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Industry influence and agency decision making: Evidence from USAID

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Industry Influence and Agency Decision Making: Evidence from USAID

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Abstract

This paper examines the avenues interest groups use to influence procurement decisions that are subject to legislative constraints that conflict with the provision of the government service or goods, such as “Buy American Laws.” We first explore a theoretical model in which the government agency can value service of the interest group and fulfillment of its procurement. We then examine the implications of this theoretical model empirically using data on the US Agency for International Development’s Title II Emergency Food Aid program for the shipment of packaged goods to low income countries facing humanitarian crises. We find that USAID, which is subject to a type of “Buy American Law” called cargo preference when allocating food aid, at times over-complies with the mandate. We then use an empirical approach to gain insights into how USAID makes allocation decisions in accordance with its compliance with the mandate throughout the fiscal year.

Keywords: Rent-seeking, Bureaucracy, Procurement, Disaster Aid

JEL: D72, D73, H57, H84

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“The proposal of any new law or regulation of commerce which comes from [commercial interests], ought always to be listened to with great precaution and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention.” [Smith \(1776\)](#).

1 Introduction

Many government agencies formally define their missions in terms of serving the public wellbeing or a specific set of policy objectives such as reducing the incidence of hunger or sustaining a nation’s defense capabilities. However, frequently those agencies conduct their operations in contexts that caveat and constrain the extent to which they are able to meet their overt goals. In some cases, the restrictions derive from legislative mandates designed to benefit special interest groups that provide services more or less related to the agency’s primary mission. In others, the agency response is a consequence of explicit regulatory capture or implicit pressures by special interest groups on influential policy makers with respect to agency budgets or other areas of their operations. The costs of serving those other constituencies can be substantial, both with respect to the burden on the public exchequer and the degree to which the agencies fail to address their primary mission ([Krueger, 1974](#); [Peltzman, 1976](#); [Becker, 1983](#); [Posner, 1974](#)).

Assessing whether or not, and the extent to which, an agency is subject to regulatory capture represents an empirical challenge. Sometimes the evidence is relatively clear cut. Bribes have been paid to officials of regulatory agencies or threats have been used to intimidate them into giving excessively lucrative contracts to preferred companies ([Bhagwati, 1982](#); [Faccio, 2006](#); [Barone and Narciso, 2015](#)).¹ In other circumstances, the empirical evidence is more ambiguous. Congress has instituted legislative

¹Additionally, staff members may move between government agencies, congressional offices, lobbying firms, and private industry and have incentives to aid in industry rent-seeking ([Posner, 1974](#); [Blanes i Vidal, Draca and Fons-Rosen, 2012](#)).

mandates that limit agency options, and has used other forms of influence, such as limiting the agency's budget, to influence agency decision making. For example, the extensive theoretical literature on rate of return regulation of utilities clearly identified the impact of the policy on incentives for private companies to alter the mix of resources used in production (Taggart, 1981; Klein, Phillips and Shiu, 2002; Averch and Johnson, 1962; Petersen, 1975; Cicala, 2015). However, there are few studies that assess the empirical extent to which regulatory agencies allowed company managers to obtain excess rents by optimally over-using capital and other resources.²

In this study, we use the United States Agency for International Development (USAID) Title II emergency food aid program as an example of a program with a clearly defined mission, delivering timely in-kind emergency aid shipments, that is subject to a legislative constraint designed to supply rents to politically powerful groups, in this case the US maritime industry. Using data on 6,280 individual packaged shipments of emergency food aid under the Title II Food for Peace program over a nine year period (fiscal years 2012-2020), we examine empirically whether or not the agency managing the program, USAID, has attempted to minimally comply or over-comply with Congress's requirement that 50 percent of all food aid shipments by weight be carried on US flagged ships. This requirement is known as food aid cargo preference, which is a type of "Buy American Law," and it has been shown to impose substantial costs on USAID (Barrett and Maxwell, 2005; Mercier and Smith, 2019; Hoxie, Mercier and Smith, 2021; Biden, 2021).

We present a theoretical framework that relates USAID's mission to maximize the delivery of food aid given their budget constraint to compliance with the cargo preference mandate. We show that over-compliance with the cargo preference mandate would indicate that effectively the agency has been captured by the special interest group that benefits from the mandate, in the case the US mercantile shipping industry. We then present empirical results that indicate that USAID is more likely to allocate

²One notable exception is Cicala (2015), who finds that cost-of-service regulation led to production distortions in coal-fired power plants.

competitive shipments when it is already in compliance with the cargo preference mandate in a given fiscal year. These results suggest that USAID may choose to over-comply with the mandate throughout the fiscal year because of concerns about failing to meet the mandate at the end of the year. This over-compliance may be the result of two factors. The first is unexpected requirements to ship aid to countries not served by US shipping companies, with subsequent penalties for non-compliance in terms of agency budgets and additional constraints on agency decision making resulting from aggressive lobbying on the part of the US maritime industry. The second is undue industry pressure from other parts of the executive branch or Congress to over-comply with the mandate.

2 Cargo Preference and Title II Emergency Food Aid

As an independent agency located within the Department of State, USAID is responsible for the two most heavily funded programs that provide emergency international aid to combat hunger, with the responsibility for managing those programs centered in the USAID Office of Food for Peace. The Title II in-kind food aid program, established by the 1954 [Food for Peace Act](#) (PL 480) as the central component of the Food for Peace Program (FFP), ships food sourced in the United States from US ports to low income countries where populations are in need of help because of natural or man-made disasters.³ In fiscal year 2019, funding for the Title II food assistance in-kind program was \$1.74 billion, accounting for 41 percent of USAID's total \$4.39 billion food assistance budget ([US Agency for International Development, 2020](#)).

As articulated most recently in the FFP program's reauthorization in the 2018 Farm Bill, the program's overt purpose, to the greatest extent possible, is to use the funds to meet emergency food

³The other major program run by USAID FFP is the Emergency Food Security Program (EFSP), initially established in 2010, through which USAID is authorized to use funds to locally or regional source food aid from countries closer to the population of need, or directly to help families in need through vouchers or cash transfers they can use to purchase food in local markets ([US Agency for International Development, 2021](#)).

needs around the world.⁴ This objective is expressed as follows in the USAID Office of Food for Peace's current mission statement:

“We partner with others to reduce hunger and malnutrition, and ensure that all individuals have adequate, safe and nutritious food to support a healthy and productive life. Expressing the compassion and generosity of the people of the United States, we mobilize America’s resources to predict, prevent and respond to hunger overseas with food assistance.” [Office of Food for Peace \(2020\)](#).

