Public Preferences about Agricultural Protectionism in the US

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Introduction

Agricultural protectionism remains virtually intact today in spite of the GATT/WTO multilateral negotiations over the last three decades attempting to dismantle it and liberalize agricultural trade (Swinnen, 2009; 2010). The history of agricultural protectionism goes as far back as the Corn Laws enacted in 1815 to restrict the import of grains and other food products into the United Kingdom (McCalla, 1968; Hollander, 1992) and to promote the interests of agricultural landlords in Britain. They were repealed in 1846 in the face of strong opposition from merchants and manufacturers. Government management of agricultural markets has resurfaced during the period between WWI and WWII and has been growing since then across industrialized countries. In particular, government intervention in the US started during the era of the Great Depression in part to proffer safety nets for the one-fourth of the population engaged in farming and to reduce the disparity in incomes between the farm and nonfarm sectors (Cochrane, 1993). Although farm incomes surpassed the nonfarm sector's income by the mid-1980s (Tweeten, 1997), agricultural protection did not disappear nor diminish, but grew markedly over the last half century.

D. Gale Johnson lamented agricultural protectionism as early as in 1972 in his book entitled "World Agriculture in Disarray". Since then, many economists, journalists, and politicians joined him in voicing criticisms against the massive government intervention in agricultural markets by the developed world and expressed their frustration at the inability of the developed world to remove/reduce farm subsidies and liberalize agricultural trade (McCalla, 1993; 2003). More recently, a body of research have been advocating agricultural policy and trade reforms with quantitative global trade models demonstrating considerable positive welfare

gains for all countries involved (e.g., Hertel and Keeney, 2006; Anderson, 2005; Anderson, 2009). Given such seemingly obvious benefits of abolishing agricultural protection, a number of puzzling questions arise. Are democratic political systems in industrialized countries so oblivious to such an evident need for reforms for such a long time? Is international cooperation so difficult to achieve despite such obvious mutual gains from removing agricultural protection?

There have been considerable amounts of research efforts to explicate the puzzling phenomenon of agricultural protectionism in developed countries. Specifically, the literature in the 1980s and the first half of the 1990s draws on political economy theories (the public choice theory (Buchanan and Tullock, 1962) and Olson's collective action hypothesis) and highlights structural political/institutional/economic factors (e.g., the share of farm sector in GDP, the share of farm labor in total labor force, farm organizations' lobby, political system and ideology) in explaining the variations in farm support across countries and/or over time (e.g., Binswanger and Deininger, 1997; Swinnen, 1994; Anderson, 1995; Swinnen and van der Zee, 1993). The political economy literature offers useful insights into how such structural variables related to the magnitudes of farm programs. Yet, the relationships represent simple correlations but do not necessarily shed light on more fundamental factors causing/sustaining/tolerating the persistence of farm support in developed countries. A nascent body of studies present useful perspectives in this regard by considering the general public's concerns/interests of food security/safety/quality, sympathy for small farms, and inequity aversion as innate drivers for government support for the farm sector (Kerr, 2010; Ellison et al, 2010; Lusk, 2012; Lu, Scheve and Slaughter, 2012; Naoi and Kume, 2011).

Building on the budding literature, this study aims at developing empirical models that would identify factors explaining the general public's preferences about two issues: (i) government involvement in agricultural markets and (ii) free trade in agriculture/food. This

study is expected to make a timely contribution to the resurgent literature probing into the causes of the persistence of farm protection in developed countries and shed lights on how US citizens perceive of the role of government and free trade in agriculture. The literature over the last four decades has considered the producer interests-based politics as the primary force driving agricultural protectionism in developed countries. Yet, the general public's preferences about the extent of government intervention are likely to grow to be more pertinent and weigh in more heavily in farm policy decisions in the future given the expected prolongation of federal budget deficits in the US and other countries in the coming years and consequent scrutiny on farm supports/programs (Lusk, 2012).

This article is structured in the following order. The next section describes four major forces that are believed to have contributed to the persistence of agricultural protection in developed countries since the Second World War. The third section describes survey design and administration along with a preview of data. The fourth section shows model specifications that include public attitudes toward government intervention and trade protection in agriculture as dependent measures and public perceptions about food security, family farms, our planet's ecology, and multifunctionality of agriculture as explanatory variables. In addition, it proposes to use two-limit Tobit model in order to take into account of the censored nature of dependent variables (attitudes toward government involvement and trade protection in agriculture) that will be constructed later in this paper. The fifth section describes empirical results, followed by concluding remarks.

Four Forces Shaping Agricultural Protectionism

The pattern of agricultural protection and trade has evolved over the last century in connection with economic and political factors at the national level as well as the international

political/economic order that underpins the world economy. Following a brief period of free trade (1840s ~ 1870s) in agriculture that was spearheaded by British after the repeal of the Corn Laws in 1846, agricultural protection has widely spread across the developed world. In addition to the farm programs in the US that has started during the Great Depression era, the European Union (EU) introduced a highly protectionist and distortive system of government intervention in agricultural markets in 1968 with the Common Agricultural Policy (CAP). While the CAP has undergone several reforms to address surplus production and the harmful consequences of intensified production practices, the EU's protectionist position has been reinforced over the last four decades. The rise and growth of agricultural protection in industrialized countries coincides with the long-term decline in the share of agricultural labor from total labor force and in the share of agriculture from overall GDP (Binswanger, Deininger, 1997; Thies and Porche, 2005). Confounded by this paradox of growing protection and declining share of agriculture (Gardner, 1992), agricultural economists devoted considerable efforts to explicate such intervention and offered various explanations.

Reflecting researchers' efforts over the last decades, figure 1 shows that agricultural protectionism is shaped by four broad forces including (i) economic characteristics intrinsic to agricultural/food industry, (ii) domestic politics as reflected in public choice theories and rent-seeking behaviors of farm/agribusiness organizations, (iii) multifunctionality of agriculture, and (iv) international political relations.

It is widely recognized that agricultural industry is characterized by a number of idiosyncrasies (e.g, absolute necessity in consumption, massive association with natural resources in production, long marketing channels) that distinguish agricultural/food markets from other sectors. Such idiosyncrasies would influence the nature of demand, supply, market structure/firm behavior/performance (most importantly, farm incomes), and vertical coordination.

They would bring about inelastic demand and supply functions; asset fixity and associated irreversible supply functions; large number of farm producers widely dispersed across regions coupled with relatively concentrated marketing and processing sectors; and consequent imbalance in access to market information and bargaining power between farmers and middlemen. These peculiar economic characteristics of agriculture are likely to give rise to market failures, uncertainty, and instability, justifying collective actions including government intervention aimed at rectifying market failures, reducing uncertainty and instability, and improving social welfare (Gardner, 1992).

The political economy theory (theory of collective action; rent-seeking behavior) hypothesizes that the interests of politicians, bureaucrats, and farm organizations are the driving forces increasing government protection (Swinnen and van Der Zee, 1993; Josling et al, 2010). Supporting this view, Gardner (1994) argued that agricultural economists (i.e., Gale Johnson, Tweeten) changed their view on agricultural protectionism from problem-solving to interest-group politics. The theory rests on the premise that small but well-organized groups with specialized interests can be more effective in advancing their economic objectives in a democratic society than large groups with more diffuse interests. While farmers find it easy to band together to press for legislation in support of their products, the resistance from consumers and taxpayers is minimal given the cost of the support to farmers is widely dispersed across much larger interest group of consumers.

