DEPARTAMENTO DE ECONOMIA
PUC-RIO

TEXTO PARA DISCUSSÃO
N°. 494

THE FTAA AND THE POLITICAL ECONOMY OF PROTECTION IN BRAZIL AND THE US

MARCELO DE PAIVA ABREU[1]

JANEIRO 2005

[1] The author is in the Integration and Regional Programs Department under the Special Initiative in Integration and Trade on leave from the Department of Economics, Catholic University of Rio de Janeiro. He wishes to thank the help or comments of participants in presentations in the Bank and at the Brazilian Embassy in Washington. Ricardo Vera is particularly thanked for help with the statistical work. This paper used information available before July 22, 2004.

INTRODUCTION TO THE RESEARCH PROGRAM: “TRADE LIBERALIZATION AND THE POLITICAL ECONOMY OF PROTECTION IN BRAZIL”

The interest of specific Latin American economies in the successful completion of the Free Trade Area of the Americas (FTAA) negotiations is very heterogeneous. A list of relevant factors to explain such divergences would include geographic orientation of trade, composition of exports, degree of openness of the economy, level of protection and commitment to trade liberalization. Mercosur trade flows with the rest of the world are more important than those of other economies in Latin America whose trade tends to be concentrated with the United States. In contrast with other Latin American economies Mercosur agricultural exports tend to be relatively important. These are exactly the products facing high protection in the United States. The level of protection in Mercosur, mainly as a reflection of the size and past policies of Brazil, is higher than in almost any other market in Latin America, although there are no tariff peaks and few non-tariff barriers. Finally, while commitment to trade liberalization is high in most of Latin America it is less so in Mercosur, and especially in Brazil, a latecomer in abandoning import substitution.

Success in the FTAA negotiations depends crucially on the convergence of views between the United States and Mercosur, and especially Brazil, in relation to access of goods to their respective domestic markets. In the last instance this convergence is likely to depend on reciprocal concessions during the transitional period towards a true free trade area that will eliminate protection of "sensitive" sectors both in the United States and Mercosur. In both sides there are strong obstacles to the required dismantlement of protection. The average tariff in the United Sates is low. However, many products in which Mercosur producers are particularly interested face tariff peaks. Protectionist interests seem well entrenched to resist the required dismantlement of protection.

This research program focuses mostly on the political economy of protection in Brazil as a high growth cum high tariff economy for most of the 20th century. Brazil has a strong inertial tradition of lack of commitment to trade liberalization. Trade liberalization was undertaken mostly in the early 1990s, and while substantial given such traditions, was

late and relatively modest if compared to those in most other Latin American economies. Mercosur initially involved tariff reduction in Brazil and selective increased protection in other members.

To understand the present political economy of protection in Brazil it is essential to understand its roots and how the heavily protected Brazilian economy was near the top of the world economic growth league until quite late in the last century. Transition to an outward-looking model in a revision of the original import substitution strategy did not involve opening the domestic market and relied heavily on sustained export subsidies. Even attraction of foreign direct investment hinged on maintaining a high tariff and selective rights of establishment. Conversion to trade liberalization was slow and half-hearted in contrast with most of the other economies in Latin America. Success in the FTAA negotiation depends on the balance in Brazil and the United States between the interests of exporting sectors, likely to be favored by increased market access, and the resistance of protected sectors that fear increased import competition.

Three papers were planned in this research program to cover the theme "Trade liberalization and the political economy of protection in Brazil". They consider the evolution of the political economy of protection in Brazil in chronological sequence. The first paper is concerned with the high protection cum high growth experience in Brazil until the second half of the 1980s and its crisis.[2] The second paper analyses unilateral trade liberalization since the late 1980s and its difficulties since the mid-1990s.[3] This last paper centers on reciprocity in the context of regional trade negotiations and on the political economy aspects of the reciprocal trade concessions between the United States and Mercosur likely to be required in the transition period towards an FTAA. It will include the identification by sector and region of rent-seeking protectionist interests and market-seeking export interests in Brazil and the United States.

[2] Abreu (2004b)
[3] Abreu (2004c).

This paper is divided in nine sections. A short introduction puts the subject matter in perspective in the context of the FTAA negotiations. Section 1 deals with obstacles to a successful conclusion of the FTAA both in Mercosur – especially in Brazil, although many of the arguments apply to the other member countries – and the United States. The following section considers briefly how notions about reciprocity and balance of concessions have been applied in multilateral negotiations and how they may be adjusted in the case of negotiations involving free trade areas. The following two triads of sections refer to the United States (sections 3, 4 and 5) and Brazil (sections 6, 7 and 8). Analysis of the political economy of the protection in the United States can be more disaggregated than that in Brazil as representatives in the House are elected by Congressional District while Brazilian *deputados* are elected by statewide vote. Sections 3 and 6 analyze in both economies how protectionist interests are distributed from the point of view of sectors affected and of their location (states and, for the United States, congressional districts). The relative importance of export interests by state is gauged in sections 4 and 7. The relative net balance of protectionist and export interests is evaluated in sections 5 and 8 under different assumptions in an effort to cope with the limitations of the measures used. Section 9 concludes.

Table of contents

The focus of this paper is on the relevance of the political economy of protection to explain why FTAA negotiations have faced so many obstacles which have contributed to significantly reduce initial ambitions concerning its comprehensiveness. And on how the mobilization of interests in favor of trade liberalization can contribute to remove them. Some of these obstacles can be understood in the context of a tradition of high protection in Brazil (and in Mercosur consequently) and a trade liberalization process which proceeded somewhat reluctantly since the early 1990s. Other significant obstacles are related to the entrenchment of protectionist interests in the United States, especially affecting market access for agricultural products.

1. Obstacles to the FTAA

The depiction of obstacles to the FTAA in Brazil and the United States can be cursory here as the subject has been treated elsewhere.[4] Since the beginning of the 1990s difficulties related to the constitution an hemispheric FTA have mainly emerged between Brazil – and, increasingly, also other members of Mercosur – and the United States. There was initial concern in Brazil about the compatibility between Mercosur and the FTAA, and before and after the launching of negotiations in 1994 many differences in views on their comprehensiveness, timetable, and the depth of commitments.

Difficulties between the United States and Mercosur are partly related to Mercosur's size, and especially of the Brazilian economy, if compared to other economies in the hemisphere. The Brazilian economy is only about one eight of the US economy, but was still the second economy in the hemisphere in 2002 (in GDP corrected by purchasing power parity), about 50% larger than both Canada and Mexico. Mercosur's GDP is about the same as the joint GDP of Canada and Mexico. Either as a reflection of size or simply because of political reasons there is in Mercosur, and most certainly in Brazil, a perception that this size should be reflected in bargaining power.

[4] See Abreu (2004a).

In Brazil, and to a lesser extent in other Mercosur economies, there is an ingrained secular protectionist tradition. In the case of Brazil this is related to the country's capacity as a market maker in coffee to shift the terms trade against consumers in the event production costs (import prices) increased. It also reflects the fact that high-tariff Brazil had one of the most successful growth performances in the first eighty years of the last century. The recipe was lost, but the spurious association remains alive in the background. Protection today is relatively high – with an average tariff in the region of 13% – but with low volatility: no tariff higher than 35% and there are no significant non-tariff barriers. Trade liberalization in the 1990s in Brazil was relatively late in relation to the rest of Latin America. The formation of Mercosur in fact helped to speed it up but, once again, the Common External Tariff today is high relative to the level of protection in most of the rest of Latin America.

Resistance to trade liberalization tends to mobilize interests that are not directly favored by high protection. This stance, rooted in political arguments, tends to be strengthened by specific reservations by more radical political groups concerning a closer relation with the United States. In contrast with most of the rest of Latin America Mercosur's share of trade with the United States is relatively small: typically 20-25% compared to 80% in Mexico and Canada and 30-40% in the other FTA initiatives in the hemisphere (Andean Community, Caricom and CACM).[5] Trade with the rest of the world is more important for Mercosur economies than for the rest of the hemisphere. Besides the US, whose trade is 60% outside the hemisphere, only Chile and Peru trade as much with the rest of the world (about 50% of total trade).

In the United States obstacles to the FTAA are a specific manifestation of difficulties related to the dismantlement of protectionism. The mean tariff in the United States is low but its volatility is relatively high: there many spikes both of the nominal tariff and of the ad valorem equivalent of specific duties. For other products there are tariff rate quotas with extremely high out of quota tariffs. For a significant number of agricultural products

[5] The US share in total Chilean trade is similar to that of Mercosur.

domestic support is an additional policy with protectionist implications. The United States traditionally use antidumping measures as an instrument of protection, especially for the steel industry. Resistance to agricultural trade liberalization is strong not only by agricultural producers but also by interests upstream or downstream in the agricultural production chain.