Nevertheless, the Title II in-kind food aid program is subject to two congressional mandates; the first requires that almost all food aid be sourced in the United States; the second is the cargo preference mandate. The cargo preference mandate was not included in the 1954 [Food for Peace Act](#). However, within two months of the Act's passage, Congress moved to include shipments of emergency food aid in a cargo preference framework introduced for military shipments fifty years earlier through the [Military Transportation Act \(1904\)](#) ([Mercier, 2019](#); [Mercier and Smith, 2019](#); [Hoxie, Mercier and Smith, 2021](#)).

Currently, the cargo preference mandate requires that, by volume, USAID assures that at least 50 percent of all Title II food aid is transported on US flagged vessels owned by companies registered in the United States with crews that predominantly consist of US citizens.⁵ Several studies have demonstrated that on a per ton of food basis, the costs of cargo preference shipments on US flagged ships are around 60 percent percent higher than the costs of such shipments on foreign flagged vessels for packaged goods ([Barrett and Maxwell, 2005](#); [Bageant, Barrett and Lentz, 2010](#); [Government Accountability Office, 2015](#); [Ferris and Thomas, 2015](#); [Mercier and Smith, 2019](#); [Hoxie, Mercier and Smith, 2021](#)). Thus,

⁴Food for Peace and other international food aid programs were reauthorized under the provisions of Title III of the [Agriculture Improvement Act of 2018](#).

⁵The 1954 food aid cargo preference mandate required that emergency food aid be sourced in the United States and at least 50 percent of all food aid be shipped on US flagged vessels crewed almost exclusively by US citizens and owned by companies registered in the United States. In the mid 1980s the cargo preference mandate was increased to 75 percent, but as part of internal congressional negotiations over the federal budget in 2012 was returned to 50 percent in July of that year ([Mercier, 2019](#); [Food Security Act, 1985](#); [Moving Ahead for Progress in the 21st Century Act, 2012](#))

by congressional mandate, and at the expense of the primary objective of the FFP program to help populations confronting hunger and malnutrition, USAID is legislatively obligated to regard US mercantile marine companies and maritime unions as constituencies whose interests are also to be served by Title II resources.

A central question, therefore, is whether USAID chooses to minimally comply or over-comply with the cargo preference mandate, because of regulatory capture of the agency by the maritime lobby, pressure placed on the agency by other parts of the administration, or concerns about the ability of that lobby to affect the agency's budgets through its influence on policy makers in Congress. The agency could over-comply out of an abundance of caution to meet the mandate at the end of a given fiscal year and concerns about their budget and other legislative constraints in subsequent years. On the one hand, on an *ex ante* basis, the exact number, size, and destination of shipments in a fiscal year cannot be known to USAID. Thus, the agency may seek to stay above the mandate during much of the year in order to have a cushion that allows for unexpected shipments that can only be served by non-cargo preference ships. On the other hand, maritime interest groups may exert pressure on USAID through the executive branch or Congress to over-comply with the mandate throughout the fiscal year.

To explore these questions, we examine the extent to which USAID complies with the cargo preference mandate for packaged goods shipments. We do not include bulk commodity shipments in our analysis because USAID determines its compliance with the cargo preference mandate for bulk shipments on a country by country basis, whereas compliance with the mandate for packaged goods is determined on a global basis.⁶

⁶For a more complete discussion of the distinction between packaged and bulk cargo preference requirements, see [Hoxie, Mercier and Smith \(2021\)](#).

3 A Model of Regular Capture and Agency Decisions

To provide a framework for examining the extent to which an agency complies or over-complies with constraints on its operations, consider the following model of agency decision-making in which the agency has to account for the welfare of a special interest group as well as the extent to which it meets the program's overt mission. Let y denote the total amount of the products or services (for example, food aid) delivered in service of the agency's primary objectives. The cost per unit of service provided using the most efficient delivery mechanism is c , and d is the additional cost of using an alternative delivery mechanism that benefits a special interest group also being served by the agency's operations. The agency also has an annual (single period) fixed budget for the program, B , which is established by the legislature.

The agency is also required by government mandate to provide a minimum share, μ , of the goods or services it provides to meet its overt mission via the delivery mechanism that benefits the special interest group. The agency may prefer to over-comply, or just satisfy the mandate. Over-compliance indicates that to some extent the agency itself has been directly or indirectly captured by the special interest group. The actual share of services delivered using the more costly mechanism, α , therefore may exceed the mandated minimum share, μ , where $0 \leq \mu \leq \alpha \leq 1$; that is the mandated and actual shares of all services provided by the special interest group cannot exceed 100 percent, and the mandated share must be less than or equal to the actual share. The agency therefore can be viewed as having the following utility function:

$$U = U(y, \alpha) \tag{1}$$

where $U'_y > 0, U''_y \leq 0, U'_\alpha \geq 0, U''_\alpha \leq 0$. Thus, U is strictly increasing in y but not necessarily in α ;

that is, the agency always prefers to offer more rather than less of the services needed to meet its overt mission but may not prefer to give any share of the business of delivering those services to the special interest group, in which case $U'_\alpha = 0$. A strongly separable utility function that satisfies these conditions can be written as:

$$U = y + \theta \alpha^\gamma \quad (2)$$

where θ and γ are positive constants and $0 < \gamma < 1$. The coefficient on y is normalized at one and if $\gamma = 1$, θ represents the relative importance placed on increasing the share of services supplied by the special interest group.

The agency faces the following budget constraint:

$$B = (1 - \alpha)cy + \alpha(c + d)y \quad (3)$$

which can be written as:

$$y = \frac{B}{c + \alpha d} \quad (4)$$

Substituting for y in 2, the utility function can be expressed solely in terms of the choice of α : that is:

$$U = \frac{B}{c + \alpha d} + \theta \alpha^\gamma \quad (5)$$

The constraint on the share of total services that must be delivered by the special interest group is:

$$\alpha - \mu \geq 0 \quad (6)$$

Assuming the agency's objective is utility maximization, the associated Lagrangian function is:

$$L = \frac{B}{c + \alpha d} + \theta \alpha^\gamma + \lambda(\alpha - \mu) \quad (7)$$

where λ is a Lagrangian multiplier. First order Kuhn Tucker conditions for the optimization of this function are:

$$L_\alpha = \frac{\gamma \theta}{\alpha^{1-\gamma}} - d \frac{B}{(c + \alpha d)^2} + \lambda = 0 \quad (8a)$$

$$L_\lambda = \alpha - \mu \geq 0 \quad (8b)$$

$$\lambda(\alpha - \mu) = 0 \quad (8c)$$

$$\lambda \geq 0 \quad (8d)$$

$$y \geq 0 \quad (8e)$$

From 8a, if the agency places no value on the share of the service provided by the special interest group and $\theta = 0$, then

$$\lambda = d \frac{B}{(c + \alpha d)^2} > 0 \quad (9)$$

which, from 8c, immediately implies that $\alpha - \mu = 0$; that is, the constraint on the share of services obtained from the special interest group is binding, and the agency will only purchase the minimum amount it is required to obtain from the special interest group. From 8a, in general:

$$\lambda = d \frac{B}{(c + \mu d)^2} - \frac{\gamma \theta}{\mu^{1-\gamma}} \quad (10)$$

Given that the total agency budget (for aid), B , is large relative to the additional cost of procuring one

unit of service from the special interest group, d , an increase in d increases the value of λ , implying that the agency is likely to continue treating the minimum requirement as a binding constraint. An increase in the agency's budget also has a similar effect, because the mandate that a minimum share of total services be obtained from the special interest group increases the cost of meeting the mandate.