The political economy arguments gave rise to a body of empirical research identifying economic, political and other characteristics associated with the growth of agricultural protectionism in developed countries. For example, Gardner (1987) examined why the extent of government intervention (in the form of farm price support programs) differs by commodities in the US. The study showed that self-sufficiency rates in agricultural products were negatively

related to the protection rates: i.e., if the commodity faces import competition, it is likely to receive greater protection. Low elasticities of demand and supply were positively associated with it. The share of commodity in aggregate agricultural output had a positive effect on the protection. In addition, Swinnen (1994) highlighted the role of relative farm incomes and countercyclical nature of agricultural protection. After controlling for the effects of economic development, terms of trade, comparative advantages, and constraints on tax collection feasibility, Beghin and Kherallah (1993) showed that agricultural protection level increases as the political system moves to a more pluralistic. Yet, the study showed that further transition to democratization causes partial dissipation of protection and agricultural protection may persist if transactions costs in connection with eliminating/reducing farm programs/policies are substantial. In line with this importance of political system, Thies and Porche (2005) examined political institutional factors on a more detailed level and showed that veto players, federalism, party fragmentation and the timing of elections are as important as other economic factors in explaining agricultural protection in the OECD.[1]

Since the launching of the Uruguay Round (UR) in Punta del Este in 1986, the concept of multifunctional agriculture has played a pivotal role in the discourse of agricultural protectionism (Potter and Burney, 2002; Potter and Tilzey, 2005). Multifunctionality of agriculture refers to a broad range of nonmarket goods and services agriculture provides with varying degrees of jointness with either market commodities or farmlands (Vatn, 2002; Batie, 2003).[2] The UR was the first serious multilateral effort to reduce agricultural protectionism and liberalize agricultural

[1]In the most recent article, Swinnen (2010) notes that the failure of the DDR to reach agreement and food price crises of 2008 have brought interest in agricultural policies back to the forefront of research agenda for agricultural economists and reviews recent developments in political economy theories and empirical analysis on government intervention.

[2]Such nonmarket goods and services include national food security, rural amenities, recreational opportunities, viable rural economy, and a broad range of ecosystem services (e.g., flood control,nutrient recycling, groundwater recharge, wildlife habitat, atmospheric carbon dioxide sequestration.

trade with two concrete results (Ingco and Croome, 2004): (i) AoA (Agreement on Agriculture) detailing how reform would progress with respect to three major pillars (market access, domestic support, and export subsidies), and (ii) the creation of World Trade Organization (WTO) that is charged with establishing a fair and market-oriented trading system and given the legal authority for settling trade disputes. Although the UR successfully brought agricultural and trade policies under the discipline of international rules for the first time in history, it hardly dismantled agricultural protectionism.[3]

The emergence of the concept of multifunctional agriculture during the UR prompted the WTO to institute the so called 'traffic light box system' (green, blue, and amber boxes)[4] that categorizes agricultural policies and subsidies based on two criteria: (i) whether or not they distort trade patterns and (ii) whether or not they are targeted at supporting the multifunctional roles of agriculture. The box system is designed to permit countries to foster the supply of nonmarket goods and services of agriculture while ensuring that such support is decoupled from production decision, thereby minimizing trade distortion. This creative device fundamentally reshaped the nature of discourse about the way the government influences the operation of agricultural market, specifically giving rise to the now widely used terms like decoupling, targeting, devolution, and cross-compliance.

With the growing recognition of widening economic inequalities across countries and pervasive poverty in developing countries, the apparent goal of the Doha Round that was

[3] . The AoA specifies quantitative reduction plans of trade barriers in three areas: (i) the AoA caps export subsidies and requires the value of subsidies and the volume of subsidized exports to be reduced by 36 and 21 percent, respectively over six years, (ii) it requires aggregate domestic support provided to farmers to be reduced by 20 percent, and it requires conversion of nontariff barriers into tariff equivalents, binds all tariffs, and opens minimum access quotas for products whose trade was largely blocked by past policy (Schott, 1994, pp. 43-54).

[4] Domestic subsidies categorized as green box (e.g., crop insurance, environmental protection, extension services, rural development) are supposed to be non-trade distorting programs and exempt from the reduction requirements. In addition, subsidies linked to production restraints are categorized as 'blue box' and exempt from the reduction requirements, too. Subsidies classified as trade-distorting 'amber box' are subject to the reduction requirements.

launched in 2001 was to devise global trade rules that would help developing countries foster economic growth and reduce poverty. Agriculture was again the most contentious area with the following three particular tasks: (i) substantial improvement in market access, (2) elimination of export subsidies, and (3) substantial reduction in trade-distorting domestic support. Progress in these areas was perceived a critical factor for liberalizing agricultural trade and fueling economic growth in developing countries by enhancing their access to agricultural markets in developed countries. With respect to the multifunctional roles of agriculture, the Doha Round regarded it as an important issue to be negotiated as stated in the Doha Declaration,

> "We take note of the non-trade concerns reflected in the negotiating proposals submitted by Members and confirm that non-trade concerns will be taken into account in the negotiations as provided for in the Agreement on Agriculture"

After a number of ministerial meetings, the Doha Round broke down officially in 2008 due to failures to reach agreement between developed and developing countries and within developed countries on the size of reduction in trade-distorting subsidies and on issues largely related to the multifunctional roles of agriculture (i.e., whether to abolish blue box; whether to expand the scope of green box; to what extent to allow sensitive and special products (Josling, 2004; Anania and Bureau, 2005; Blanford and Boisvert, 2005).[5]

In short, the concept of multifunctional agriculture emerged as a pivotal juncture in interpreting the nature of agricultural protectionism. The emergence was a consequence of the efforts by European and other countries within the WTO to draw attention to special characteristics of agriculture distinctive from other sectors.[6] Such efforts were designed to shield their agriculture from the potentially irreversible detrimental effects of the globalization and

[5]Developed countries were concerned about *import-sensitive products* that are particularly more susceptible to competition from foreign countries, while developing countries (e.g., India, China) were insisting that *special products* should be exempt from reductions in protection because of their importance in development, food security, and rural livelihood.

[6] Such distinctiveness of agriculture is believed to have spawned the notion of 'agricultural exceptionalism' triggering and rationalizing to a large extent the spread of agricultural protectionism across developed countries after the Second World War (Skogstad, 1998).

trade liberalization forces that have been vigorously advanced by the prevailing ideology (neoliberalism) of the time. That is, agricultural protectionism collided with neoliberalism/globalization, creating an environment amenable to the birth of the concept of multifunctional agriculture. The main consequence of the rise of multifunctional agriculture was that, while neoliberalism and trade liberalization forces had measurable impacts on the processes of crafting trade rules and farm policies of WTO member countries, agricultural exceptionalism/protectionism was legitimized to a considerable extent.

The fourth force sustaining agricultural protectionism concerns international relations/politics that underpins international trade in agriculture and the crafting of trade rules through the WTO (Warly, 1976; Potter and Tilzey, 2005). International markets for grains are very thin with less than 10 percent of the world production traded internationally and dominated by a few large grain trading corporations (Cargill, ADM, Bunge). The thin market coupled with intrinsic economic characteristics of agricultural production and consumption (i.e., inelastic supply/demand, asset fixity, irreversible supply function) makes the grain market highly volatile as evidenced by the 1973 and 2007/2008 food price crises. Hence, states have legitimate reasons to feel vulnerable to food insecurity particularly when they have to depend on international markets for a significant portion of the food their people are in need of. It is quite rational for the states under such an environment to take measures to secure an optimal/minimum level of domestic agricultural production. It can be contended that the persistence of agricultural protection across the world manifests such an innate desire for securing some domestic production. The contention suggests that economic liberalism (viewing interstate economic relations as harmonious) may not be able to explain today's interstate relations with respect to agriculture.

The field of international political economy (IPE) provides theories/ideologies alternative to economic liberalism including Mercantilism, Statism, Nationalism, and Realism. While the IPE theories are projected to explain interstate relations that would materialize as consequences of states' pursuit of national economic gains relative to other states, this paper makes use of them to explicate interstate relations specifically with respect to agriculture given its distinctive position in national economies and its sharp divergence from manufacturing/industrial sectors in terms of the extent of international specialization and globalization. Whereas the four theories share some commonality such as their emphasis on the strong role of the state in determining trade patterns, they differ in other aspects.

The mercantilists' main concern was to enlarge national wealth via trade policies encouraging exports while limiting imports. The mercantilism as expressed in the writings of Alexander Hamilton (Secretary of States of the US, 1780-1785) provides the intellectual origin of economic nationalism of the nineteenth century and presents an earlier form of dynamic theory of economic development underscoring the importance of manufacturing over agriculture (Gilpin, 1987, pages 180 –184). Economic nationalists in the form of the German Historical School as represented by Friedrich List contend that free trade would favor the most industrially advanced economy and advocate for state control of trade under the belief that free trade would place late-starting states at distinctive disadvantages. To the nationalists, free trade/laissez-faire was an ideology that served the interests of advanced economies.

