of China's Outward Foreign Direct Investment." US-China Economic & Security Review Commission. https://www.uscc.gov/sites/default/files/Research/GoingOut.pdf.

"South Sudan - Countries - Office of the Historian." n.d. US Department of State. Accessed April 26, 2022. https://history.state.gov/countries/south-sudan.

Stats, R. on and R. 2021. "Multiple Linear Regression Made Simple | R-Bloggers." October 4, 2021. https://www.r-bloggers.com/2021/10/multiple-linear-regression-made-simple/.

"The Academy for the Performing Arts." n.d. The University of Trinidad and Tobago. Accessed April 26, 2022. https://utt.edu.tt/index.php?wk=71&page_key=1222.

"The People's Republic of China(1949-) History." n.d. China's Ministry of Foreign Affairs. Accessed April 26, 2022. https://www.mfa.gov.cn/ce/celr//eng/gyzg/jgiejgi/jgkdsjg/t372963.htm.

"UNdata." n.d. Accessed April 26, 2022. https://data.un.org/.

United Nations. n.d. "THE 17 GOALS | Sustainable Development." Accessed April 26, 2022. https://sdgs.un.org/goals.

Vadlamannati, Krishna Chaitanya, Yuanxin Li, Samuel Rueckert Brazys, and Alexander Dukalskis. 2019. "Building Bridges or Breaking Bonds? The Belt and Road Initiative and Foreign Aid Competition." *SSRN Electronic Journal, AidData at William & Mary*, April, 50. https://doi.org/10.2139/ssrn.3329502.

Voeten, Erik, Anton Strezhnev, and Michael Bailey. 2021. "United Nations General Assembly Voting Data." Harvard Dataverse. https://doi.org/10.7910/DVN/LEJUQZ.

Xinhua. 2017. "'Belt and Road' Incorporated into CPC Constitution," October 24, 2017. http://www.xinhuanet.com/english/2017-10/24/c_136702025.htm.

Zaken, Ministerie van Algemene. 2019. "Responsibilities of the Netherlands, Aruba, Curaçao and St Maarten - Caribbean Parts of the Kingdom - Government.Nl." Onderwerp. Government of Netherlands. Ministerie van Algemene Zaken. October 16, 2019. https://www.government.nl/topics/caribbean-parts-of-the-kingdom/responsibilities-of-the-netherlands-aruba-curacao-and-st-maarten.

Zhao, Suisheng. 2020. "China's Belt-Road Initiative as the Signature of President Xi Jinping Diplomacy: Easier Said than Done." *Journal of Contemporary China* 29 (123): 319–35. https://doi.org/10.1080/10670564.2019.1645483.

Appendix

For replication purposes, the below figures show the R code used in the cross-national analysis, included for replication purposes:

```
# read data from excel
data <- read_xlsx("regression_data.xlsx")

# change all missing data to NA
data <- data %>%
  replace_with_na_all(condition = ~.x == "No data")

# make sure R reads all data as numeric values, not strings
data$DV <- as.numeric(data$DV)
data$DV_LAG <- as.numeric(data$DV_LAG)
data$DV_Lead <- as.numeric(data$DV_Lead)
data$IV_Var1 <- as.numeric(data$IV_Var1)
data$IV_Var2 <- as.numeric(data$IV_Var2)
data$IV_Var3 <- as.numeric(data$IV_Var3)
data$IV_Var4 <- as.numeric(data$IV_Var4)
data$IV_Var5 <- as.numeric(data$IV_Var5)
data$IV_Var6 <- as.numeric(data$IV_Var6)
data$IV_Var7 <- as.numeric(data$IV_Var7)
data$IV_Var8 <- as.numeric(data$IV_Var8)
data$IV_Var9 <- as.numeric(data$IV_Var9)
data$IV_Var10 <- as.numeric(data$IV_Var10)
data$IV_Var11 <- as.numeric(data$IV_Var11)
data$IV_Var12 <- as.numeric(data$IV_Var12)
data$IV_Var13 <- as.numeric(data$IV_Var13)
data$IV_Var14 <- as.numeric(data$IV_Var14)
```

Appendix Figure 1: Reading the data and cleaning it in R to prepare it for analysis.

```
# recode to get rid of negative numbers for IV1 (polity scores)
data$IV_Var1 <- ifelse(data$IV_Var1=="-10", "1",
    ifelse(data$IV_Var1=="-9", "2",
    ifelse(data$IV_Var1=="-8", "3",
    ifelse(data$IV_Var1=="-7", "4",
    ifelse(data$IV_Var1=="-6", "5",
    ifelse(data$IV_Var1=="-5", "6",
    ifelse(data$IV_Var1=="-4", "7",
    ifelse(data$IV_Var1=="-3", "8",
    ifelse(data$IV_Var1=="-2", "9",
    ifelse(data$IV_Var1=="-1", "10",
    ifelse(data$IV_Var1=="0", "11",
    ifelse(data$IV_Var1=="1", "12",
    ifelse(data$IV_Var1=="2", "13",
    ifelse(data$IV_Var1=="3", "14",
    ifelse(data$IV_Var1=="4", "15",
    ifelse(data$IV_Var1=="5", "16",
    ifelse(data$IV_Var1=="6", "17",
    ifelse(data$IV_Var1=="7", "18",
    ifelse(data$IV_Var1=="8", "19",
    ifelse(data$IV_Var1=="9", "20",
    ifelse(data$IV_Var1=="10", "21",
        NA)))))))))))))))))))))
```

```
# recode so that the higher numbers are the more of the
# condition for IV6 (Political Rights), so 7 = more free
data$IV_Var6 <- ifelse(data$IV_Var6=="7", "1",
    ifelse(data$IV_Var6=="6", "2",
    ifelse(data$IV_Var6=="5", "3",
    ifelse(data$IV_Var6=="4", "4",
    ifelse(data$IV_Var6=="3", "5",
    ifelse(data$IV_Var6=="2", "6",
    ifelse(data$IV_Var6=="1", "7",
        NA)))))))

# recode IV7 (Civil Liberties) the same as IV6, so 7 =
# more free
data$IV_Var7 <- ifelse(data$IV_Var7=="7", "1",
    ifelse(data$IV_Var7=="6", "2",
    ifelse(data$IV_Var7=="5", "3",
    ifelse(data$IV_Var7=="4", "4",
    ifelse(data$IV_Var7=="3", "5",
    ifelse(data$IV_Var7=="2", "6",
    ifelse(data$IV_Var7=="1", "7",
        NA)))))))
```