Putnam (1987) has drawn attention to the two-level nature of the trade policy negotiation process. The stronger the resistance to trade liberalization, the less scope there is for international negotiators to clinch a deal with trade partners, the smaller is the available "win set". Developments in the US trade policy such as the constraints imposed by Congress in the approval of a Trade Negotiation Authority enabling the administration to negotiate trade agreements and the increase in domestic support entailed by the Farm Bill have significantly reduced the "win set" available for US trade negotiators, especially in relation to agricultural products.

2. Reciprocal and balanced concessions

It is of the nature of trade negotiations that negotiators will try to maximize their country's access to the country's market as immediately as possible and try to postpone as much as possible the opening up of their own market. The fact that special interests favoring the maintenance of protection are very heterogeneously distributed among sectors of activity results in the volatility of the tariff which has been mentioned as particular feature of US protection. In this kind of situation there are several dangers to be taken into account. There will be a higher risk of backloading tariff cuts – that is the concentration of cuts towards the end of implementation periods – than would have been the case with lower tariff volatility. The skewed distribution of special interests also explains the popularity of pick and choose trade liberalization if compared with formulae of tariff reduction which can be applied in much less discretionary form. Finally, the dangers related to the exclusion of "sensitive"tariff lines from regional trade liberalization initiatives should be mentioned. Article XXIV, paragraph 8 (b) of GATT 1994, states that a free-trade area should entail the elimination of duties on "substantially all the trade"

between its constituent territories. The interpretation of what is the meaning of "substantially all" is a notoriously gray area. In any case, since protection reduces, or even eliminates, trade, the 85% or 90% threshold of total trade which is frequently mentioned is not exacting. Much protection can be preserved in the 10-15% residual.

Difficulties concerning the FTAA are mainly related to different assessments of what can be considered equivalent concessions by the two sides that polarize the process. Reciprocity and equilibrium of concessions are complex issues, especially so when trade liberalization affects economies of different sizes and is supposed to proceed until all tariffs are totally eliminated, as is often the case in regional free trade agreements.

In multilateral trade negotiations there is no explicit and direct definition of reciprocity. The best approximation is an opinion of the legal adviser to the Director-General of the General Agreement on Tariffs and Trade in the context of assessing damages caused by the withdrawal of tariff concessions.[6] This is equivalent to gains related to concessions with the reversed sign. In an entirely mercantilist framework, which underlines the need to have a neutral impact on the trade balance, it states that account should be taken of the level of relevant imports affected, the magnitude of tariff variations and the relevant price elasticities.

Many economies have criticized the GATT negotiation process on the grounds that it is mercantilist and does not make sense in economic terms. Why should a tariff reduction should be compensated by a similar "concession" of the trade partners if unilateral liberalization is welfare enhancing? The GATT-WTO mercantilist rules have been redeemed by Bagwell and Staiger (2002): they are indeed mercantilist, but they allow economies to escape from a bad equilibrium in the direction of another equilibrium in which welfare is higher. The perverse initial equilibrium exists because economies that are big enough to influence their terms of trade would tend to adopt a level of protection based on the optimal tariff argument. There is bad equilibrium which is driven by a terms

[6] GATT document C/M/220, pp. 35-6, quoted in WTO (1995) p. 949 mentioned by Bagwell and Staiger (2002), ch. 4.

of trade prisoners' dilemma. GATT-WTO mercantilist rules based on the "exchange of concessions" allow these economies to move to a new equilibrium which would entail higher welfare and lower tariffs.

But GATT-WTO reciprocity is typically reciprocity at the margin and the end result of multilateral trade negotiations is not necessarily zero tariff for all products. Certainly not zero tariff for all products. Regional trade negotiations, "substantially all trade" difficulties aside , have a zero tariff target in a given time span. If the negotiation is between developed and developing economies the level of "equivalent" protection is generally higher in the latter. So if the tariff is to converge to zero, tariff cuts must be more significant in developing than in developed economies. It is for no other reason that partial equilibrium estimates of the impact of the FTAA on trade flows generally indicate that there is a negative trade balance impact on developing economies. From the viewpoint of the GATT-WTO mercantilist rule of thumb on the equivalence of concessions, developing economies would be "conceding" more than developed economies.

But the FTAA integration process involves other issues besides market access. Indeed the comprehensiveness of FTAA has become the thorniest issue in the negotiations. In an ambitious FTAA, "balanced concessions" would probably have involved "concessions" by Mercosur to the United States in market access for industrial products and services and also in rules-related issues such as foreign investment, intellectual property, public procurement, services and competition. "Concessions" by the United States to Mercosur would be concentrated in agricultural market access issues (including agricultural subsidies, or compensation for their lack thereof) and antidumping.

The United States decided to reserve substantive negotiations covering antidumping and agricultural for WTO negotiation, both themes in which Mercosur was deeply interested. This elicited the reaction that Mercosur would only negotiate in the WTO issues such as rules on foreign investment, intellectual property, public procurement, services and competition on which the US was the *demandeur*.

A way out of the deadlock in the FTAA was in the decision of making possible arrangements more flexible to suit discrepant objectives between future members. A more modest core hemispheric agreement was to be complemented by plurilateral agreements which would only include economies willing to participate and accept stronger disciplines.

The consolidation of the possibility of an FTAA with variable geometry in the Miami Summit of 2003 opened space for a tit for tat between the United States and Brazil taking substance out of the possible agreement. Once Mercosur showed unwillingness to negotiate rules it was to be expected that the United States should mention “substantially all trade” or a variation of it. If negotiations cover all tariff lines and exclude the issues about which the US care most it is difficult to see what leverage could the US have in the future to press for Mercosur “concessions” on rules. The less Mercosur is willing to concede in rules and industrial tariffs, the less the US would be willing to concede in agriculture trade barriers and AD.

A feasible scenario for a successful FTAA would probably involve concessions from the United States which could be used by the government in Brazil to counter the opposition of protectionist lobbies that would be hurt by trade liberalization. Similarly, export interests can be mobilized in the United States to counter opposing protectionist interests. So a bottom line is that protectionism in Brazil and in the United States is the main obstacle to a successful conclusion of the FTAA negotiations and that such outcome depends on the removal or very substantial reduction of protection in Brazil and the United States.

The dismantlement of protectionist interests hurt by trade liberalization depends on the mobilization of export interests which would benefit from market expansion. That is why the bulk this paper is concerned with the regional and sectoral identification of protectionist and export interests in the United States and Brazil and on how these interests can be netted at the state and national level.

Identification of the geographic and sectoral distribution of interests in favor and against trade liberalization can be of interest for policy-makers seeking better targeting for their canvassing of support for the FTAA. They could avoid spending limited political and financial resources where protectionist interests are well entrenched . Or they may have a special interest in targeting regions where protectionist interests are relevantly counterbalanced by export interests. Cross border bi-national pro-trade coalitions could gather export interests in both economies.

The identification of sectors and regions where protectionist interests are stronger also allows to center focus on where should be directed efforts to counter the undesirable consequences of trade liberalization in terms of displacement of employment. Given the relative importance of agricultural products whose domestic production shall be affected in the case of a possible exchange of market access concessions between the United States and Brazil (or Mercosur) it is important to stress that adjustment costs in agriculture are of different nature if compared to industrial products. For trucks, footwear and steel in the United States and for industries producing electric and electronic products including computers, telecom equipment and transport equipment in Mercosur the problem is how to complement retraining of the labor force with a more substantial commitment to support on a temporary basis activities which could absorb some of the displaced manpower. In the case of agricultural products the problem is altogether different as trade liberalization would entail some radical changes in the use of land as well as the more familiar impact on suppliers of agricultural inputs and processors of agricultural output. The focus changes from employment losses or retraining to include also land use and crop substitution.

In this paper only market access to goods markets will be considered. It is an all trade rather than a “substantially all trade” perspective. There is no implied suggestion on what is an acceptable “equilibrium of concessions” is for either side of the table. It is only an effort to identify interests in favor and against trade liberalization. The framework of analysis can, however, be adapted to less ambitious scenarios by considering alternative

assumptions in designing the criteria for netting the balance between protectionist and export interests.

Actual special interests in a given congressional district in the US or a given state in both countries are of course multilayered and include many other issues besides market access for exports or protection of not very efficient producers. These other issues may dominate the political agenda in spite of what may be the implications of special interests related to trade in goods. Maps of special interests related to other issues than trade in goods are not easy to draw but, in theory, a true picture of interests would depend on the superposition of all such maps.