An increase in the importance placed by the agency on meeting the special interest group's objectives, reflected by an increase in either γ or θ (or both), lowers λ , implicitly reducing the likelihood that the constraint will continue to be binding. If the agency is willing to over-comply with the mandate, then $\alpha > \mu$, $\lambda = 0$ and, from 8a:

$$0 = \frac{\gamma\theta}{\alpha^{1-\gamma}} - d \frac{B}{(c + \alpha d)^2} \quad (11)$$

Thus,

$$\frac{\gamma\theta}{dB} = \frac{\alpha^{1-\gamma}}{(c + \alpha d)^2} \quad (12)$$

From Equation 12, given that $\alpha < 1$ and $\gamma < 1$, the following results immediately follow. An increase in either the total budget, B , or the additional cost of obtaining services from the special interest group, d , unambiguously reduces the share of total services supplied by that interest group.

The above results yield the following insights. First, if the agency is not captured or in other ways influenced by the special interest group (that is, $\theta = 0$), then the agency will set the share of services purchased from that group at the minimum level required by the legislature. Second, increases in the cost of buying such services, d , or an increase in the agency's budget, B , will reduce the share of services obtained from the special interest group if that share initially exceeds the minimum mandated level. Third, additional preference for the interest group, an increase in θ (or γ), leads to an increase

in the share of services procured from that interest group (α). In the case of USAID, a shift towards serving the interest group could come from multiple sources. Fear of not meeting the mandate due to unexpected shipments at the end of the fiscal year could influence USAID to leave a buffer and stay above the mandate, especially towards the end of the fiscal year. The agency could also receive explicit pressure to over-comply, from either within the executive branch or from Congress. Congress and the executive branch could also raise or lower the mandate through legislation, as they have in the past ([Food Security Act, 1985](#); [Moving Ahead for Progress in the 21st Century Act, 2012](#)).⁷ Here we use a unique data set on all Title II shipments of packaged goods by USAID over nine fiscal years (FY 2012 to FY 2020) to examine whether or not USAID over-complies the cargo preference mandate and, by implication, has been directly captured or indirectly influenced by the US mercantile shipping industry.

4 Data

We use a data set of all 6,280 international emergency food aid shipments of packaged goods authorized under the Title II program over the nine year period FY 2012-FY 2020 to examine whether or not USAID over-complies with the cargo preference mandate and, by implication, has been directly captured, or indirectly influenced, by the US mercantile shipping industry. These data were obtained from publicly available information reported by the US Department of Agriculture (USDA), which jointly oversees the purchases of commodities with USAID. The Agricultural Marketing Service at USDA publishes individual shipment data on food aid programs in its “International Food Aid Report” each fiscal year ([Agricultural Marketing Service, 2020a](#)). Each observation includes information about the size (in metric tons) and composition of the shipment (which commodities are included), whether the shipment was transported on a US flagged cargo preference vessel or on a foreign flagged vessel, port of origin and port of destina-

⁷A more subtle way that the industry could influence procurement is by pushing for an oversight role for an agency that serves its interest ([Maritime Administration, 2013](#); [Smith and Barrett, 2020](#); [Maritime Administration, 2020](#); [Young, 2021](#); [International Organization of Masters, Mates, and Pilots, 2021](#)).

tion, shipping company and vessel, and the date on when requests for bids for each individual shipment were announced.

The USAID Food for Peace (FFP) program office is required to comply with the cargo preference mandate under which it operates for packaged goods on a fiscal year basis (October 1 to September 30). The mandate is applied on the basis of the volume by weight of total global shipments of aid for packaged goods, regardless of destination.⁸ Thus, USAID complies with the mandate if, by the end of the last day of the fiscal year, by weight over half of all packaged good shipments during that year have been transported on cargo preference compliant vessels. In Figure 1, data are reported on the end of year allocation of packaged good emergency food aid shipments between cargo preference and non-cargo preference vessels in each fiscal year from 2012 to 2020. With the exception of FY 2013, consistently USAID allocated over 50 percent of all Title II food aid shipments (by weight) to cargo preference vessels, in compliance with the 50 percent cargo preference mandate that pertained over that period.

In each year after 2013, while compliance was achieved, the share of Title II program package goods shipments carried by cargo preference vessels remained relatively close to the minimum share required by the mandate, averaging 53.6 percent between FY 2014 and FY 2020. In addition the annual share of total aid carried under cargo preference at most exceeded the mandated minimum by five percent (in FY 2017). These data suggest that USAID typically comes close to minimizing the extent to which the agency complies with the cargo preference mandate, but does not exactly satisfy the constraint. In all but one year, the share of cargo preference aid shipments exceeded the mandatory minimum but generally by a relatively small amount reflecting an agency strategy concerned with not

⁸For bulk commodities, which involve far fewer relatively large shipments to a small number of countries, partially as a result of a 1998 law suit, the cargo preference mandate is applied on a country by country basis; that is, under the current mandate at least 50 percent of food aid shipments of bulk commodities to a specific country such as Ethiopia must be transported under cargo preference. We do not include bulk commodities in our empirical analysis. For a more in depth discussion of these issues, see [Mercier \(2019\)](#) and [Hoxie, Mercier and Smith \(2021\)](#).

violating the congressional mandate because of perceived adverse consequences. This suggests that $\theta \neq 0$. Thus, USAID appears to place some weight on the share of cargo preference going to the maritime industry.

The data permit a more detailed examination of USAID decisions about the allocation of cargoes between US flagged (cargo preference) vessels and foreign flagged vessels by, within any fiscal year, tracking the extent to which USAID is complying with the cargo preference mandate. Requests for transportation bids for shipments of international emergency food aid under Title II are announced in batches; that is, typically, on any given announcement date, USAID issues requests for transportation bids for more than one shipment to more than one destination. For example, on the same day and at the same time a bid may be issued for a shipment of 1,000 tons of packaged soybeans from Louisiana to Ethiopia and another for 500 tons of corn oil to be shipped from Oregon to Bangladesh. In principle, each individual batch of bid requests may include bids that are all limited to cargo preference vessels, some bids restricted to cargo preference vessels and other bids open to all vessels, or only bids that are open to all vessels.