Whereas mercantilism and nationalism are rooted in the traditions of classical political economy, statism and realism represent theories that have originated from modern International Relations (IR). Statism highlights the role of the state in managing international economic relations with each state seeking to make gains relative to other states. Realism underscores the world view that states are the principal actors in the international arena whose primary concern is

to secure their survival and promote their own national interests, prestige, and power. Hence, the realist perspective emphasizes the competitive and conflictual side of international politics in contrast to liberalism/idealism highlighting the possibility of cooperation and harmony of interests among states. Fundamentally rooted in the view of human beings as inherently egoistic and self-interested, the realist perspective believes that the anarchic environment (the absence of the world government which has the sort of authority that states are subordinate to) plays the central role in shaping international political outcomes (e.g., peace, war). To the realists, numerous wars of varying scales in our world history eloquently corroborate their view of the world as conflictual and anarchic rather than harmonious and orderly.

As such, realism in the IR tradition is largely concerned with grand scale geopolitical issues such as war, peace/stability, security, and military power. The field of IPE shifts the spotlight to the interdependent nature of the relationship between the market (economics) and the state (politics) that arises in the process of states interacting with each other in the global economy. Realism within the IPE represents a theory/perspective highlighting international economic relations characterized by an anarchical environment in which states compete with one another for greater economic power, prestige, and influence. When applied to interstate relations specifically with respect to agriculture, the realist perspective is well positioned to explicate the state's aspiration to maximize its food security and minimize food dependence on other states, thereby offering a compelling explanation for the prevalence of agricultural protection across developed countries since the Second World War and its spreading to developing countries (Strange, 1985). Indeed, the ability to grow food is increasingly considered as a new form of leverage in geopolitical competition (McMichael, 2013).

When taken together, the four forces above provide systemic explanations for the rise and persistency of agricultural protectionism and why it is so difficult to liberalize agricultural trade.

While it is not straightforward to gauge the relative contributions of the four forces in explaining agricultural protection, the interactions among them should have intensified the phenomenon of agricultural protection much stronger. For instance, the distinctive economic characteristics of agricultural production and market was the initial impetus for giving rise to agricultural protection and later provided unifying themes for the rent-seeking behaviors of farmers' organizations. In addition, the arguments for multifunctionality of agriculture, while legitimate to a considerable extent, should have been used for justifying the protectionist stances of food-importing developed countries.

Survey Design and Administration

Survey instrument was designed to measure US citizen's perceptions and attitudes toward an array of issues related to agricultural and trade policies. The final questionnaire was administered as an online survey in June 2008 to a nationally representative web-based household panel maintained by the Ipsos-Observer, a market research/consulting firm specializing in research of consumer behavior on various social issues. The sample was stratified by geographic regions, household income, education, and age in accordance with 2000 US Census. Questionnaires were emailed to a sub-sample of 5000 participants of this panel that was representative of the US population. A total of 1070 consumers completed the online survey within 7 days, accounting for 39% response rate. The online survey elicited socio-demographic information including respondents' age, education, income, household size, geographic region, gender, and ethnic background. The permission-based research approach is often used to explore consumer behavior because it offers two advantages-higher response rate and disclosure of demographic information for nonrespondents as well as respondents, thereby facilitating assessment of potential nonresponse bias. Comparison of socio-demographic characteristics

between respondents and nonrespondents shows that males were more likely to choose not to respond (62 % vs. 56 %) and whites were slightly more prone to respond to our survey (87 % vs. 80.6). Other than these two categories, there are no major discrepancies between respondents and nonrespondents, suggesting that there is little reason to be concerned about potential biases due to systematic nonresponses from particular groups of nonrespondents.

The survey instrument includes five question items measuring the general public's attitudes toward various aspects of government involvement in agriculture including: (i) Government should reduce their involvement in Agriculture to a level comparable with other sectors in the economy, (ii) Farmers should compete in a free market without government support, (iii) Government should not be involved in Agriculture at all, (iv) Government should help as many farmers as possible through government programs, (v) Government should guarantee a minimum price to farmers for their products. The general public's perceptions toward them were measured using a seven-point Likert scale ranging from 'Disagree Completely' to "Agree Completely.' The first three questions are phrased in opposition to government involvement and the last two in support of it.

Similarly, another set of five question items attempts to measure the general public's attitudes toward trade protection in agriculture: (i) The United States should import food if it is cheaper than domestically produced food, (ii) The United States should not have trade barriers restricting the import of foreign agricultural products, (iii) The United States should produce nearly all the food it consumes, (iv) I would be concerned about becoming dependent upon foreign countries for our food supply, and (v) Each country should determine how much food is produced within the country versus how much food is imported,. The first two questions are worded in opposition to trade protection in agriculture, while the latter three question items are worded in support of it.

Table 1 presents summary statistics of the above ten question items about agricultural protectionism in the US along with socio-demographic profiles and other question items measuring public's perceptions about issues pertinent to agricultural policies such as ecological sustainability, multifunctionality of agriculture (nonmarket benefits of agriculture), food security, and family farms.

Data Preview

This section presents a descriptive data analysis on the general public's attitudes toward two focal issues of this study: government involvement and trade protection in Agriculture. Figure 2 shows the distribution of responses to the questions phrased in opposition to government involvement in agriculture. Responses to questions (i) and (ii) show a similar pattern: approximately 27 percent of the respondents disagree (either completely or modestly or weakly), about 39 percent agreeing (either completely or modestly or weakly), and 34 percent do neither agree nor disagree. In contrast, with about 28 percent of the respondents choosing the neutral option, respondents were more in disagreement to question (iii): more than half of the respondents disagree (either completely or modestly or weakly) and less than 20 percent agree (either completely or modestly or weakly). The greater percentage in disagreement may be explained by the extreme way the question is phrased ("Government should not be involved in agriculture at all"). The distributions of responses to the two questions in support of government involvement are presented in Figure 3. Responses are quite similar across the two questions: about 23 percent disagree (either completely or modestly or weakly) with the need for government intervention, while nearly half of the respondents agreeing (either completely or modestly or weakly).

The comparison of responses across figure 2 (questions in opposition to government involvement) and figure 3 (questions in support of government involvement) displays two

aspects of interest about how the general public think of the role of government in agriculture. First, the percentage of neutral responses is higher in questions phrased in opposition (34 percent) than questions phrased in support (28 percent). That is, more respondents could not decide whether or not to agree/disagree to questions arguing for no government intervention in agriculture than to questions advocating the opposite. Second, a considerably greater percentage of respondents (50 percent vs. 23-27 percent) is in support of government involvement in agriculture commonly across the two figures. This result indicates that there is a great degree of symmetry in responses between the two sets of questions that are worded in two opposing directions.

Figures 4 and 5 show the distribution of responses for the general public's attitudes toward trade protection in agriculture. Figure 4 presents the distribution of responses to questions phrased in opposition to trade protection in agriculture. It shows that nearly 55 percent of the respondents disagreed (either completely or modestly or weakly) with the notion of no trade protection in agriculture, while roughly 17 percent agreeing (either completely or modestly or weakly). Hence, the majority of the respondents perceived the notion of free trade in agriculture as inappropriate. About 25 percent could not decide whether to agree/disagree to the question. Displaying the distribution of responses to questions phrased in support of trade protection in agriculture, figure 5 confirms the above results. It shows that only about 6 to 9 percent of the respondents disagreed (either completely or modestly or weakly) with the need for protecting domestic agricultural production, whereas 60 to 80 percent of the respondents were in agreement with it. About 12-18 percent could not decide whether to agree/disagree to the questions.

Contrasting figures 4 and 5 reveals two findings of interest. First, significantly smaller percentage of the respondents were unsure of whether to agree or disagree for the questions

worded in favor of trade protection than those worded in opposition to trade protection. Second, much higher percentage of the respondents was in support of trade protection in agriculture (roughly 75 percent vs. 50 percent) when asked in the form of advocating for trade protection in agriculture than advocating for no trade protection. This result suggests that the public's response to the questions of trade protection is likely to differ depending on the way the questions are framed either positively or negatively.

Model Specification

This article attempts to identify US citizen's psychological and socio-demographic characteristics that affect their attitudes on two concepts: (i) government involvement in agriculture and (ii) trade protection in agriculture. The measure of government involvement in agriculture may be legitimately argued to encompass the measure of trade protection in agriculture. Nonetheless, the questions in the survey for the former were meant to imply domestic policies/programs, while the latter were worded to refer to policies/programs directly in connection with foreign countries. Public preferences may differ between domestic and foreign/trade policies. Indeed, the previous analysis of figures 2 through 5 shows in general that US citizens are more supportive of trade protection (roughly 60 percent) than government involvement (roughly 35 percent). Hence, this paper considers the two measures as two separate dependent variables.