While recognizing the relevance of other issues it has been decided to concentrate the attention on trade in goods because the related issues are more visible both in Congress and for the public at large. The regional implications are also more visible than in the case of other issues such as trade in services, investment rules or intellectual property to just name a few that are not easy to pinpoint geographically.

3. Protectionist interests in the United States

The objective is, as a first step in the regional and sectoral identification of net interests favoring trade liberalization, to map protection interests in the USA. This will be followed by the identification of US export interests and how the findings can be combined to define net trade liberalization interests. Subsequently a similar analysis is undertaken for Brazil in sections 6 to 8.[7] The methodology provides a framework to assess reciprocal concessions related to goods taking into some account political economy arguments. But all the provisos already mentioned on the partial nature of the analysis must be kept in mind.

[7] There is a pioneer analysis of US Congress stances concerning the FTAA with emphasis on Brazil in CEBRI (2001). But it concentrates on US protectionist interests based in shares of states in the output of specific products rather than trying to identify the weight of such interests at the Congressional District level. There is also much on voting patterns and attitudes based on interviews and on lobbying based on comprehensive data bank of the Center for Responsive Politics.

Attention in this section of the paper is centered on tariff lines (at the 6-digit level) on which US tariffs exceeded 15% in 2002, or the tariff equivalent of non-tariff barriers exceeded 15% in 2002, or on which antidumping and countervailing orders were on place as of April 7, 2003, or agricultural commodities whose supply was significantly affected by domestic subsidies either directly or indirectly in 2002. Only products whose total exports by Brazil exceeded US$ 50 million in 2001 were included.[8]

Heavily protected products facing tariff peaks or other forms of protection include: orange juice, sugar and related products such as corn, tobacco, poultry, beef, cotton, footwear, and heavy duty trucks. By far the most important products affected by antidumping measures are iron and steel products. Soybeans and related products, such as pork meat, are affected directly or indirectly (through the productive chain) by domestic subsidies.

Tariff lines have been related to the corresponding NAICS (North American Industrial Classification System) aggregation at the 5-digit or 6-digit level for which there is information on sales, payroll and paid employees in the economic census of 1997. Unfortunately Congressional Districts have changed since the 1997 Economic Census and the results of the 2002 Economic Census are not yet available. So information on output (1997 Agricultural Census) and sales (1997 Economic Census) at the county level has been used. A county has been considered as having significant protectionist interests if, in the case of agricultural goods, the value of its agricultural sales exceeded 10% of the value of total manufactured products sales. Agricultural sales have been estimated using Census data for physical sales and the relevant 1997 agricultural prices. The same criterion was applied for manufactured products: if the sales of the relevant product exceed 10% of total sales of manufactured products, the county is considered to have protectionist interests. If a county is selected as a relevant producer of an affected product the corresponding congressional district is deemed as having a dominant protectionist interest.[9]

[8] Sources: for US tariffs US ITC, and for Brazilian exports, WITS, World Bank. Jank (2003) for US agricultural support.

[9] See annex 1 on criteria used to include specific states.

Table 3.1 includes information by state and product on the share of congressional districts with strong protectionist interests taking tariffs into account.[10] The last column provides a synthetic measure of protectionism by state avoiding the double counting of congressional districts in which there is a strong protectionist interest for more than one product. Figures 3.1 to 3.11 map the protectionist interests in the United States for the main Brazilian exports facing tariffs and also for the aggregate.

If a CD is deemed protectionist its representative in the lower house will tend to take these interests into account. The higher the share of protectionist CDs in the number of total CDs in a given state the more likely will be that its senators will take protectionist interests into account. There are well-known strong distortions affecting senatorial representation. Two senators are elected in each US state whatever its population. This means that some senators represent very few electors while others represent a large number. In 2003 a senator for Wyoming represented a population of roughly a quarter of a million contrasted to about 18 million in the case of California.

The geographical distribution of protection in the United States varies widely depending on the product. In 1997, Florida produced 79.2% of all oranges produced in the US. Oranges produced in other states are not for juice. In six CDs the value of orange production in at least one county exceeded 10% of the value of manufacturing sales making up 24% of CDs for Florida.[11] See Figure 3.1.

The consequences of an overhaul of the present US policies governing market access for sugar and related products would be rather complex. Although the consumption of natural sweeteners in the United States is mainly in the form of refined sugar – obtained from both sugar beet and sugar cane – other natural sweeteners such as HFCS (High Fructose Corn Syrup) are significant. So reform of the sugar regime will affect the production in the US of sugarcane, sugar beet and corn. The US output of sugarcane for

[10] Table A3.1 provides information on specific CDs affected by protection.
[11] Data at the county level were from the Agricultural Census for 1997 and the 1997 Economic Census.

sugar in 1997 was concentrated in Florida (49.8%), Louisiana (38.6%) and Hawaii (9.1%). In Florida, production is concentrated in two CDs already singled out in the core of CDs producing oranges. In Louisiana, 4 CDs are “protectionist” (43% of the state total) and in Hawaii one out of two CDs. These three states also answered for about 82.6% (estimated) of the 4,938 paid jobs in sugar cane mills (NAICS 311311). See Figure 3.2 for the distribution by state of the share of protectionist CDs producing sugar cane in total CDs.

In 1997, 69.2% of US sugar beets were produced in four states: Minnesota (27.8%), Idaho (17%), North Dakota (14.1%) and Michigan (10.3%). North Dakota has only one CD. Sugar beets are important in Idaho (one of two CDs) and also in Wyoming, Montana and Nebraska. Wyoming and Montana produced only 4.3% and 4.2% of the total US sugar beets output in 1997 but, since they are single CD states, it was thought justified to include them as potentially crucial states when sugar protection is considered. In Nebraska, one of the three CDs was affected but its share of US output was even lower. In the bigger states the importance of sugar beets was more diluted: it affected one in eight CDs (13%) in Minnesota. See Figure 3.3 for the distribution by state of the share of protectionist CDs producing sugar beets in total CDs.

In 1997 82.9% of US corn was produced in the Seed Grains and Livestock Belt (Iowa, 17.9% of output; Illinois, 15.9%; Nebraska, 12.3%; Minnesota, 9.1%; Indiana, 7.7%; Ohio, 5%; Wisconsin, 4.2%; Kansas, 4.1%; South Dakota, 3.5%; Missouri, 3.2%). The concentration of output at the county level, however, is rather low. No county produced more than 0.5% of US output and the 100 leading counties produced only 28.4% of total output. Corn production was important in all CDs of Iowa. It was relevant in two of the three CDs of Nebraska and was also important in South Dakota. There were no big producing corn counties there but it is a single CD state. In a second tier were Illinois (32% of CDs affected), Kansas and Minnesota (both 25%) and, further back in the list, Colorado (14%). In Indiana, Wisconsin, Ohio and Missouri there are no counties where

corn production was as significant as in the other states named.[12] More than 68% of the 9,221 jobs in wet corn milling in 1997 were located in Iowa, Illinois and Indiana (NAICS 311221). See Figure 3.4 for the distribution by state of the share of protectionist CDs producing corn in total CDs.

Five states answered for 89.1% of the total output of tobacco in 1997: North Carolina (40.3% of total output), Kentucky (28.9%), South Carolina (7.1%), Virginia (6.7%) and Tennessee (6.1%). In one CD in Maryland, which was not among the ten top tobacco states, tobacco output was relevant. Production was relevant in two thirds of CDs in Kentucky, 31% of CDs in North Carolina and less than 20% in other states. See Figure 3.5 for the distribution by state of the share of protectionist CDs producing tobacco in total CDs.

Twenty states answered for 98.1% of US sales of broilers and other meat-type chickens in 1997. Of these, fourteen included "protectionist" CDs: Georgia (15.1%), Arkansas (14.9%), Alabama (12.9%), North Carolina (8.8%), Mississippi (8.2%), Texas (5.7%), Virginia (3.9%), Maryland (3.8%), Delaware (3.3%), Missouri (3%), Oklahoma (2.6%), Louisiana (1.8%), Kentucky (1.3%) and West Virginia (1.2%). A high proportion of CDs were "protectionist" in Delaware, Arkansas, Mississippi, Georgia and Alabama (57% of the total or more), a lower share (23-33%) in West Virginia, Louisiana and North Carolina and 20% or less in the other producers with "protectionist" CDs. Figure 3.6 for the distribution by state of the share of protectionist CDs producing poultry in total CDs.