Between FY 2012 and FY 2020, USAID issued 234 separate batches of announcements of requests for shipment bids, with the number of individual requests in each batch averaging about 27 bids and ranging from 1 to 151 bids for different shipments. Among these batches, 22 consisted of a single shipment for which bids were requested. Thus, in each fiscal year, on each day prior to USAID's announcement of a new batch of requests for shipment bids, the FFP program office knows exactly the extent to which the agency is in compliance with the cargo preference mandate under which the agency operates. Given that information, for each new batch of shipment requests, USAID then decides how much food aid will be carried under cargo preference and how much will be open to bids from foreign flagged vessels.

Information on the share of cargo preference shipments in each batch by weight is presented in

Figure 2 on the vertical axis for the period FY 2012 to FY 2020. The horizontal axis shows the difference between the cumulative share by tonnage of all cargo preference shipments within a given fiscal year on the day prior to the issuance of a new batch of requests for bids and the cargo preference mandate. For example, suppose the cumulative cargo preference share of all previous shipments within the fiscal year (1 to $n - 1$) is 0.52 (0.48) percent and the cargo preference mandate is 50 percent ($\mu = 0.5$), then the value on the horizontal axis will be 0.02 (-0.02). If the value is zero, the mandate is just being satisfied (that is, $\alpha = \mu$) prior to the issuance of a new batch of bids. Each data point is represented by a bubble, where the size of the bubble represents the total tonnage for which bids are requested in each batch.

In Figure 2, the data are heavily clustered around the point (0, 50), suggesting that in most batches of bid requests USAID is seeking to satisfy, but not substantially exceed, the cargo preference mandate. Some batches of bids include no cargo preference shipments (represented the bubbles that lie along the horizontal axis) but these tend to be relatively small shipments and are likely required to be sent to destinations not served by cargo preference vessels for one reason or another. Similarly, a few batches are made up of all, or almost all, cargo preference shipments, either because of shipping logistics issues or because USAID was concerned about meeting the overall cargo preference mandate.

Given that USAID makes allocation decisions sequentially, Figure 3 shows the agency's cumulative compliance with the cargo preference mandate throughout the fiscal year, with each year graphed in its own panel. The vertical axis represents USAID's cumulative share of cargo preference shipments, from batches 1 to n , centered around the legislative mandate μ , and the horizontal axis represents the progress through the fiscal year in months. Figure 3 shows that USAID had 3 fiscal years in which it was never out of compliance with the cargo preference mandate, and was rarely out of compliance with the mandate in the last 6 months of the fiscal year after 2013. Taken together, Figures 1 and 3 suggest that USAID may be under pressure to over-comply with the legislative mandate, which suggests that μ may be lower than the *de facto* allocation constraint. In the next section, we describe the econometric mod-

els we use to examine how USAID makes batch allocation decisions in relationship to their cumulative compliance with the mandate in each fiscal year.

5 Econometric Models and Estimation Procedures

Decisions by the USAID Food for Peace program managers about the cargo preference share of each batch of bids for packaged goods shipments are likely to be affected by the extent to which the agency is already complying with the cargo preference mandate that fiscal year, as suggested by Figure 3. If the agency is not in compliance, then it is likely that a larger share of the total tonnage for which bids are being issued in the new batch will be restricted to cargo preference bids. Thus, given that batches are sequenced chronologically within each fiscal year, the share of total tonnage allocated to CP bids in the n^{th} batch, $CPShare_n$ will be a function of the cumulative share allocated to CP bids in the previous $n-1$ batches, $CPShare_{n-1}$, centered around the legislative mandate, μ .⁹ The cumulative share allocated to cargo preference in previous batches (1 to $n-1$) may also impact the cargo preference share in batch n differently if USAID is already in compliance with the mandate in that fiscal year. So, we use an indicator variable $I(Above)_{n-1,t}$ to denote when $CPShare_{n-1,t}$ indicates that USAID is already above the required cargo preference tonnage share for the fiscal year. This variable is then interacted with $CPShare_{n-1,t}$. If the agency is not substantively captured by maritime interest groups beyond the constraints imposed by the CP mandate, then the relationships between both $CPShare_{n-1,t}$ and $CPShare_{n-1,t} * I(Above)_{n-1,t}$ and $CPShare_n$ are expected to be negative.

Batches also vary substantially with respect to the total tonnage of aid in each batch. Total batch tonnage, $Tons_{n,t}$, could conceivably affect decisions about the share of aid allocated to CP eligible

⁹Explicitly, we define the cumulative share of cargo preference shipments within each fiscal year as: $CPShare_{n-1,t} = \left(\frac{\sum_{i=1}^{n-1} CPTonnage_i}{\sum_{i=1}^{n-1} AllTonnage_i} \right) - \mu$, where the numerator is the sum of cargo preference tonnage allocated in fiscal year t up to, but not including, batch n , and the denominator is sum of all the tonnage allocated in fiscal year t up to, but not including, batch n . The legislative mandate, μ , is then subtracted from this fraction. μ takes a value of 0.75 until July 6, 2012 and then a value of 0.5 afterwards, following the [Moving Ahead for Progress in the 21st Century Act \(2012\)](#) legislation.

vessels. Assuming USAID is concerned about violating the mandate at the end of a fiscal year, other things being equal, at the margin as the total tonnage in a batch increases, the agency may choose to allocate a larger share of that batch to CP bids.

The size of the impact of the cumulative cargo preference share on the share of the new batch allocated to cargo preference share may also vary within a fiscal year. The effect may be larger when the date on which bids are issued is closer to the end of the fiscal year. To account for these potential differences, an indicator variable for the fourth quarter of the fiscal year, $I(Q4)_{n,t}$, is interacted with the variable $CPShare_{n-1,t}$. Thus, the most general form of the estimation model is:

$$\begin{aligned}
 CPShare_{n,t} = & \alpha + \beta_1 CPShare_{n-1,t} + \beta_2 (CPShare * I(Above))_{n-1,t} \\
 & + \delta Tons_{n,t} + \gamma (CPShare * I(Q4))_{n-1,n,t} + \tau_t + \varepsilon_{n,t}
 \end{aligned}
 \tag{13}$$

where subscript t identifies the fiscal year in which the shipment occurs, n identifies the batch, τ_t are fiscal year fixed effects, and $\varepsilon_{n,t}$ is an error term.¹⁰ Summary statistics are presented in Table 1.

In 73 batches bids only consist of competitive bid requests and in 17 batches bids only consist of cargo preference bid requests. Thus these models are estimated using two sided Tobit procedures to account for the potential impacts of masses of dependent variable observations at the variable's extreme ranges of zero and one. Of necessity, the first batch of bids issued in each fiscal year has to be dropped as an observation because there is no prior allocation of shipments between cargo and non-cargo preference vessels. Batches are weighted by the number of shipments within each batch. Results for the Tobit models are discussed in the following section.