Appendix Figure 2: Recoding variables one, six, and seven, this standardized the data so that the higher values meant more of the measure and got rid of negative values.

```
# Creating a data frame (the needed object type) to run correlation
df <- data.frame(data$DV, data$DV_LEAD, data$IV_Var1, data$IV_Var2, data$IV_Var3, data$IV_Var4,
data$IV_Var5, data$IV_Var6, data$IV_Var7, data$IV_Var8, data$IV_Var9, data$IV_Var10, data$IV_Var11,
data$IV_Var12, data$IV_Var13, data$IV_Var14)

# Pearson method of correlation, omitting NA values from data
cor <- cor(na.omit(df), method = "pearson")
```

Appendix Figure 3: Pearson method of correlation used to see interactions between variables.

```
# Poisson Event Count Model, excluding. NA values from data
poisson.model <- glm(data$DV ~ data$IV_Var1 + data$IV_Var2 + data$IV_Var3 + data$IV_Var4 +
data$IV_Var5 + data$IV_Var7 + data$IV_Var8 + data$IV_Var9 + data$IV_Var10 + data$IV_Var11 +
data$IV_Var12 + data$IV_Var13 + data$IV_Var14, data = data, family = poisson(link = "log"),
na.action=na.exclude)
summary(poisson.model)
```

Appendix Figure 4: Code for Poisson model, ran a second time to lead the data.

```
# OLS Regression,  excluding NA values from data
Model <- lm(data$DV ~ data$IV_Var1 + data$IV_Var2 + data$IV_Var3 + data$IV_Var4 + data$IV_Var5 +
data$IV_Var7 + data$IV_Var8 + data$IV_Var9 + data$IV_Var10 + data$IV_Var11 + data$IV_Var12 +
data$IV_Var13 + data$IV_Var14, data = data, na.action=na.exclude)
summary(Model)
```

Appendix Figure 5: Code for OLS model, used as a robustness check.

```
# Poisson Marginal Effects
poisson_results_mfx <- poissonmfx(formula = data$DV ~ data$IV_Var1 + data$IV_Var2 + data$IV_Var3 +
data$IV_Var4 + data$IV_Var5 + data$IV_Var7 + data$IV_Var8 + data$IV_Var9 + data$IV_Var10 +
data$IV_Var11 + data$IV_Var12 + data$IV_Var13 + data$IV_Var14, data = data)
poisson_results_mfx
```

Appendix Figure 6: Code for Poisson Marginal Effects, ran a second time to lead the data.

Ordinary Least Square Regression Model

	Vanity Projects (DV)	Vanity Projects Leading (DV)
IV1: Polity State Regime Level	-0.0004	-0.002
	(0.003)	(0.003)
IV2: State Fragility Levels	0.004	0.005
	(0.003)	(0.003)
IV3: Instances of State Failure	-0.045	-0.031
	(0.032)	(0.033)
IV4: Political Violence Levels	0.005	0.006
	(0.010)	(0.011)
IV5: Instances of Federal Elections	-0.011	-0.010
	(0.023)	(0.024)
IV7: Civil Liberties Levels	0.018	0.021
	(0.014)	(0.015)
IV8: Voting with the United States at the United Nations General Assembly	0.105	0.043
	(0.133)	(0.143)
IV9: Voting with China at the United Nations General Assembly	0.283	0.193
	(0.201)	(0.213)
IV10: Overall Number of Chinese Development Financing Projects	**0.009*****	**0.005***
	(0.002)	**(0.002)**
IV11: Changes in Gross Domestic Product	-3e-15	-1e-12
	(8e-15)	(9e-13)
IV12: Changes in Gross Domestic Product per capita	-0.000005	0.000009
	(0.00001)	(0.00002)
IV13: Instances of Protests	-0.00002	-0.00002
	(0.00004)	(0.00004)
IV14: Overall Amount of United States Development Financing	-7e-12	-5e-12
	(7e-12)	(7-12)
N	1781	1695
R Square	0.022	0.011
Adjusted R Square	0.015	0.003

Standard error in parentheses

*** = p < 0.001, ** = p < 0.01, * = p < .05, ^= p<0.1

Appendix Figure 7: Results of OLS regression used for robustness check.