Beef production (cattle and calves sold) in 1997 was rather dispersed: the twenty top states answered for 83.2% of total sales and the ten top states for 66.3% of the total. The following top twenty states included "protectionist" counties and consequently "protectionist" CDs: Texas (17.6%), Kansas (11.1%), Nebraska (9.7%), Oklahoma (5.9%), Colorado (5%), Iowa (3.9%), South Dakota (3.3%0, Montana (2.2%), Idaho

[12] In the case of corn, in an effort to ascertain whether CDs had been overlooked due to the dispersion of output the county sample has been expanded to include in the relevant states all counties producing at least a half of the output of the county placed in 100th place in 1997. The number of CDs selected was not affected by this expansion.

(2.1%), New Mexico (1.8%), Wyoming (1.5%), Washington (1.5%) and Oregon (1.3%). Protectionist CDs were very important in one CD states (Montana, South Dakota and Wyoming), Nebraska (2 out of 3 CDs) and Idaho (1 out of 2), in the 20-33% range in Arizona, Colorado, Iowa, Kansas, New Mexico, Oklahoma and Oregon and of less importance in Texas and Washington. See Figure 3.7 for the distribution by state of the share of protectionist CDs producing beef in total CDs.

In 1997, 91.7% of total US cotton production was concentrated in ten states. Of these eight – Texas (27% of US output), Georgia (9.6%), Mississippi (9.6%), Arkansas (9.1%), Louisiana (5.4%), Arizona (4.7%), Tennessee (3.5%) and Missouri (3.1%) – had at least one "protectionist" CD. In other two states – California (14.2%) and North Carolina 9.9%) – there were no "protectionist" CDs. Oklahoma, although not in the top ten cotton states, had one CD where cotton production was relevant. Half the CDs in Arkansas are affected, 20-25% in Arizona, Georgia, Oklahoma and Mississippi and less significantly in Louisiana, Texas and Tennessee. See Figure 3.8 for the distribution by state of the share of protectionist CDs producing cotton in total CDs.

In 1997, 20.5% of the sales of industrial establishments engaged in footwear manufacturing in the United States were concentrated in the state of Maine. The number of paid employees in footwear manufacturing in counties included in both the state's Congressional Districts exceeds 10% of those employed in manufacturing in both the state's CDs. In other states whose production exceeded 5% of US output only in Wisconsin and New York footwear production was relevant. Even then this affected just one CD so the share of CDs affected by protection was low: 13% and 3%, respectively. See Figure 3.9 for the distribution by state of the share of protectionist CDs producing footwear in total CDs.

States which were important producers of heavy trucks in 1997 and where there was at least one "protectionist" CD were: Ohio (25.2% of estimated employment in the US production of heavy trucks), North Carolina (12.6%), Georgia (5.9%) and Virginia

(5.9%).[13] In no state the share of "protectionist" CDs in all CDs is higher than 15% (in North Carolina). See Figure 3.10 for the distribution by state of the share of protectionist CDs producing heavy trucks in total CDs.

Taking into account information on "protectionist" CDs defined from the point of view of tariff protection for the ten most relevant products it is possible to aggregate by state avoiding double counting. That is, if a given CD is "protectionist" in the case of more than one product is counted just once. The last column of Table 3.1 shows the share of "protectionist" CDs in total CDs by state. The same information is presented in Figure 3.11. In many one or two-CD states all CDs are "protectionist". They are: in the northern Rocky Mountain (Idaho, Montana, Wyoming, the Dakotas), Delaware, Maine, Arkansas and Iowa. The 60-80% range includes Nebraska, Kentucky, Mississippi, Georgia and North Carolina. Louisiana, Alabama, Hawaii and Oklahoma are in the 40-60% group. The two most important states in the 20-40% group are Texas and Florida but all other regions are represented. States with low share of protectionist CDs are concentrated in the Northeast, some of the East North Central and most of the West Pacific, including California.

[13] State sales were distributed according to estimated employment.

Table 3.1
United States: proportion of congressional districts with protectionist interests (tariffs), %*

	Oranges	Sugar cane	Sugar beets	Corn for sugar	Tobacco	Poultry	Beef	Cotton	Footwear	Heavy trucks	Total tariff net
Alabama (7)	0	0	0	0	0	57	0	0	0	0	57
Alaska (1)	0	0	0	0	0	0	0	0	0	0	0
Arizona (8)	0	0	0	0	0	0	25	25	0	0	38
Arkansas (4)	0	0	0	0	0	75	0	50	0	0	100
California (53)	0	0	2	0	0	0	2	8	0	0	9
Colorado (7)	0	0	0	14	0	0	29	0	0	0	29
Connecticut (5)	0	0	0	0	0	0	0	0	0	0	0
Delaware (1)	0	0	0	0	0	100	0	0	0	0	100
Florida (25)	24	8	0	0	0	0	0	0	0	0	24
Georgia (13)	0	0	0	0	0	62	0	23	0	8	62
Hawaii (2)	0	50	0	0	0	0	0	0	0	0	50
Idaho (2)	0	0	50	0	0	0	50	0	0	0	100
Illinois (19)	0	0	0	32	0	0	0	0	0	0	32
Indiana (9)	0	0	0	0	0	0	0	0	0	0	0
Iowa (5)	0	0	0	100	0	0	20	0	0	0	100
Kansas (4)	0	0	0	25	0	0	25	0	0	0	25
Kentucky (6)	0	0	0	0	67	0	0	0	0	0	67
Louisiana (7)	0	43	0	0	0	29	0	14	0	0	57
Maine (2)	0	0	0	0	0	0	0	0	100	0	100
Maryland (8)	0	0	0	0	13	13	0	0	0	0	25
Massachusetts (10)	0	0	0	0	0	0	0	0	0	0	0
Michigan (15)	0	0	0	0	0	0	0	0	0	0	0
Minnesota (8)	0	0	13	25	0	0	0	0	0	0	25
Mississippi (4)	0	0	0	0	0	75	0	25	0	0	75
Missouri (9)	0	0	0	0	0	11	0	11	0	0	22
Montana (1)	0	0	100	0	0	0	100	0	0	0	100
Nebraska (3)	0	0	33	67	0	0	67	0	0	0	67
Nevada (3)	0	0	0	0	0	0	0	0	0	0	0
New Hampshire (2)	0	0	0	0	0	0	0	0	0	0	0
New Jersey (13)	0	0	0	0	0	0	0	0	0	0	0
New Mexico (3)	0	0	0	0	0	0	33	0	0	0	33
New York (29)	0	0	0	0	0	0	0	0	3	0	3
North Carolina (13)	0	0	0	0	31	23	0	0	0	15	62
North Dakota (1)	0	0	100	0	0	0	0	0	0	0	100
Ohio (18)	0	0	0	0	0	0	0	0	0	11	11

Oklahoma (5)	0	0	0	0	0	20	20	20	0	0	40
Oregon (5)	0	0	0	0	0	0	20	0	0	0	20
Pennsylvania (19)	0	0	0	0	0	0	0	0	0	0	0
Rhode Island (2)	0	0	0	0	0	0	0	0	0	0	0
South Carolina (6)	0	0	0	0	17	0	0	0	0	0	17
South Dakota (1)	0	0	0	100	0	0	100	0	0	0	100
Tennessee (9)	0	0	0	0	11	0	0	11	0	0	22
Texas (32)	0	0	0	0	0	9	13	16	0	0	25
Utah (3)	0	0	0	0	0	0	0	0	0	0	0
Vermont (1)	0	0	0	0	0	0	0	0	0	0	0
Virginia (11)	0	0	0	0	18	18	0	0	0	9	27
Washington (9)	0	0	0	0	0	0	11	0	0	0	11
West Virginia (3)	0	0	0	0	0	33	0	0	0	0	33
Wisconsin (8)	0	0	0	0	0	0	0	0	13	0	13
Wyoming (1)	0	0	100	0	0	0	100	0	0	0	100

* The total number of CDs in each state is between brackets after each state name.
Sources: Congressional Districts 108th Congress (www.nationalatlas.gov), 1997 Economic Census (www.census.gov) and 1997 Census of Agriculture (www.usda.gov).