Given that the two dependent variables were measured in two opposite ways (opposition and support), we develop two separate indexes for each of the two dependent measures: one aggregating question items phrased in opposition (i.e., preferring market-oriented system) and another for question items phrased in favor. By doing so, explanatory variables are expected to have opposite signs between the two indexes (opposition and support), yet they are allowed to

have asymmetric/differential effects between them. For example, an explanatory variable may exert a significant impact on both indexes or on one index but not on the other. In sum, we develop two regression models for the dependent measure of government involvement in agriculture and two additional models for the dependent measure of trade protection in agriculture.

This paper depends on previous studies addressing agricultural protectionism to identify explanatory variables. It discussed four forces shaping agricultural protection in developed countries including economic characteristics of agricultural markets, rent-seeking behaviors of farm organizations, multifunctionality of agriculture, and interstate conflicts of agricultural interests. The discussion provides basic frameworks useful in selecting explanatory variables. Further, it was noted that research emerged in recent years underlining the importance of consumers' psychology/attitudes/ ideology on such issues as food safety/quality (Lusk, 2012), sympathy for farmers (Naoi and Kume, 2011), support for family farms (Ellison, Lusk, and Briggeman, 2010), support for multifunctional agriculture (Moon and Griffith, 2011), inequity aversion (Lu, Scheve, and Slaughter, 2012) and environmental concerns (Bechtel, Bernauer, and Meyer, 2011) in designing public and trade policies. Integrating the two bodies of literature, we hypothesize that US citizens' perceptions about food security, family farms (sense of equity), ecology (concern about sustainability of our planet), attitudes toward the notion of multifunctional agriculture would play an important role in shaping their attitudes toward government protection and free trade in agriculture.

On a last note on model specification, three sets of regression models (Models A, B, and C) are developed for each of the two dependent measures: (i) government involvement in agriculture (Table 2), and (ii) trade protection in agriculture (Table 4) with each set consisting of Opposition (representing the index constructed from questions worded in opposition) and

Support (representing the index constructed from questions worded in favor): Model A includes only socio-demographic profiles as independent variables; Model B includes only perception variables concerning food security, family farm, ecology, and multifucntionality of agriculture, while Model C encompasses both sets of independent variables.

The development of the three sets of regression models is designed to examine whether or not there are any mediation relationships among explanatory variables in explaining the dependent variables of government involvement and trade protection. In particular, the perception variables may mediate the effects of some socio-demographic profiles. Then, such effects are embedded in the perception variables and the coefficients of the socio-demographic profiles will become statistically insignificant or the size of the coefficients will become substantially smaller in Model C that includes both perceptions and socio-demographic profiles. The comparison of estimated parameters and standard errors among Models A, B, and C will permit researchers to determine the presence/absence of potential mediating relationships.

Two-Limit Tobit Model

As shown in figures 6 through 9, the range of the four indexes representing either opposition or support for government involvement/trade protection is bounded by the lower ends (3 and 2) and higher ends (21 and 14): the index of opposition to government involvement is bounded 3 and 21; the index of support for government involvement is bounded by 2 and 14; the index of opposition to trade protection is constrained by 2 and 14; the index of support for trade protection is constrained by 3 and 14. Significant numbers of observations fall on the lower and higher ends, indicating that they are censored at such ends. The censoring renders ordinary least squares (OLS) methods to produce biased estimates. Therefore, we employ a two-limit Tobit

model to estimate four regression models involving the four indexes as dependent variables (Tobin, 1958; Maddala, 1983).

A censored variable implies that part of its distribution is not observable and then its expected value will change which should be taken into account in estimating regression models involving such variable as a dependent variable. Therefore, the usual OLS estimation will be biased and marginal effects have to be calculated accordingly. Following the model presented by Tobit (1958), estimation under two censoring points can be discussed as follows. Suppose y_{ij}^{*} is a latent random variable which is a linear function of a set of explanatory variables denoted by $X_i^{'}$,

$$y_{ij}^{*} = X_i^{'}\beta + \varepsilon_i \tag{1}$$

with

$$\begin{aligned} y_{ij} &= a_k \quad \text{If } y_{ij}^{*} \le a_k \\ y_{ij} &= b_k \quad \text{If } y_{ij}^{*} \ge b_k \qquad\qquad \text{For } j = 1,2 \text{ and } k = 1,2. \\ y_{ij} &= y_{ij}^{*} \quad \text{If } a_k \le y_{ij}^{*} \le b_k \end{aligned}$$

Where $j = 1,2$ indicates the two different dependent variables used in this paper. Specifically, y_{i1} represents the general public's attitudes toward government involvement in agriculture as measured by two alternative indices capturing the opinion of individuals under two different foci in the questions, pro and against government involvement. In the same way, y_{i2} represents the general public's attitudes toward free trade in agriculture which is also measured by two indices capturing the opinion of individuals under two different foci in the questions, pro and against free trade. Furthermore, $k = 1,2$ represents the two lower censoring points, 2 and 3, and the two upper censoring points, 14 and 21, depending on the index used for each respective dependent variable. β is a vector of parameters and ε_i is a random disturbance normally distributed.

Finally, the set of independent variables represented by the matrix $X_i^{'}$ encompass socio-demographic profiles such as age, education, income, gender, race, marital status, employment status, and geographical origin, and public perceptions about family farms, ecology, intangible benefits of agriculture, and food security.

The latent variable y_{ij}^{*} is assumed to be normally distributed; that is, $y_{ij}^{*} \sim N\left(\mu, \sigma^2\right)$. Under this features, the probability of the different sections of the distribution are

$$\begin{aligned}
&\text{Prob}\left(y_{ij} = a_k\right) = \text{Prob}\left(y_{ij}^{*} \le a_k\right) = \Phi\left(\frac{a_k - \mu}{\sigma}\right), \\
&\text{Prob}\left(y_{ij} = b_k\right) = \text{Prob}\left(y_{ij}^{*} \ge b_k\right) = 1 - \Phi\left(\frac{b_k - \mu}{\sigma}\right), \text{ and} \\
&\text{Prob}\left(a_k \le y_{ij} \le b_k\right) = \text{Prob}\left(a_k \le y_{ij}^{*} \le b_k\right) \\
&= 1 - \Phi\left(\frac{a_k - \mu}{\sigma}\right) - \left[1 - \Phi\left(\frac{b_k - \mu}{\sigma}\right)\right] = \Phi\left(\frac{b_k - \mu}{\sigma}\right) - \Phi\left(\frac{a_k - \mu}{\sigma}\right)
\end{aligned} \tag{2}$$

Where $\Phi(.)$ is the standard normal cumulative distribution function, and μ and σ are the expected value and standard deviation of the latent variable. The previous definition implies that the distribution is characterized by a continuous and a discrete part. An important characteristic of censored variables is that the full mass of probability is assigned to the section between the censoring points a_k and b_k.

Based on the probabilities of the censoring points presented in equation (2), the log-likelihood function can be constructed as below in order to estimate the parameters of interest.

$$l\left(\beta, \sigma\right) = \sum_{a \le y_{ij} \le b} \ln \phi\left(\frac{y_{ij} - X_i^{'}\beta}{\sigma}\right) + \sum_{y_{ij} = a_k} \ln\left[1 - \Phi\left(\frac{a_k - X_i^{'}\beta}{\sigma}\right)\right] + \sum_{y_{ij} = b_k} \ln \Phi\left(\frac{b_k - X_i^{'}\beta}{\sigma}\right) \tag{6}$$

Given this expression can present some difficulties to converge, Olsen (1978) proposes a reparameterization where $\gamma = \frac{\beta}{\sigma}$ and $\theta = \frac{1}{\sigma}$ which simplifies the maximization problem.

Estimated Results

Government Involvement in Agriculture

Table 2 presents estimated results (Models A, B, and C) for the two-limit censored Tobit models with the general public's attitudes toward government involvement in agriculture as the dependent measure. The Likelihood-Ratio tests reject the null hypothesis of zero coefficients simultaneously at the significance level of 99 percent for all cases analyzed, confirming the overall significance of the models.