¹⁰Appendix Figure 3 shows the evolution of the cargo preference share in each of the fiscal years for which data are available. The pattern of compliance varies substantially across different years. Hence, FY fixed effects are included to account for potential determinants of these patterns that cannot be observed such as differences in the availability of cargo preference vessels and destination port facilities. Kernel density estimates for the cumulative share of cargo preference tonnage for batches 1 to n are presented in Figure A.1.

6 Econometric Results

Results for specifications based on the general model presented in Equation 13, estimated using Tobit procedures with robust standard errors, are reported in Table 2. A consistent finding is that as the cumulative share of cargo allocated to cargo preference bids among all previous batches of bids increases, the share of the current batch of bids allocated for cargo preference decreases. That is, the coefficient for $CPShare_{n-1,t}$ is negative and implies that a 1 percent increase in the cumulative cargo preference share in batches 1 to $n - 1$ result in a 0.2 percent decrease in tonnage allocated to cargo preference in batch n .

For models that include the interaction term $(CPShare * I(Above))_{n-1,t}$ we present the linear combination of the coefficients on the baseline $CPShare_{n-1,t}$ and the interaction.¹¹ In our preferred specification in Column 5, when USAID is already in compliance with the cargo preference mandate, there is a negative and statistically significant relationship between the cumulative cargo preference percentage for batches 1 to $n - 1$ and the share of cargo preference tonnage allocated in batch n . The combined effect suggests that when USAID is above the mandate by 1 percent ($\alpha = 0.51 > \mu$), they will allocate 1.8 percent less tonnage to cargo preference in batch n . The results presented in Table 2 are therefore consistent with the data presented in Figure 2; that is, when the mandate is being satisfied at the time a new batch of bids are issued, USAID is likely to allocate a larger share of the tonnage in the new batch for competitive bids and a smaller share for cargo preference bids.

A batch's total tonnage may also affect shares allocated to cargo preference bids. Conceivably, if USAID perceives that it faces a substantial penalty for failing to comply with the cargo preference mandate, to avoid such a risk then, ceteris paribus, the larger the batch, the larger the share allocated for cargo preference bids.¹² The results reported in Table 2 provide support for this hypothesis. The

¹¹These results are obtained using the “lincom” command in Stata.

¹²A binned scatter plot of the relationship between batch tonnage and the share allocated to cargo preference is presented

coefficient for the variable Tons is positive and significant (at the one percent level) in Column 5. A one standard deviation increase (15 percent) in batch tonnage is associated with an almost 8 percent increase in the share of batch n allocated to cargo preference shipments.

The cargo preference mandate has to be satisfied at the end of the fiscal year (September 30). Thus, it is possible that the extent to which USAID is complying with the mandate on the allocation of tonnage between cargo preference and competitive bids, as reflected by the cumulative share variable, may increase as the end of the fiscal year approaches. However, even though the coefficients of the interaction variable $(I(Q4)*CPSHare)_{n-1,n,t}$ are positive, as would be expected, they are not significantly different from zero (at the five percent level), indicating that the impact of $CShare_{n-1,t}$ likely does not change in the fourth quarter of the fiscal year.

7 Discussion

Rent-seeking occurs in multiple dimensions and a myriad of ways but can usefully be divided into three general approaches.¹³ The first is to pressure legislators for regulations that benefit the special interest groups, often through campaign contributions or other financial incentives (for example, direct bribes or a threat to support opposition candidates), or through a credible promise to deliver or withhold votes at election time. The second is to capture the agency managing the program that could potential benefit the interest group. The third, and most subtle way, is to apply pressure to over-comply from other parts of the executive branch than the agency making the procurement decisions. These approaches are by no means mutually exclusive. However, when an interest group is successful in obtaining favorable legislation, as is the situation with respect to the food aid cargo preference mandate with which USAID is required to comply in its Food for Peace program, the interest group may or may not also be successful

in Figure A.2.

¹³For a more detailed taxonomy, see [Bhagwati \(1982\)](#).

in “capturing” the agency by directly forcing or enticing it to over-comply with that mandate or wielding influence through other parts of the administration.

As reported in Figure 1, on an annual basis the cargo preference share of total Food for Peace program aid shipments exceeds the mandate by no more than 7 percentage points, with the exception of FY 2013, when the agency fell short of the mandate. The differences between actual end of FY cargo preference shares and the mandated minimum share suggest that $\theta \neq 0$ and therefore some form of influence is being applied to USAID to over-comply, if only to a small extent. After USAID failed to meet the mandate in FY 2013, almost immediately the shipping industry engaged in a campaign to ensure Congress and other parts of the administration would enforce the legislation. Maritime interest groups were able to pressure the acting MARAD administrator to host a symposium on a national maritime strategy, in which enforcement of cargo preference rules was a subject of discussion, as well as directly pressuring Congress for stronger enforcement (Maritime Administration, 2013; Buzby, 2018; Workboat Staff, 2014; Committee on Transportation and Infrastructure, 2014).¹⁴ Subsequently, perhaps to avoid further constraints on its resources, USAID appears to have been careful to satisfy the mandatory minimum cargo preference requirement. Figure 3 shows that in 2015, 2016, and 2017 USAID was in compliance with the mandate at every point in the fiscal year.

The econometric evidence also provides support for the hypothesis that USAID seeks minimally to comply with the mandate, while not risking failing to comply with the mandate. Throughout the fiscal year, as the cumulative share of previous shipments allocated for cargo preference increases, the share of a new batch of bids reserved for cargo preference eligible vessels declines. However, the share of a new batch of bids allocated to cargo preference generally increases with the total tonnage included in the batch, suggesting that USAID may be concerned about adverse legislative repercussions if the mandate is violated, as it was in FY 2013. In fact, for the most part, and arguably in response to their inability

¹⁴This is shown by Figures 1, 3, and A.1.

to capture the agency, in recent years US shipping companies and seamen's unions have focused much of their efforts to obtain a larger share of the USAID Food for Peace budget on persuading Congress to increase the cargo preference mandate and give other parts of the administration besides USAID a role in enforcement. In 2014, for example, then Representative Duncan Hunter (CA), an ally of maritime interest groups who served on the House Transportation and Infrastructure Committee, pushed for the inclusion of a provision to increase the mandate to 75 percent in a bill to support the Coastguard ([American Maritime Officers, 2013](#); [Maritime Trades Department, 2013](#); [International Organization of Masters, Mates, and Pilots, 2014](#); [Committee on Transportation and Infrastructure, 2014](#); [Jennewein, 2015](#)). In 2017, at the urging of mercantile interests, the Trump Administration proposed increasing the mandate to 100 percent, and as discussed above, in 2014, mercantile interests sought an increase in the mandate and stronger enforcement measures after USAID failed to meet the mandate in FY 2013 ([Wroughton and Zengerle, 2017](#)). However, neither of these initiatives came to pass.