Figure 3.1 United States
Protectionist interests: oranges for juice

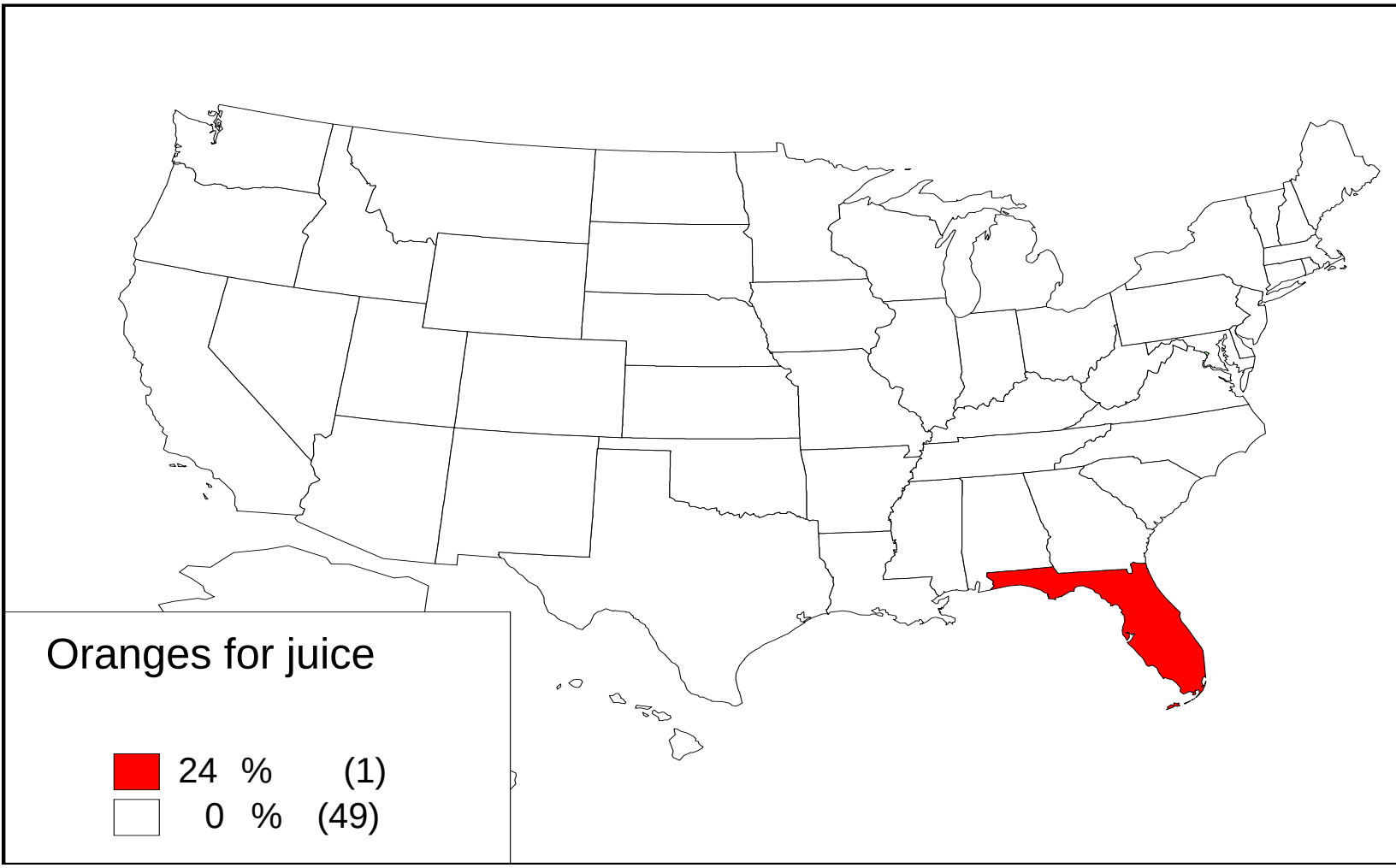


Figure 3.2 United States
Protectionist interests: sugar cane

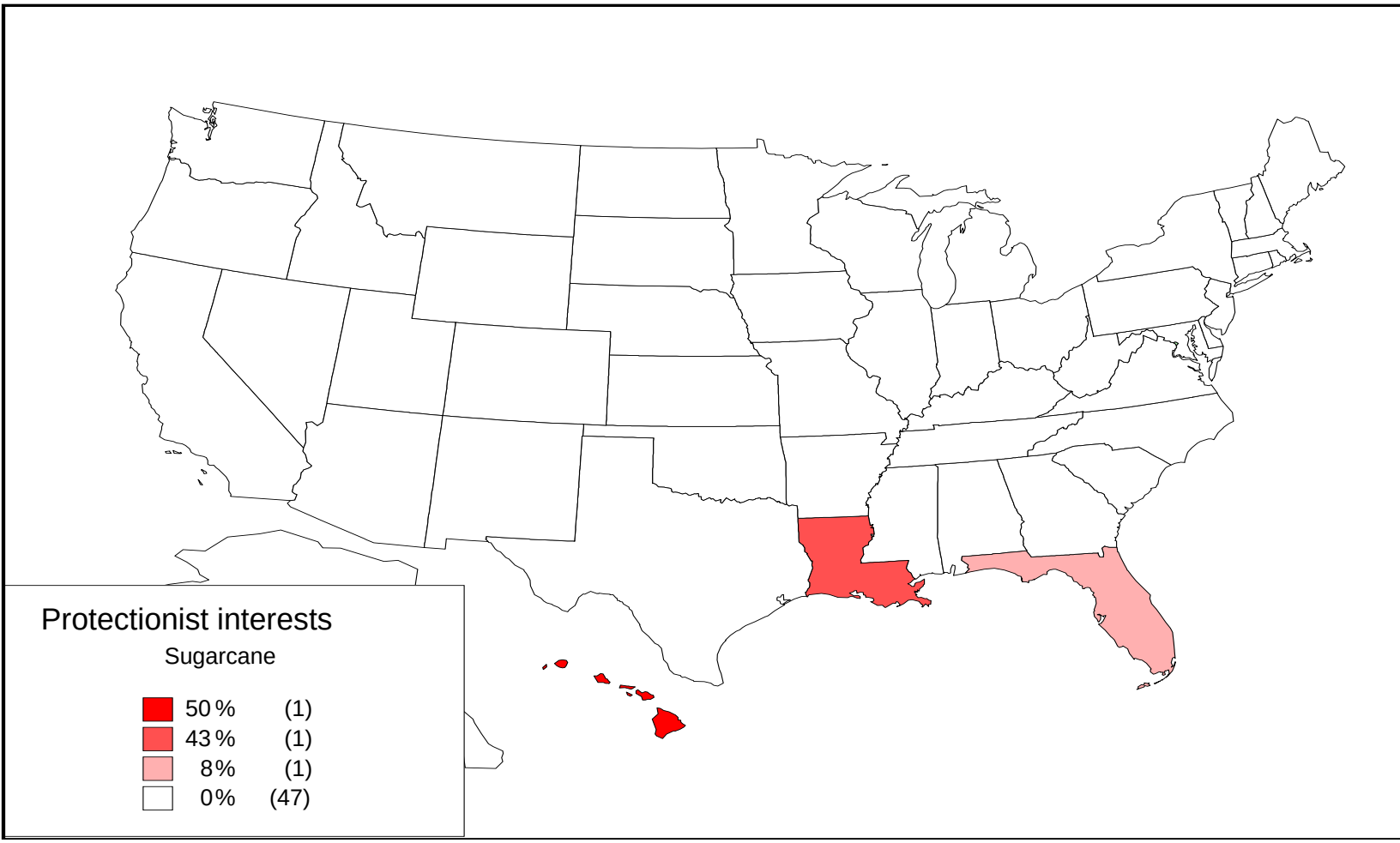


Figure 3.3 United States