Overall, the results of Model A tend to show that some socio-demographic profiles (age, education, gender, income) exert a statistically significant effect on their attitudes toward the role of government in agriculture. For example, respondents with higher income were more likely to be opposed to government involvement in agriculture and less likely to support it. Older citizens were more likely to be opposed to government intervention in agriculture as manifested commonly through the Opposition and Support models. Respondents with higher education were predisposed to be in opposition to government involvement as revealed with a negative sign in the Support model. Yet, the Education variable was not significant in the Opposition model, suggesting that it had a differential/asymmetric effect between Opposition and Support models. Males were less likely to support government involvement than females.

In order to evaluate the mediation hypothesis, we compare the estimated parameters of socio-demographic profiles across Modes A, B, and C. The comparison reveals several findings of interest. First, the effects of Gender and Income are mediated by the perception variables as

evidenced by the changes in the parameters and *t*-values between Models A and C. Specifically, statistically significant effects of Gender and Income in the Opposition equation in Model A (that includes only socio-demographic profiles) become not significant in Model C when the perception variables were incorporated. The changes indicate that the effects of Gender and Income on the public's attitudes toward government involvement in agriculture are mediated by the perception variables. Second, the coefficients of Age remain virtually constant between Models A and C, indicating that its effects on the attitudes toward government involvement in agriculture are direct but not mediated through the perception variables. Third, in the case of Gender in the Support equation, the size of the coefficient is reduced to half from (-1.05; *t*-value -5.02) to (-0.51; *t*-value -2.77), suggesting that the effect of Gender on the public's attitudes toward supporting government intervention is partially mediated by the perception variables.

The results of the perception variables remain fairly stable (except for the case of Food_Sec in the Support equation) between Models B and C. We hypothesized that respondents with greater concern/interest in securing food supply would be predisposed to desire a higher level of government involvement/protection in agriculture. However, the perception about food security was positively associated with opposition to government involvement while negatively associated with support for it (in Model B). Although contrary to the hypothesis, the result may be indicative of US citizens' belief that free market is more conducive to securing food security. When we use the results of Model C, Food_Sec is significant only in the Opposition equation, while insignificant in the Support equation. This result may show that a variable could have differential impacts between Opposition and Support. Specifically, concern about food security leads to a desire for market-oriented agriculture, but does not either significantly weaken support for government intervention. While such results are apparently contradictory, they are not out of possible given the different wordings and nuances of the questions posed to the respondents.

The other perception variables (Family_Farms, Ecology, Intan_Ben) have symmetric effects between the Opposition and Support equations. As hypothesized, respondents who show sympathy for family farms are significantly less likely to be opposed to government intervention in agriculture and more likely to support it.

US citizens' perceptions about our planet's ecological state were significantly associated with their attitudes toward the issue of whether government should be involved in agriculture. That is, respondents who are concerned about the impact of human economic activities on the sustainability of our world's ecology/environment are predisposed not to be opposed to government intervention in agriculture while showing greater support for it.

Intan_Ben is a variable representing US citizens' perception of the notion of multifunctional agriculture referring to an array of nonmarket benefits that agriculture produces in association with market commodities. As hypothesized, Intan_Ben was significantly linked to attitudes toward government intervention in agriculture: i.e., more agreement with the notion of multifunctional agriculture implies less opposition to and, alternatively, greater support for government involvement in agriculture.

Trade protection in Agriculture

Table 3 presents estimated results (Models A, B, and C) for the two-limit censored Tobit models with the general public's attitudes toward trade protection in agriculture as the dependent measure. The LR tests reject the null hypothesis of zero-coefficients simultaneously in all cases. While the results of the models of trade protection were similar in general to those of government involvement, there were some differences between the two dependent measures. First, income was inversely associated with government intervention in agriculture but it had no impact on trade protection. The results suggest that US citizens with higher income were more

opposed to government intervention in agriculture while being more supportive of trade policies protecting domestic agriculture when compared to those with lower income. Second, US citizens' perceptions of food security were negatively related to government intervention but positively with trade protection. The result indicates that US citizens consider restricting agricultural imports as necessary to promote domestic food security. These differences confirm the need to differentiate the dependent measures between government intervention in agriculture and trade protection.

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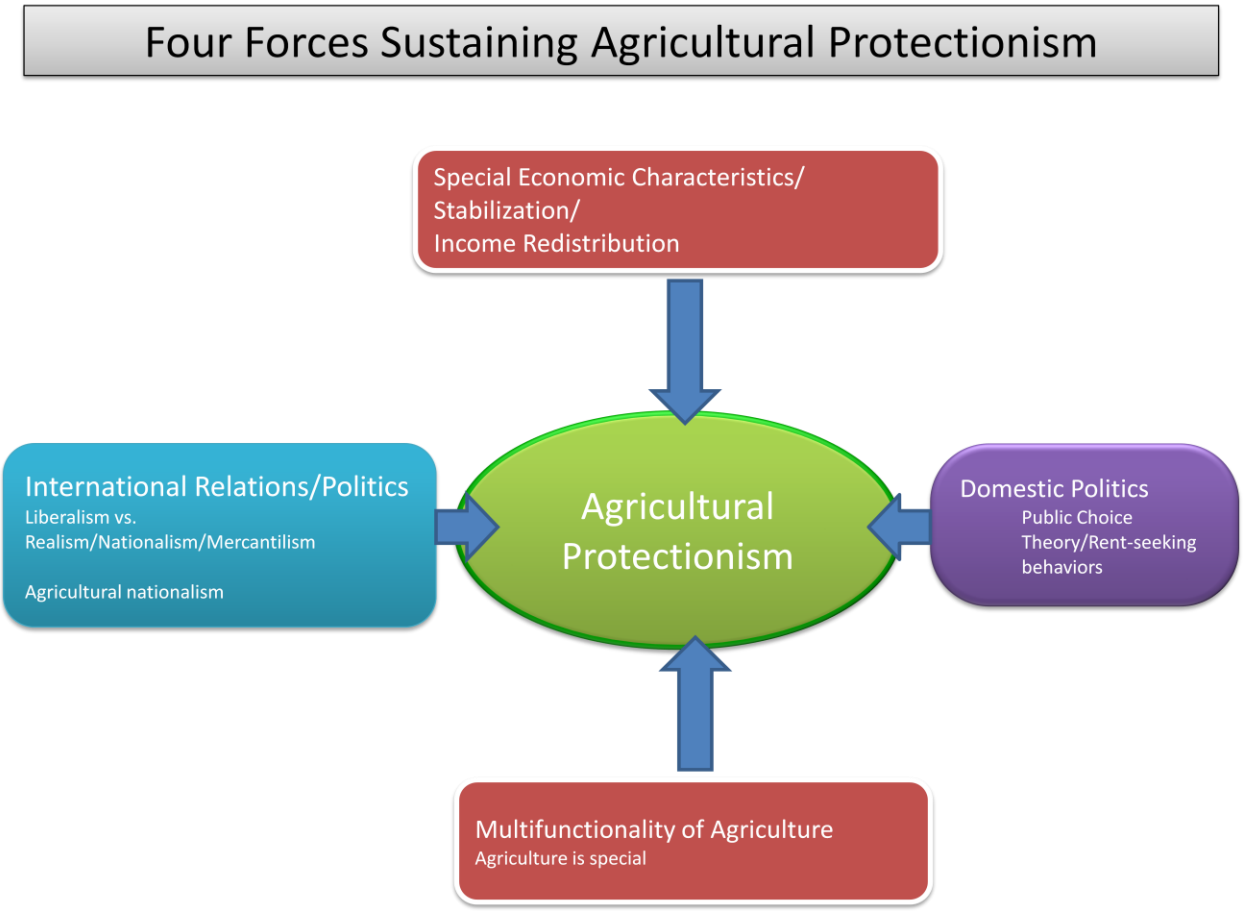

Figure 1. Four Forces Sustaining Agricultural Protectionism

Table 1. Definitions and descriptive statistics of variables used in the empirical model