In 2021, the Biden Administration issued an executive order establishing the "Made in America Office" as part of the Office of Management and Budget ([Biden, 2021](#)). The new office will have centralized waiver authority over "Buy American Laws," and issue reports on how agencies subject to these laws are complying (or not complying) with them. Subsequently, the administration issued a memo directly stating that the new agency would work with USAID to ensure that it uses US-flag vessels "in excess of any statutory minimum" when allocating cargo preference shipments ([Young, 2021](#)). This new office may become a channel through which Maritime interest groups are able to further extract rents from the US in-kind food aid programs ([International Organization of Masters, Mates, and Pilots, 2021](#)). Mandated over-compliance, and mandated bi-annual reports from the Made in America Office, may add additional costs to the cargo preference mandate as USAID is further constrained with regards to what shipments it can solicit, although the exact amount of additional costs will vary with the routes

USAID needs to serve and the availability of US vessels.¹⁵

8 Conclusion

In this study, we present a stylized model in which the utility of the agency decision maker is potentially a positive function of both the level at which the agency's overt objective is accomplished (delivering food aid in this example) and the welfare of the interest group. We show that the regulation will be binding and compliance will be minimal if either the agency places no value on the benefits that accrue to the special interests, or the marginal value of increasing the extent to which the overt objective is accomplished is greater than increasing benefits accruing to the interest group. We then empirically explore whether or not USAID has been subject to influence by US shipping companies and maritime unions. The evidence provides support for the hypothesis that, with respect to the Food for Peace program, USAID may be over-complying with the cargo preference mandate at the expense of its mission to deliver aid.

The problem of agency regulatory capture, industry influence, and special interest lobbying for preferential legislation or decisions that divert resources away from an agency's primary mission for the financial benefit of a small group of individuals is pervasive in the United States and elsewhere (Krueger, 1974; Barone and Narciso, 2015; Brollo et al., 2013; Faccio, 2006; Biden, 2021). The cargo preference mandate therefore represents an interesting case study of the extent to which industry influence and rent-seeking, through direct pressure on an agency, the executive, or Congress, can influence procurement decisions of an agency subject to "Buy American Laws." That, in this context, over-complying with the mandate comes at the expense of resources fundamentally intended for humanitarian purposes makes the example particularly egregious and suggests one reason why maritime interests have

¹⁵Hoxie, Mercier and Smith (2021) show that cargo preference increases the cost of delivering aid compared to competitive shipments on average, but also that these cost differences vary across routes.

exerted pressure on the agency indirectly, either through Congress or other parts of the executive branch rather than through USAID itself.

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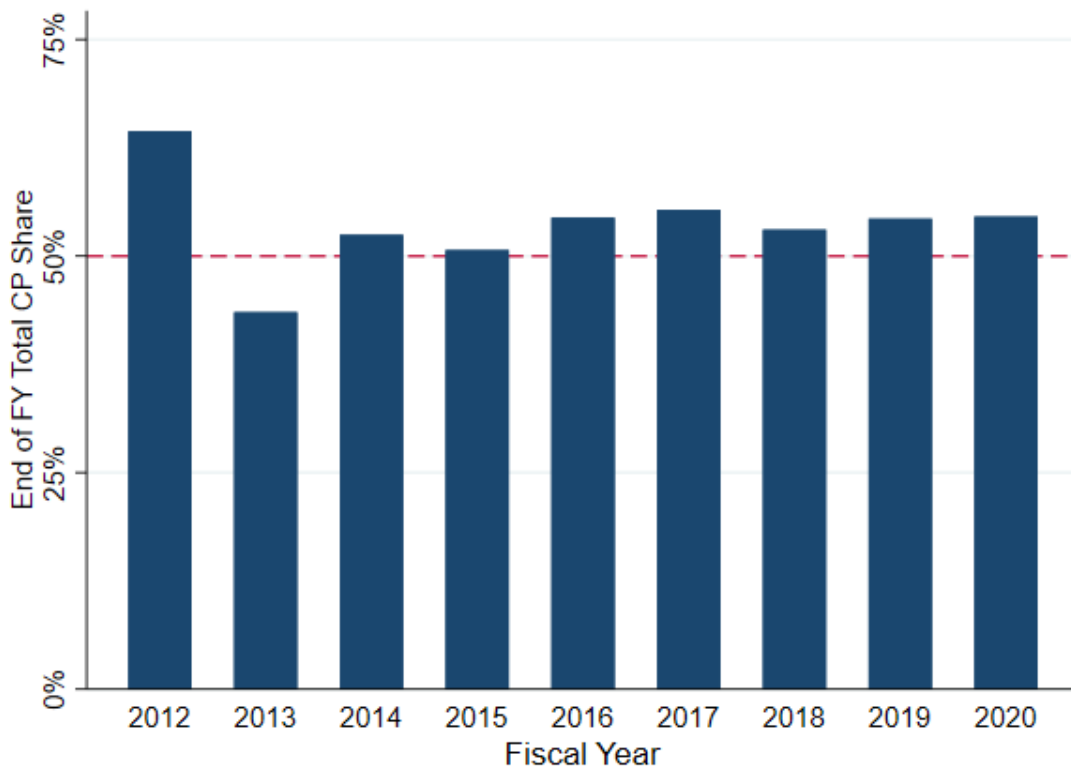
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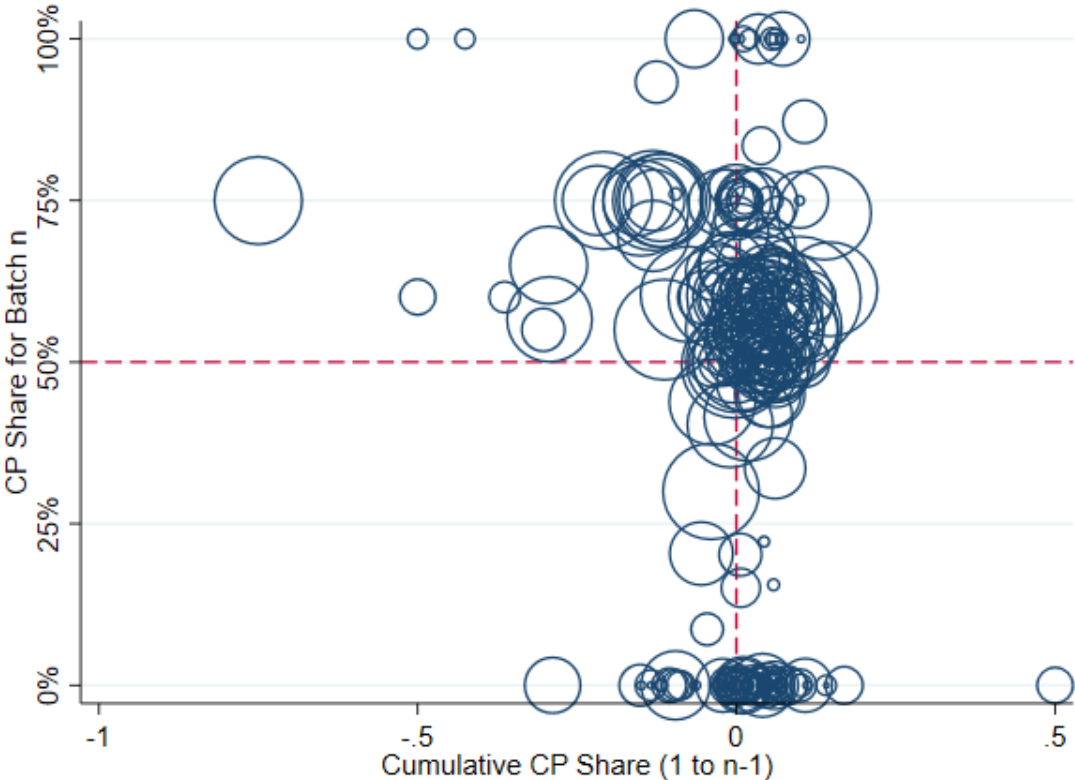
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Figure 1: End of Fiscal Year Share of Cargo Preference Tonnage, 2012 to 2020