Protectionist interests: sugar beets

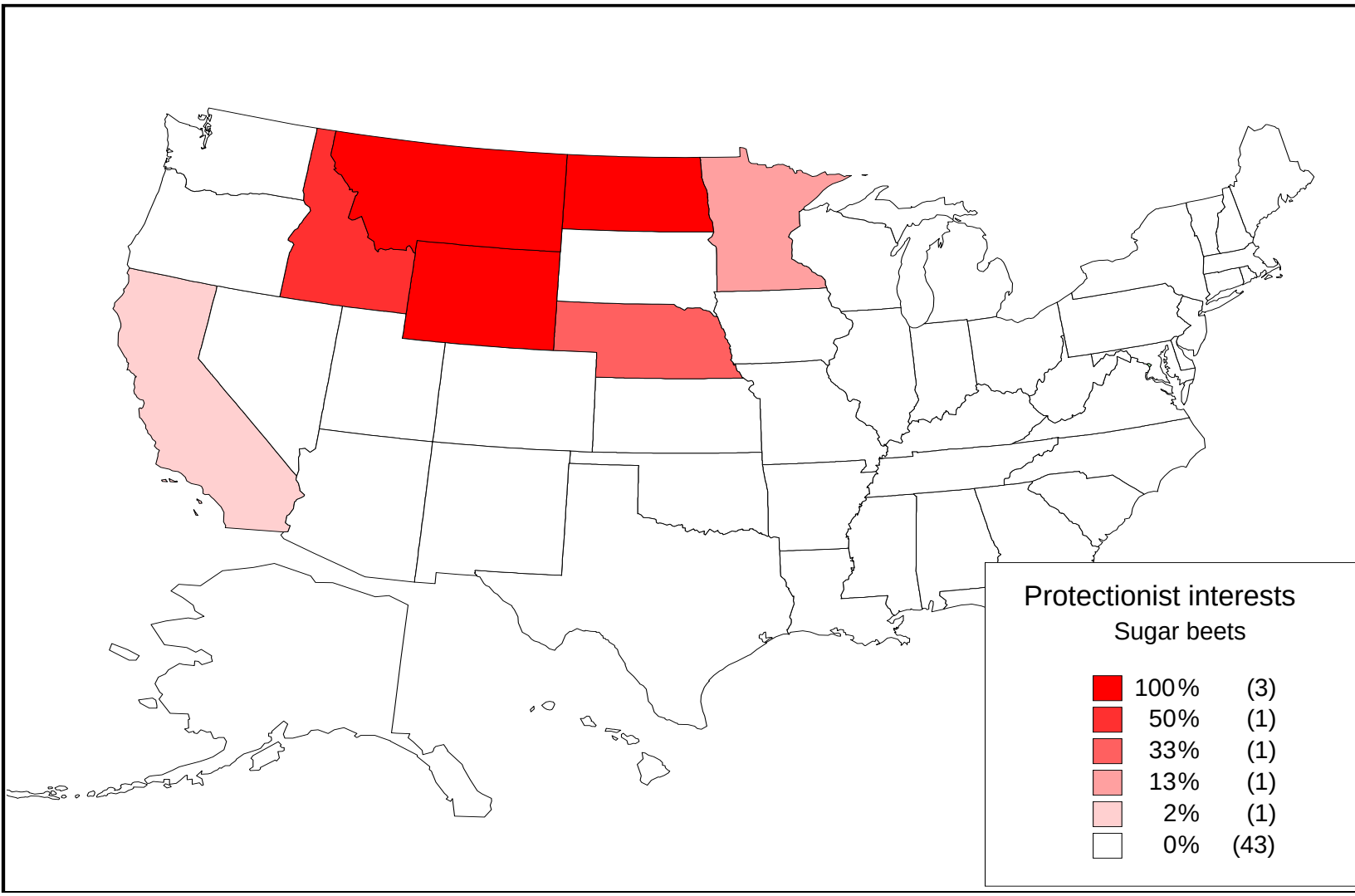


Figure 3.4 United States Protectionist interests: corn

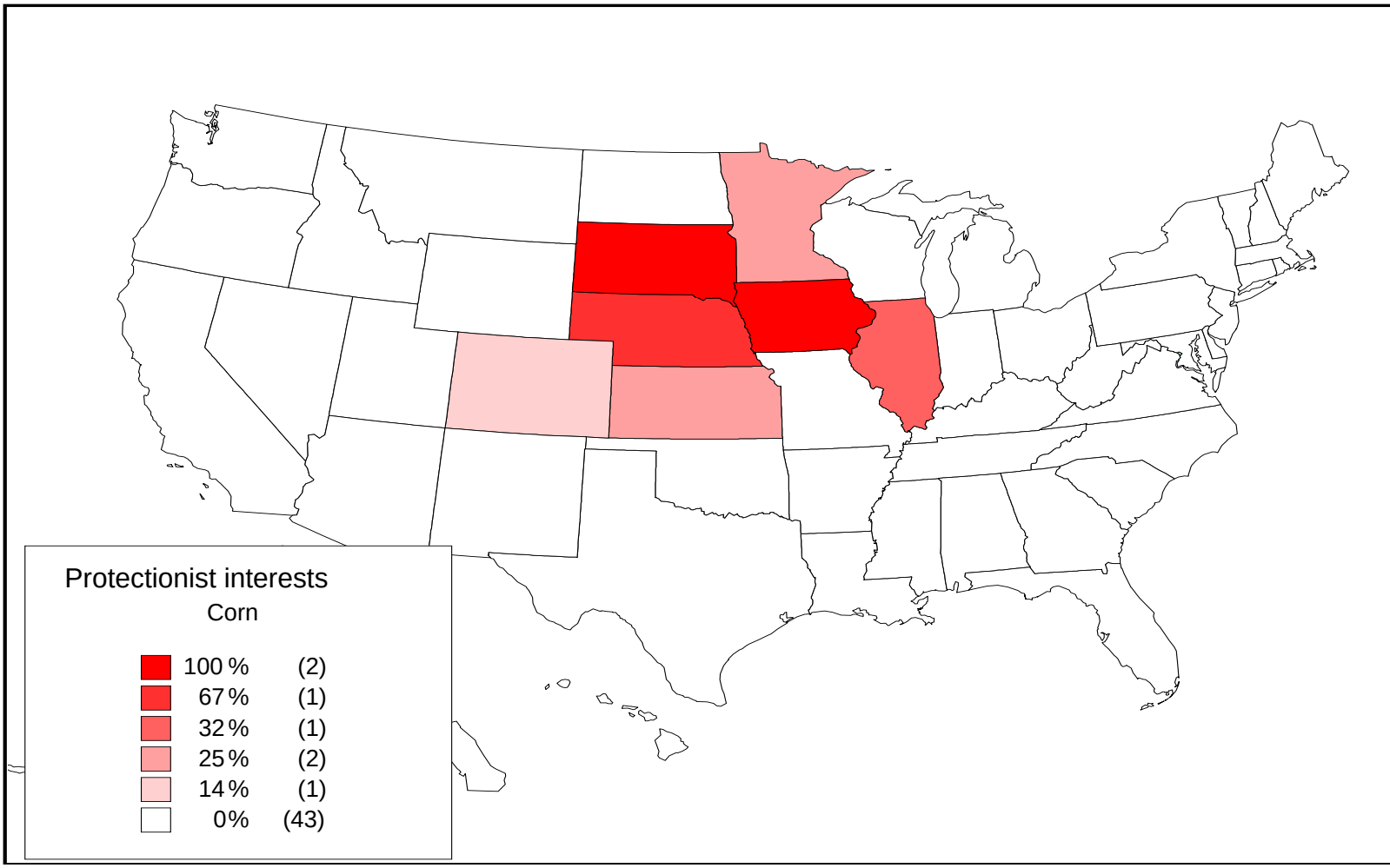


Figure 3.5 United States
Protectionist interests: tobacco