Variable	Description	Mean (SD)
DEPENDENT VARIABLES: Attitudes Toward		
Government Intervention		
	1. The government should reduce their involvement in agriculture to a level comparable with other sectors of the economy	4.25 (1.60)
	2. Farmers should compete in a free market without government support	4.19 (1.62)
	3. Government should not be involved in agriculture at all	4.50 (1.69)
	4. Government should help as many farmers as possible through government programs	
	5. Government should guarantee a minimum price to farmers for their products	4.29 (1.70)
		3.37 (1.76)
Trade Protection in Agriculture		
	1. The United States should import food if it is cheaper than domestically produced food	5.33 (1.49)
	2. The United States should not have trade barriers restricting the import of foreign agricultural products	3.31 (1.60)
	3. The United States should produce nearly all the food it consumes	
	4. I would be concerned about becoming dependent upon foreign countries for our food supply	4.24 (1.53)
	5. Each country should determine how much food is produced within the country versus how much food is imported	3.98 (1.71)
		3.25 (1.62)
INDEPENDENT VARIABLES: Perceptions about		
Way of thinking about Ecology		
	1. We are approaching the limit of the number of people the earth can support	4.40 (1.69)
	2. The earth has plenty of natural resources if we just learn to develop them	4.98 (1.60)
	3. The earth is like a spaceship with only limited room and resources	4.85 (1.67)
Ecology	4. Humans have the right to modify the natural environment to suit their needs	3.36 (1.65)
	5. Plants and animals have as much right as humans to exist	5.16 (1.68)
	6. Humans were meant to rule over the nature	3.49 (1.83)
	7. When humans interfere with nature it often produces disastrous consequences	5.24 (1.47)
	8. The balance of nature is strong enough to cope with the impacts of modern industrial nations	3.40 (1.64)
	9. The balance of nature is very delicate and easily upset	5.02 (1.58)
	10. Human ingenuity will ensure that we do not make the earth unlivable	4.00 (1.64)
	11. Despite our special abilities humans are still subject to the laws of nature	5.81 (1.26)
	12. Humans will eventually learn enough about how nature works to be able to control it	3.35 (1.65)
	13. Humans are severely abusing the environment	5.27 (1.63)
	14. The so-called ecological crisis facing humankind has been greatly exaggerated	3.56 (1.87)
	15. If things continue on the present course, we will soon experience a major ecological catastrophe	4.77 (1.68)
Intangible benefits provided by agriculture		
	1. Agriculture produces intangible benefits that cannot be sold	5.16 (1.45)
Intan_Ben	2. Government should compensate farmers for the intangible benefits produced by agriculture	4.41 (1.45)
National Food Security		
Food_Sec	1. Ensuring an adequate supply of food (national food security) is the most	5.46 (1.28)

	important service that agriculture produces in addition to producing products for sale	
Family Farms		
Fam_Farms	1. The family farm should be preserved because it is a vital part of our cultural heritage	5.33 (1.49)
	2. Obtaining greater efficiency in food production is more important than preserving the family farm	3.31 (1.60)
	3. Family farms should be supported even if it means higher food prices	4.24 (1.53)
	4. Family farms should compete in the same market place as corporate farms	3.98 (1.71)
	5. Government should encourage the consolidation of farms into larger units to achieve greater efficiency in production costs	3.25 (1.62)

Socio-demographics		
Education	1=grade school; 2=some high school; 3=graduated high school; 4=some college; 5=graduate from some college-2 years; 6=graduated from collage-4 years; 7=some post graduate; 8=post graduate degree	4.22 (1.68)
Age	Actual age (years)	48.96 (16.00)
Gender	1=male; 0=female	0.56 (0.50)
Married	1=married; 0=otherwise	0.59 (0.49)
Unemployed	1=unemployed; 0=otherwise	0.07 (0.25)
Part-time	1=employed part-time; 0=otherwise	0.09 (0.28)
Black	1= african american; otherwise	0.04 (0.20)
Asian	1=asian or pacific islander; 0=otherwise	0.04 (0.21)
Other	1=race different to white, black, or asian, 0=otherwise	0.05 (0.22)
Hispanic	1=hispanic, 0=otherwise	0.02 (0.15)
Income	1=>$5,000; 2=$5,000-$9,999; 3=$10,000-$14,999; 4=$15,000-$19,999; 5=$20,000-$24,999; 6=$25,000-$29,999; 7=$30,000-$34,999; 8=$35,000-$39,999; 9=$40,000-$44,999; 10=$45,000-$49,999; 11=$50,000-$54,999; 12=$55,000-$59,999; 13=$60,000-$64,999; 14=$65,000-$69,999; 15=$70,000-$74,999; 16=$75,000-$79,999; 17=$80,000-$84,999; 18=$85,000-$89,999; 19=$90,000-$94,999; 20=$95,000-$99,999; 21=$100,000-$124,999; 22=$125,000-$149,999; 23=$150,000-$199,999; 24=$200,000-$249,999; 25=<$250,000	12.89 (6.44)
Geographic regions		
Northeast	1=northeast; 0=otherwise	0.19 (0.39)
Midwest	1=midwest; 0=otherwise	0.24 (0.43)
West	1=west; 0=otherwise	0.24 (0.43)

Figure 2: Opposition to government involvement

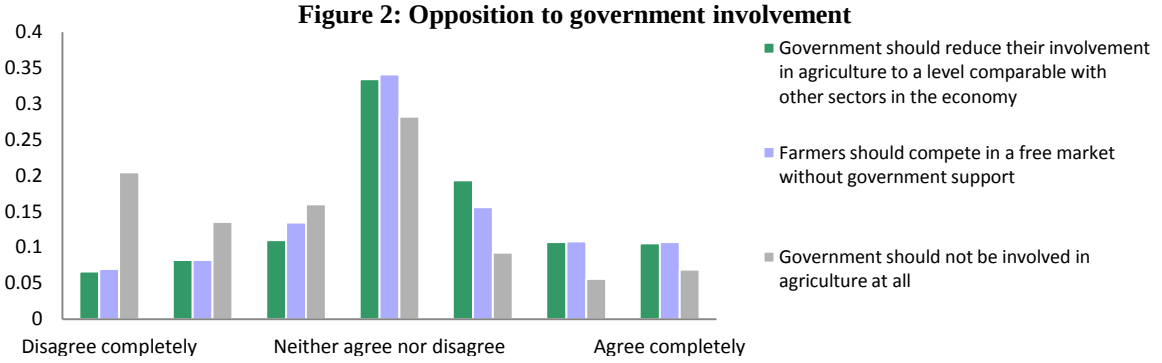

Figure 3: Support of government involvement

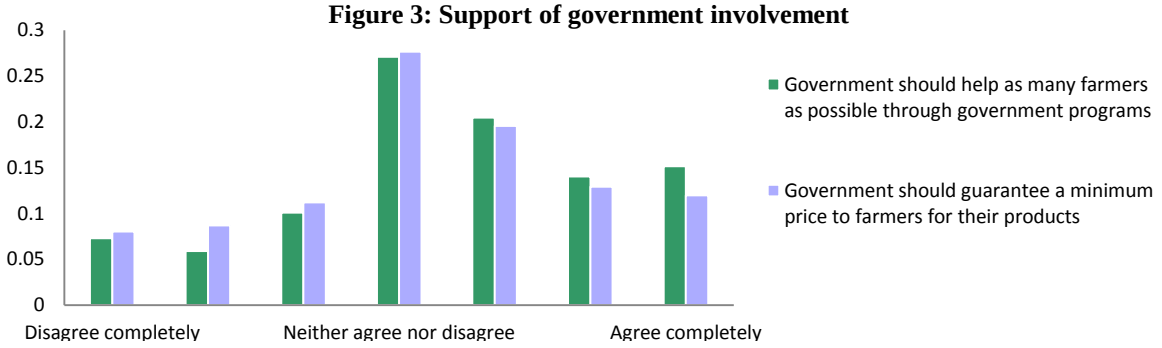

Figure 4: Opposition to trade protection in Agriculture

Figure 5: Support of trade protection in Agriculture

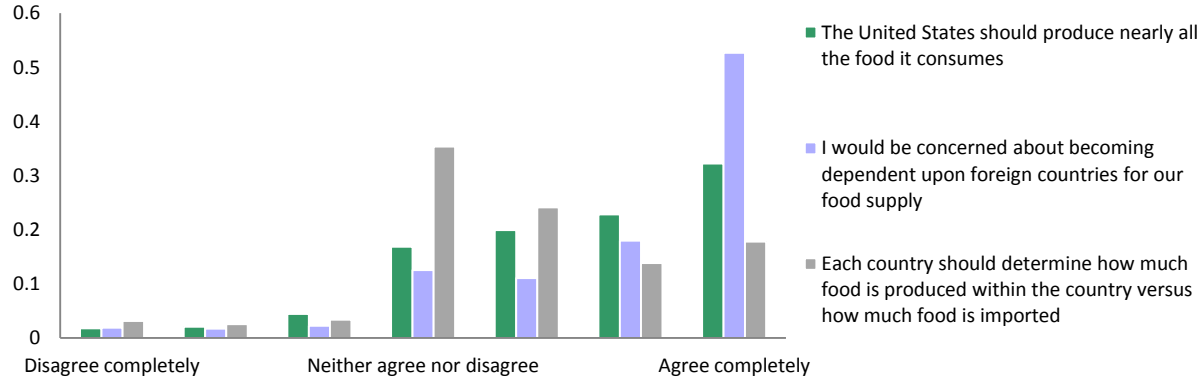

Figure 6: Index of Opposition to Government Involvement (in favor of market)