Note: This figure shows end of fiscal year cargo preference percentages for each fiscal year in our sample using data from the [Agricultural Marketing Service \(2020b\)](#). The 50 percent cutoff is shown as a horizontal line.

Figure 2: Scatter of Batch CP Allocation and Cumulative Cargo Preference Share, 2012 to 2020



Note: This figure shows cargo preference percentages for batch n and cumulative cargo preference shares that are calculated on a fiscal year-to-date basis for batch 1 to $n-1$ and centered around the legislative mandate μ . Fiscal year 2012 uses the 0.75 cutoff until July 6, 2012 and then all observations use the 0.50 cutoff afterwards following the [Moving Ahead for Progress in the 21st Century Act \(2012\)](#). The sample consists of 234 Title II shipment batches between FY 2012 and FY 2020 from the [Agricultural Marketing Service \(2020b\)](#).

Figure 3: Cumulative Cargo Preference Tonnage over the Fiscal Year, 2012 to 2020



Note: This figure shows cumulative fiscal year Cargo preference percentages for batch n as the fiscal year progresses using data from the [Agricultural Marketing Service \(2020b\)](#). Cumulative cargo preference shares are calculated for batch 1 to n and centered around the legislative mandate μ . Fiscal year 2012 uses the 0.75 cutoff until July 6, 2012 and then all observations use the 0.50 cutoff afterwards, following the [Moving Ahead for Progress in the 21st Century Act \(2012\)](#). Each year in the dataset is shown in its own panel and the mandate, μ , is shown as a horizontal line.

Table 1: Summary Statistics for Batched Purchasing Order Sample

	Obs	Mean	Std. Dev.	Min	Max
CP Share for Batch n	225	0.4301	0.3272	0	1
Cumulative CP Share (1 to $n - 1$)	225	0.0003	0.1148	-0.75	0.5
I(Above)	225	0.6622	0.4740	0	1
Cumulative CP Share (1 to $n - 1$) * I(Above)	225	0.0345	0.0473	0	0.5
Tonnage	225	0.1439	0.1533	0.0003	0.7561
I(Q4)	225	0.2756	0.4478	0	1
Cumulative CP Share (1 to $n - 1$) * I(Q4)	225	0.0085	0.0257	-0.0643	0.1473
Shipments in Batch	225	26.467	26.734	1	151

Note: This table presents summary statistics computed for the batched purchasing order sample used for our Tobit analysis. Cumulative cargo preference shares are calculated on a fiscal year-to-date basis for batch 1 to $n - 1$ and centered around the legislative mandate μ . Fiscal year 2012 uses the 0.75 cutoff until July 6, 2012 and then all observations use the 0.50 cutoff afterwards, following the [Moving Ahead for Progress in the 21st Century Act \(2012\)](#). Data come from the [Agricultural Marketing Service \(2020b\)](#) records on Title II shipments for fiscal years 2012 to 2020.

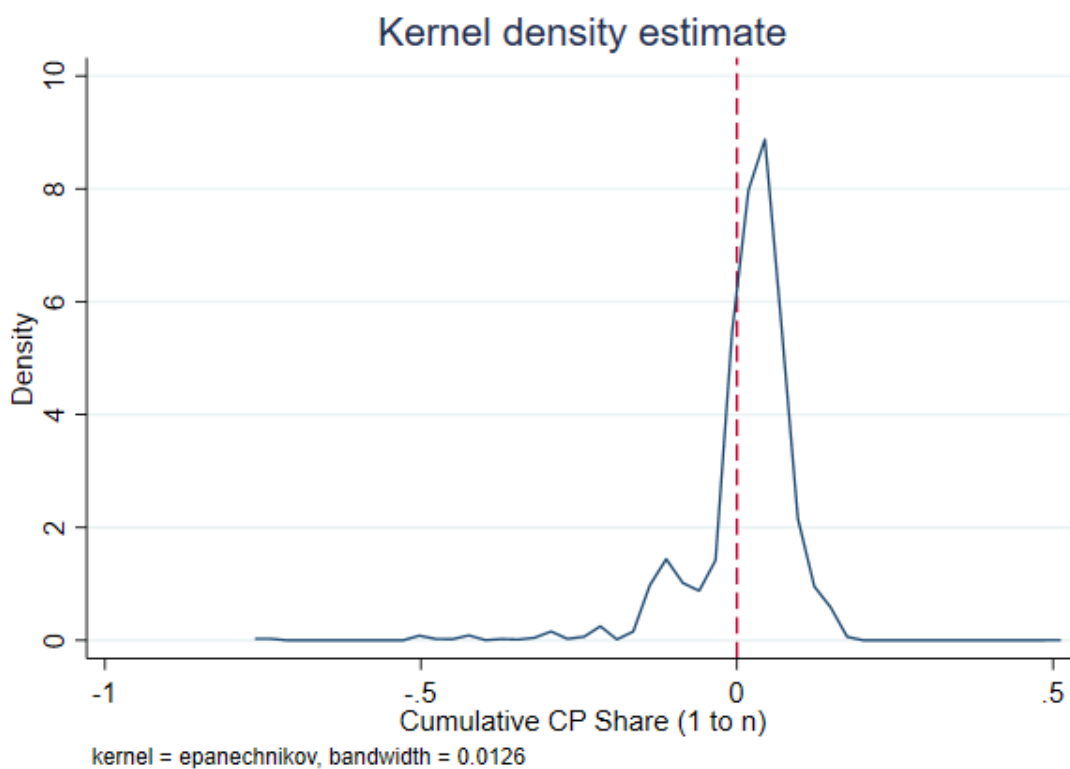
Table 2: Tobit Estimation of the Relationship Between Cumulative Cargo Preference Share in Batches 1 to $n - 1$ and Cargo Preference Share in Batch n for Title II Shipments, 2012 to 2020