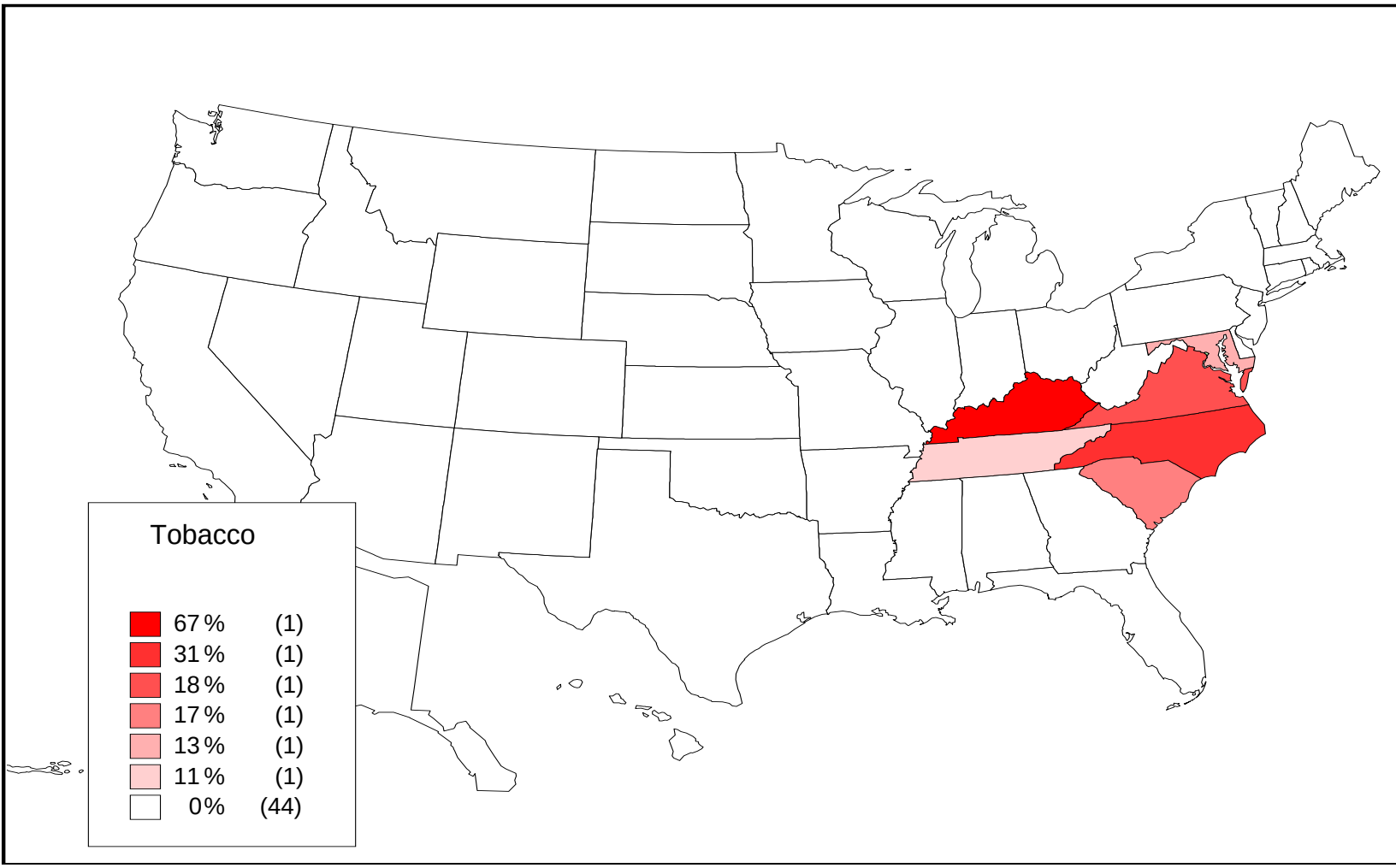


Figure 3.6 United States Protectionist interests: poultry

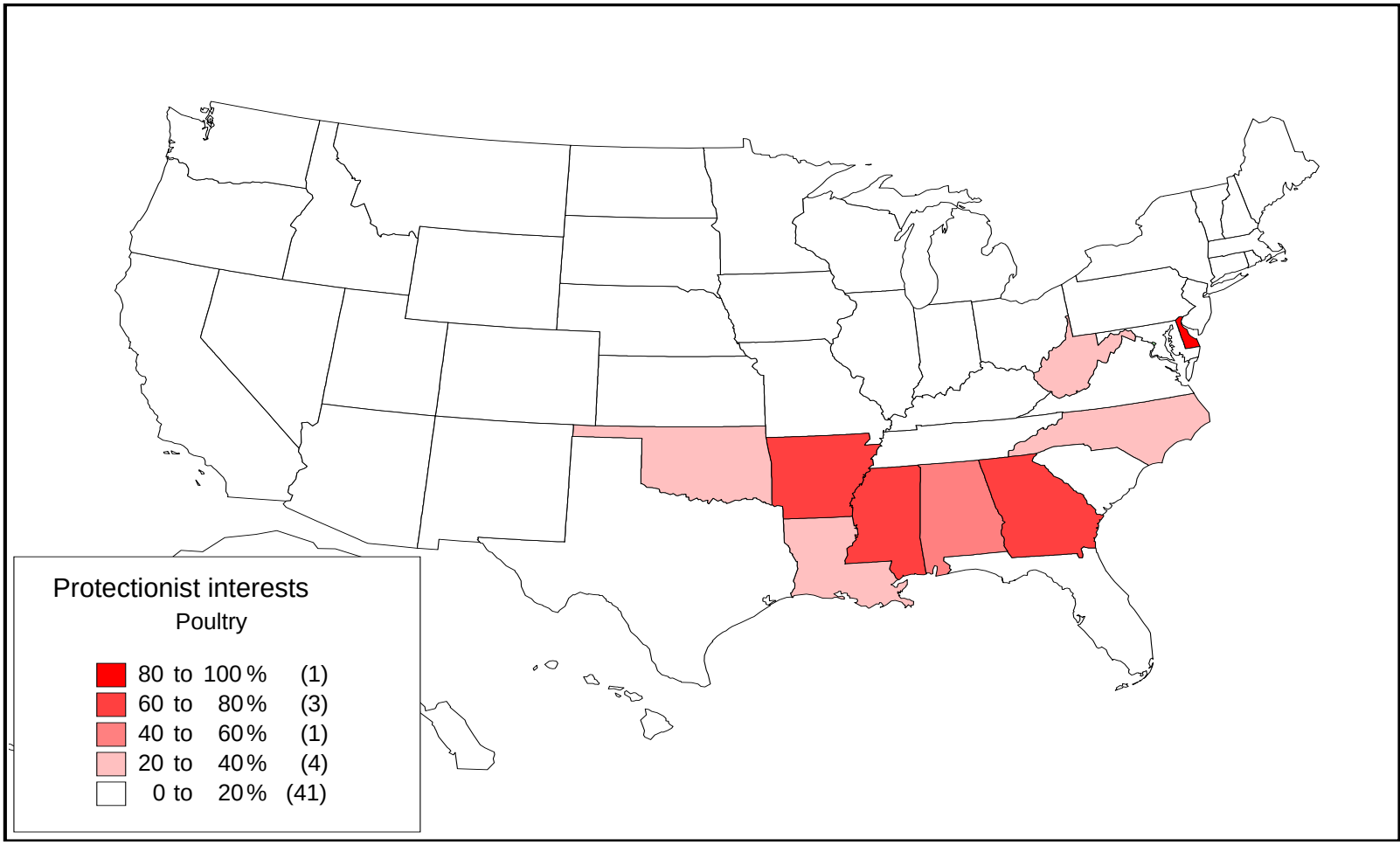


Figure 3.7 United States Protectionist interests: beef

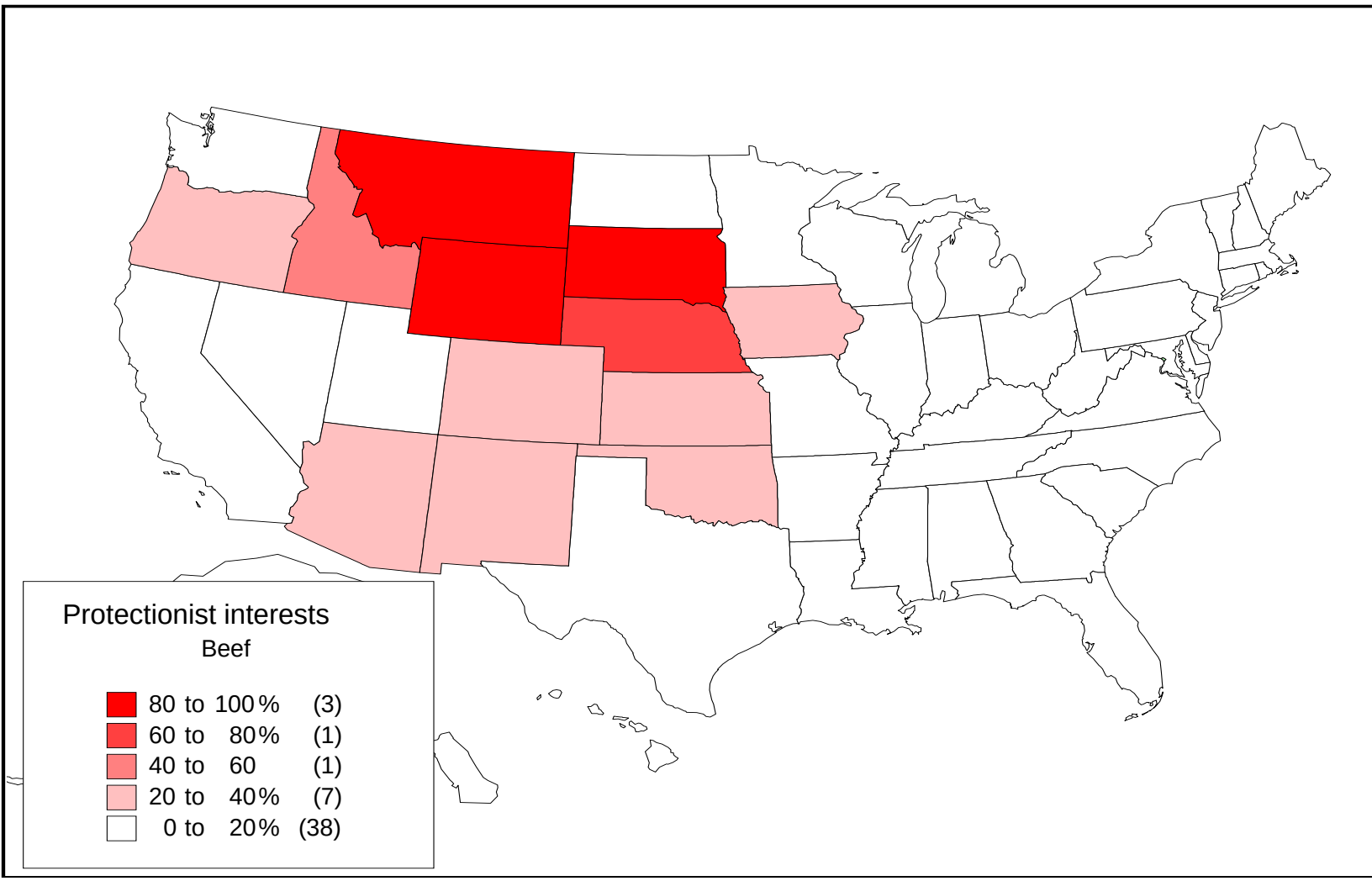


Figure 3.8 United States