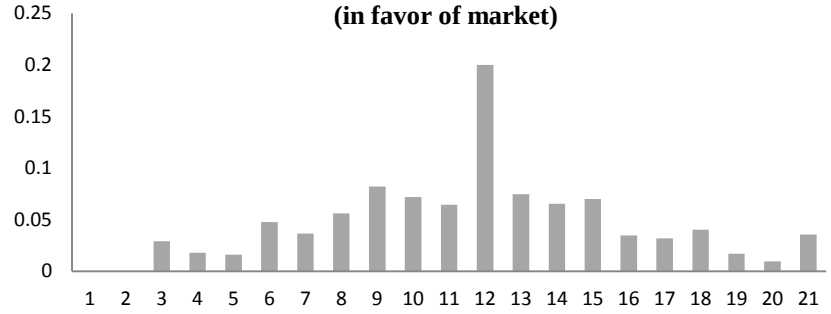

Figure 7: Index of Support for Government Involvement

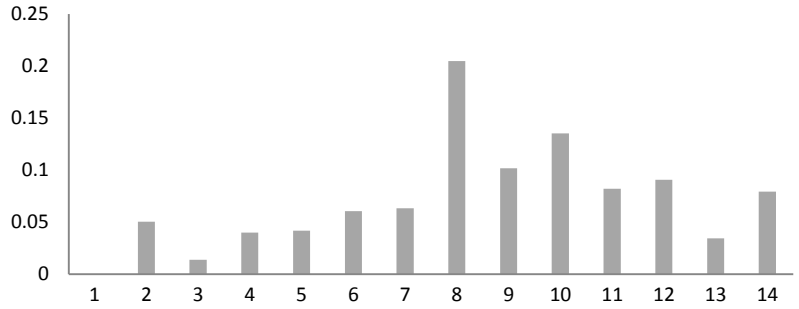

Figure 8: Index of Opposition to Trade Protection (in favor of free trade)

Figure 9: Index of Support for Trade Protection

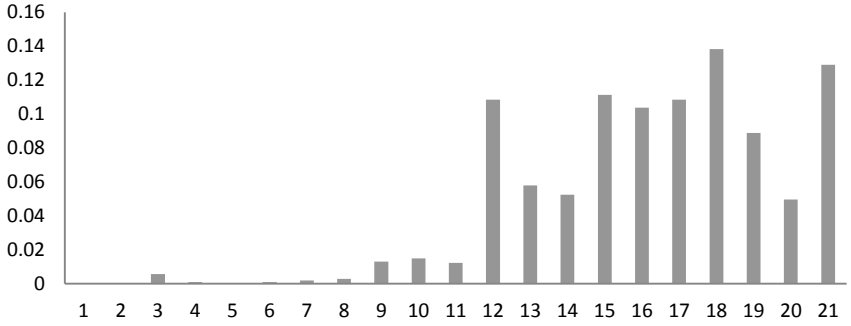

Table 2. Censored-Tobit Estimation for Government Involvement in Agriculture

Variable	**Model A** Parameter (Z-Statistic)		**Model B** Parameter (Z-Statistic)		**Model C** Parameter (Z-Statistic)	
	Oppose	Support	Oppose	Support	Oppose	Support
Constant	8.77 (13.45)***	13.22 (26.19)***	20.23 (24.31)***	0.01 (0.02)	17.86 (17.64)***	3.69 (4.97)***
Age	0.03 (3.14)***	-0.04 (-5.16)***	-	-	0.03 (4.13)***	-0.04 (-7.14)***
Education	-0.04 (-0.44)	-0.24 (-3.70)***	-	-	-0.05 (-0.60)	-0.26 (-4.72)***
Gender	0.84 (3.11)***	-1.05 (-5.02)***	-	-	0.26 (1.03)	-0.51 (-2.77)***
Asian	1.51 (2.25)**	-0.86 (-1.67)*	-	-	1.00 (1.62)	-0.19 (-0.43)
Black	-0.23 (-0.35)	0.35 (0.68)	-	-	-0.63 (-1.04)	0.84 (1.90)*
Hispanic	-0.65 (-0.68)	-0.04 (-0.05)	-	-	-0.61 (-0.71)	0.18 (0.28)
Other	1.50 (2.42)**	0.29 (0.61)	-	-	1.77 (3.12)***	0.03 (0.07)
Income	0.06 (2.55)**	-0.06 (-3.73)***	-	-	0.03 (1.48)	-0.04 (-3.00)***
Northeast	0.46 (1.20)	-0.08 (-0.29)	-	-	0.46 (1.33)	0.06 (0.25)
Midwest	0.46 (1.31)	-0.25 (-0.92)	-	-	0.55 (1.71)*	-0.16 (-0.68)
West	0.43 (1.19)	-0.27 (-0.98)	-	-	0.34 (1.03)	-0.10 (-0.42)
Unemployed	-0.06 (-0.11)	0.72 (1.69)*	-	-	0.25 (0.49)	0.56 (1.51)
Part-time	0.28 (0.58)	0.18 (0.49)	-	-	0.56 (1.30)	-0.11 (-0.37)
Married	0.32 (1.11)	-0.25 (-1.15)	-	-	0.32 (1.22)	-0.30 (-1.55)
Food_Sec	-	-	0.59 (5.53)***	-0.29 (-3.54)***	0.53 (4.86)***	-0.10 (-1.21)
Fam_Farms	-	-	-0.20 (-8.97)***	0.13 (7.71)***	-0.21 (-9.41)***	0.14 (8.10)***
Ecology	-	-	-0.04 (-4.07)***	0.02 (3.19)***	-0.03 (-3.84)***	0.02 (2.93)***
Intan_Ben	-	-	-0.35 (-5.69)***	0.53 (11.11)***	-0.34 (-5.46)***	0.50 (11.02)***
Log Likel.	-2962.4	-2603.8	-2897.6	-2518.2	-2876.7	-2451.3
Restr. LogL	-2994.2	-2662.7	-2994.2	-2662.7	-2994.2	-2662.7
χ^2	63.6***	117.8***	193.2***	289.0***	235.0***	422.8***
McFadden R^2	0.01	0.02	0.03	0.05	0.04	0.08