	CP Share in Batch n				
	(1)	(2)	(3)	(4)	(5)
Cumulative CP Share (1 to $n - 1$)	-0.401** (0.13)	-0.338* (0.17)	-0.102 (0.15)	-0.137 (0.15)	-0.206 (0.16)
Cumulative CP Share (1 to $n - 1$) * I(Above)			-1.120 (0.62)	-1.267* (0.57)	-1.616* (0.65)
Tonnage				0.491*** (0.11)	0.504*** (0.11)
Cumulative CP Share (1 to $n - 1$) * I(Q4)					1.136 (0.63)
FY Fixed Effects	N	Y	Y	Y	Y
Constant	0.514*** (0.02)	0.612*** (0.05)	0.679*** (0.06)	0.504*** (0.07)	0.466*** (0.08)
Combined effect: Cumulative CP Share + (I(Above) * Cumulative CP Share)			-1.222** (0.572)	-1.404*** (0.523)	-1.822*** (0.624)
Observations	225	225	225	225	225

Note: This table reports estimates of Tobit regressions for batches of Title II shipments between fiscal years 2012 and 2020 using Equation 13 and data from the [Agricultural Marketing Service \(2020b\)](#). Robust standard errors are in parentheses.

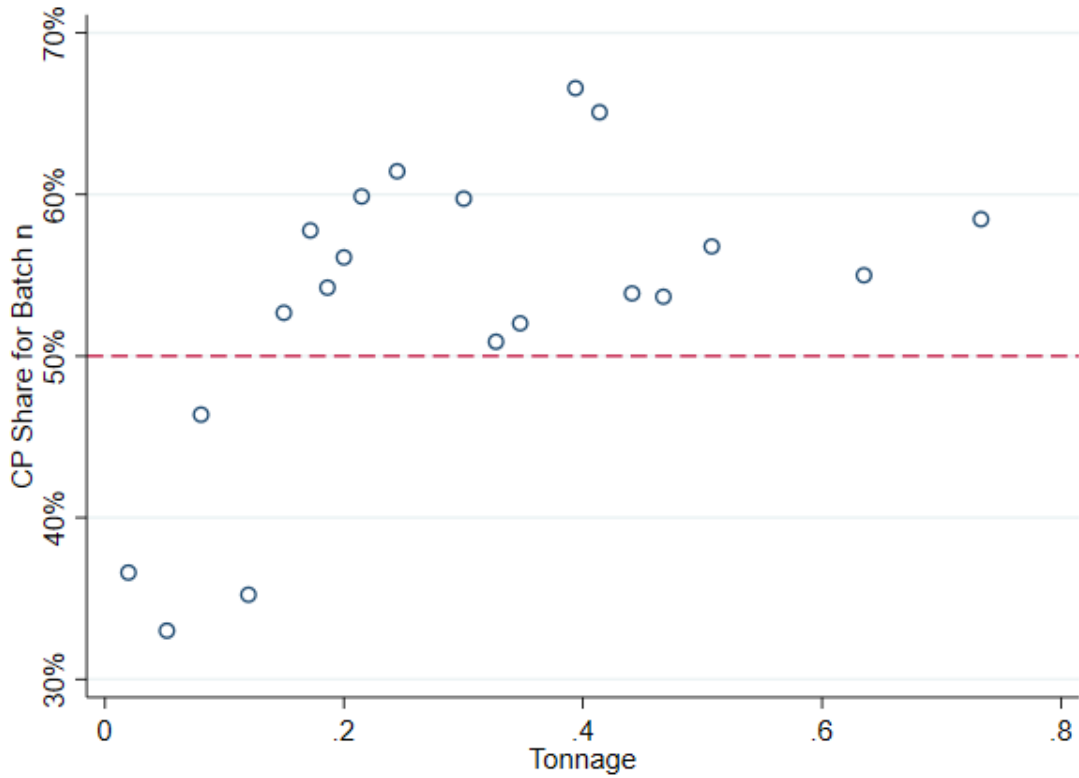
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure A.1: Density Estimate for Cumulative Cargo Preference Share (1 to n), 2012 to 2020



Note: The figure shows a kernel density estimate for the fiscal year cumulative cargo preference tonnage percentage variable calculated from 1 to n , centered at the legislative mandate μ in each fiscal year. Cargo preference percentages are calculated on a fiscal year-to-date basis. Fiscal year 2012 uses the 0.75 cutoff until July 6, 2012 and then all observations use the 0.50 cutoff afterwards following the [Moving Ahead for Progress in the 21st Century Act \(2012\)](#). The sample consists of 234 Title II shipment batches between FY 2012 and FY 2020 from the [Agricultural Marketing Service \(2020b\)](#). Observations are weighted by the number of shipments in each batch.

Figure A.2: Binned Scatter of Batch CP Share and Tonnage, 2012 to 2020



Note: This figure shows binned Cargo preference percentages for batch n and tonnages (in metric tons) for batch n . Fiscal year 2012 uses the 0.75 cutoff until July 6, 2012 and then all observations use the 0.50 cutoff afterwards following the [Moving Ahead for Progress in the 21st Century Act \(2012\)](#). The sample consists of 200 Title II shipment batches between FY 2012 and FY 2020 from the [Agricultural Marketing Service \(2020b\)](#). Observations are weighted by the number of shipments in each batch. The Pearson's ρ correlation coefficient is 0.3075.

Table A.1: OLS Estimation of the Relationship Between Cumulative Cargo Preference Share in Batches 1 to $n - 1$ and Cargo Preference Share in Batch n for Title II Shipments, 2012 to 2020

	CP Share in Batch n				
	(1)	(2)	(3)	(4)	(5)
Cumulative CP Share (1 to $n - 1$)	-0.345*** (0.10)	-0.243* (0.12)	-0.080 (0.11)	-0.115 (0.11)	-0.149 (0.12)
Cumulative CP Share (1 to $n - 1$) * I(Above)			-0.729* (0.35)	-0.753* (0.30)	-0.828** (0.31)
Tonnage				0.335*** (0.07)	0.338*** (0.07)
Cumulative CP Share (1 to $n - 1$) * I(Q4)					0.449 (0.44)
FY Fixed Effects	N	Y	Y	Y	Y
Constant	0.533*** (0.01)	0.646*** (0.03)	0.678*** (0.04)	0.558*** (0.05)	0.536*** (0.05)
Combined effect: Cumulative CP Share + (I(Above) * Cumulative CP Share)			-0.809** (0.314)	-0.868*** (0.262)	-0.977*** (0.294)
Observations	225	225	225	225	225
R^2	0.037	0.107	0.116	0.194	0.196

Note: This table reports estimates of OLS regressions for batches of Title II shipments between fiscal years 2012 and 2020 using Equation 13. Data are from [Agricultural Marketing Service \(2020b\)](#). Robust standard errors are in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$