***,**, and * implies the significance at 1%, 5%, and 10%, respectively.

Table 3. Marginal Effects for Censored-Tobit Estimation: Government Involvement

Variable	**Model A** Parameter (Z-Statistic)		**Model B** Parameter (Z-Statistic)		**Model C** Parameter (Z-Statistic)	
	Oppose	Support	Oppose	Support	Oppose	Support
Constant	8.46 (13.41)***	12.21 (26.19)***	19.75 (24.25)***	0.01 (0.02)	17.48 (17.62)***	3.54 (4.97)***
Age	0.03 (3.14)***	-0.03 (-5.16)***	-	-	0.03 (4.13)***	-0.04 (-7.15)***
Education	-0.03 (-0.44)	-0.22 (-3.70)***	-	-	-0.04 (-0.60)	-0.25 (-4.72)***
Gender	0.81 (3.11)***	-0.97 (-5.02)***	-	-	0.25 (1.03)	-0.49 (-2.77)***
Asian	1.46 (2.25)**	-0.80 (-1.67)*	-	-	0.98 (1.62)	-0.18 (-0.43)
Black	-0.22 (-0.35)	0.32 (0.68)	-	-	-0.61 (-1.04)	0.80 (1.90)*
Hispanic	-0.62 (-0.68)	-0.04 (-0.05)	-	-	-0.60 (-0.71)	0.17 (0.28)
Other	1.45 (2.42)**	0.27 (0.61)	-	-	1.73 (3.12)***	0.03 (0.07)
Income	0.05 (2.55)**	-0.06 (-3.73)***	-	-	0.03 (1.48)	-0.04 (-3.00)***
Northeast	0.44 (1.20)	-0.08 (-0.29)	-	-	0.45 (1.33)	0.06 (0.25)
Midwest	0.44 (1.31)	-0.23 (-0.92)	-	-	0.54 (1.71)*	-0.15 (-0.68)
West	0.41 (1.19)	-0.25 (-0.98)	-	-	0.33 (1.03)	-0.10 (-0.42)
Unemployed	-0.06 (-0.11)	0.67 (1.69)*	-	-	0.24 (0.49)	0.54 (1.51)
Part-time	0.27 (0.58)	0.16 (0.49)	-	-	0.55 (1.30)	-0.11 (-0.37)
Married	0.31 (1.11)	-0.24 (-1.15)	-	-	0.31 (1.22)	-0.28 (-1.55)
Food_Sec	-	-	0.58 (5.53)***	-0.27 (-3.54)***	0.51 (4.86)***	-0.09 (-1.21)
Fam_Farms	-	-	-0.20 (-8.97)***	0.13 (7.71)***	-0.21 (-9.41)***	0.13 (8.11)***
Ecology	-	-	-0.04 (-4.07)***	0.02 (3.19)***	-0.03 (-3.84)***	0.02 (2.93)***
Intan_Ben	-	-	-0.35 (-5.69)***	0.50 (11.12)***	-0.33 (-5.46)***	0.48 (11.02)***

***,**, and * implies the significance at 1%, 5%, and 10%, respectively.

Table 4. Censored-Tobit Estimation for Trade Protection in Agriculture

Variable	**Model A** Parameter (Z-Statistic)		**Model B** Parameter (Z-Statistic)		**Model C** Parameter (Z-Statistic)	
	Oppose	Support	Oppose	Support	Oppose	Support
Constant	6.46 (13.05)***	16.47 (29.81)***	14.61 (22.79)***	3.92 (5.93)***	14.04 (18.08)***	5.34 (6.66)***
Age	-0.03 (-4.21)***	0.03 (3.37)***	-	-	-0.02 (-2.50)**	0.01 (0.87)
Education	0.09 (1.49)	-0.05 (-0.77)	-	-	0.11 (1.85)*	-0.16 (-2.67)***
Gender	0.77 (3.74)***	-0.89 (-3.87)***	-	-	0.37 (1.94)*	-0.46 (-2.32)**
Asian	1.52 (3.00)***	-2.17 (-3.85)***	-	-	0.96 (2.07)**	-1.08 (-2.24)**
Black	0.93 (1.84)*	-1.29 (-2.31)**	-	-	0.52 (1.12)	-0.57 (-1.18)
Hispanic	0.50 (0.69)	-1.32 (-1.63)	-	-	0.60 (0.91)	-0.92 (-1.33)
Other	0.24 (0.51)	0.77 (1.46)	-	-	0.28 (0.64)	0.79 (1.77)*
Income	0.02 (1.18)	-0.02 (-1.17)	-	-	0.0002 (0.02)	-0.01 (-0.60)
Northeast	0.27 (0.92)	-0.59 (-1.81)*	-	-	0.33 (1.26)	-0.39 (-1.41)
Midwest	0.18 (0.68)	-0.67 (-2.24)**	-	-	0.19 (0.78)	-0.28 (-1.11)
West	-0.17 (-0.63)	0.20 (0.64)	-	-	-0.14 (-0.56)	0.29 (1.13)
Unemployed	-0.14 (-0.34)	0.46 (0.99)	-	-	0.10 (0.27)	0.50 (1.26)
Part-time	-0.48 (-1.32)	0.54 (1.35)	-	-	-0.33 (-0.99)	0.37 (1.08)
Married	-0.43 (-1.98)**	0.17 (0.72)	-	-	-0.47 (-2.33)**	0.15 (0.74)
Food_Sec	-	-	-0.16 (-1.91)*	1.06 (12.56)***	-0.08 (-1.03)	1.05 (12.23)***
Fam_Farms	-	-	-0.21 (-12.00)***	0.08 (4.33)***	-0.19 (-11.11)***	0.06 (3.48)***
Ecology	-	-	-0.04 (-5.90)***	0.04 (5.65)***	-0.04 (-5.91)***	0.04 (5.49)***
Intan_Ben	-	-	0.10 (2.13)**	0.19 (3.83)***	0.10 (2.08)**	0.18 (3.71)***
Log Likel.	-2528.11	-2666.91	-2452.24	-2521.51	-2433.01	-2503.01
Restr. LogL	-2749.7	-2287.0	-2749.7	-2287.0	-2749.7	-2287.0
χ^2	241.27***	77.93***	393.00***	368.73***	431.47***	405.72***
McFadden R^2	0.05	0.01	0.07	0.07	0.08	0.08

***,**, and * implies the significance at 1%, 5%, and 10%, respectively.

Table 5. Marginal Effects for Censored-Tobit Estimation: Trade Protection in Agriculture

Variable	**Model A** Parameter (Z-Statistic)		**Model B** Parameter (Z-Statistic)		**Model C** Parameter (Z-Statistic)	
	Oppose	Support	Oppose	Support	Oppose	Support
Constant	5.74 (12.75)***	14.72 (30.00)***	13.24 (22.29)***	3.63 (5.93)***	12.80 (17.84)***	4.97 (6.66)***
Age	-0.03 (-4.21)***	0.02 (3.37)***	-	-	-0.01 (-2.50)**	0.01 (0.86)
Education	0.08 (1.49)	-0.05 (-0.77)	-	-	0.10 (1.85)*	-0.15 (-2.67)***
Gender	0.68 (3.74)***	-0.79 (-3.87)***	-	-	0.34 (1.94)*	-0.43 (-2.32)**
Asian	1.35 (3.00)***	-1.94 (-3.85)***	-	-	0.87 (2.07)**	-1.01 (-2.24)**
Black	0.82 (1.84)*	-1.16 (-2.31)**	-	-	0.47 (1.12)	-0.53 (-1.18)
Hispanic	0.44 (0.69)	-1.18 (-1.63)	-	-	0.55 (0.91)	-0.86 (-1.33)
Other	0.21 (0.51)	0.69 (1.46)	-	-	0.25 (0.64)	0.74 (1.77)*
Income	0.02 (1.18)	-0.02 (-1.17)	-	-	0.0002 (0.02)	-0.01 (-0.60)
Northeast	0.24 (0.92)	-0.52 (-1.81)*	-	-	0.31 (1.26)	-0.36 (-1.41)
Midwest	0.16 (0.68)	-0.60 (-2.24)**	-	-	0.18 (0.78)	-0.26 (-1.11)
West	-0.15 (-0.63)	0.18 (0.64)	-	-	-0.13 (-0.56)	0.27 (1.13)
Unemployed	-0.13 (-0.34)	0.41 (0.99)	-	-	0.09 (0.27)	0.47 (1.26)
Part-time	-0.42 (-1.32)	0.48 (1.35)	-	-	-0.30 (-0.99)	0.34 (1.08)
Married	-0.38 (-1.98)**	0.16 (0.72)	-	-	-0.43 (-2.33)**	0.14 (0.74)
Food_Sec	-	-	-0.14 (-1.91)*	0.13 (1.65)*	-0.08 (-1.03)	0.97 (12.23)***
Fam_Farms	-	-	-0.19 (-12.01)***	0.98 (12.55)***	-0.18 (-11.12)***	0.06 (3.48)***
Ecology	-	-	-0.04 (-5.90)***	0.07 (4.33)***	-0.04 (-5.91)***	0.04 (5.49)***
Intan_Ben	-	-	0.09 (2.13)**	0.04 (5.65)***	0.09 (2.08)**	0.17 (3.71)***

***,**, and * implies the significance at 1%, 5%, and 10%, respectively.