Protectionist interests: cotton

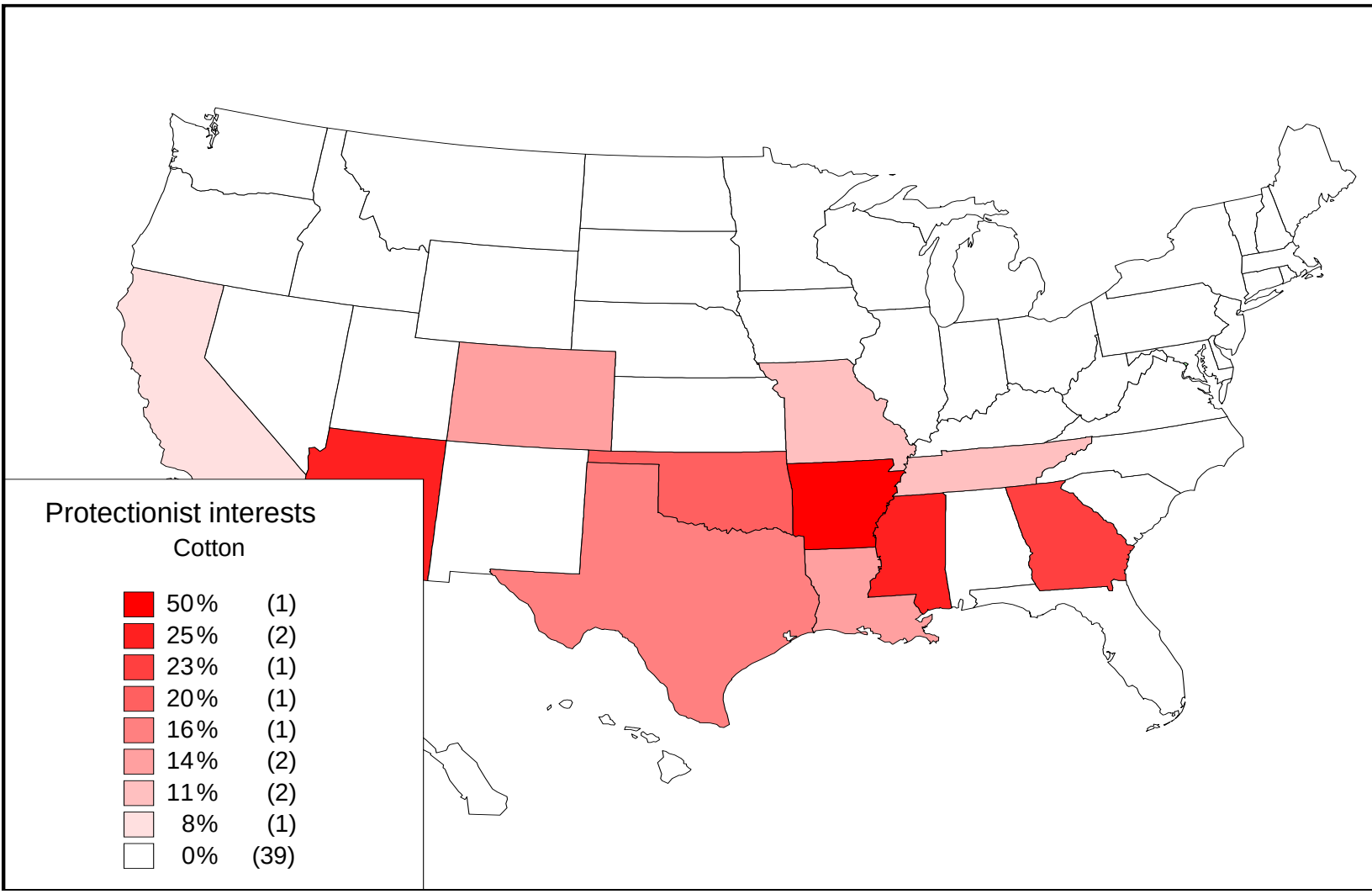


Figure 3.9 United States
Protectionist interests: footwear

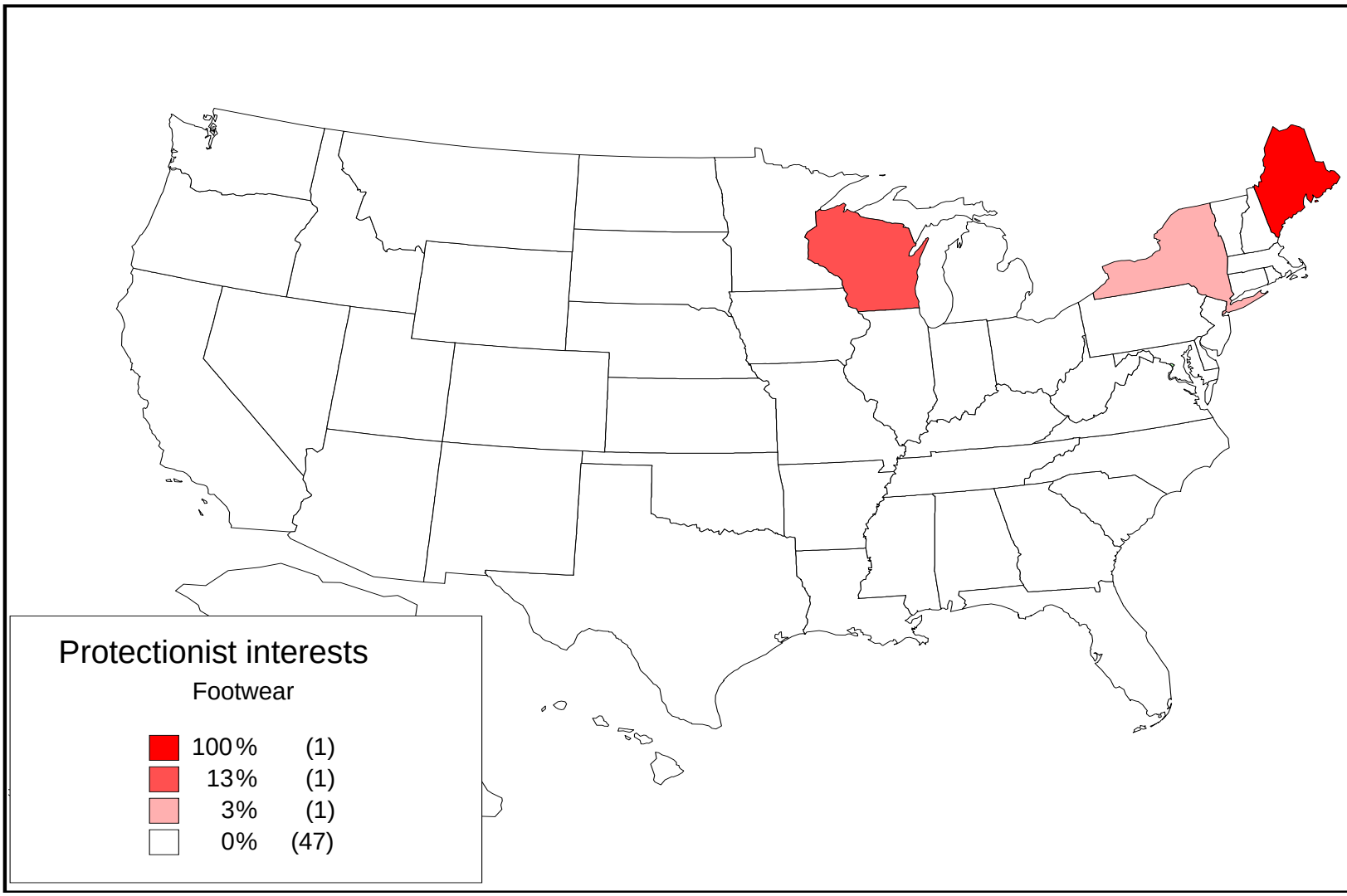


Figure 3.10 United States Protectionist interests: heavy trucks

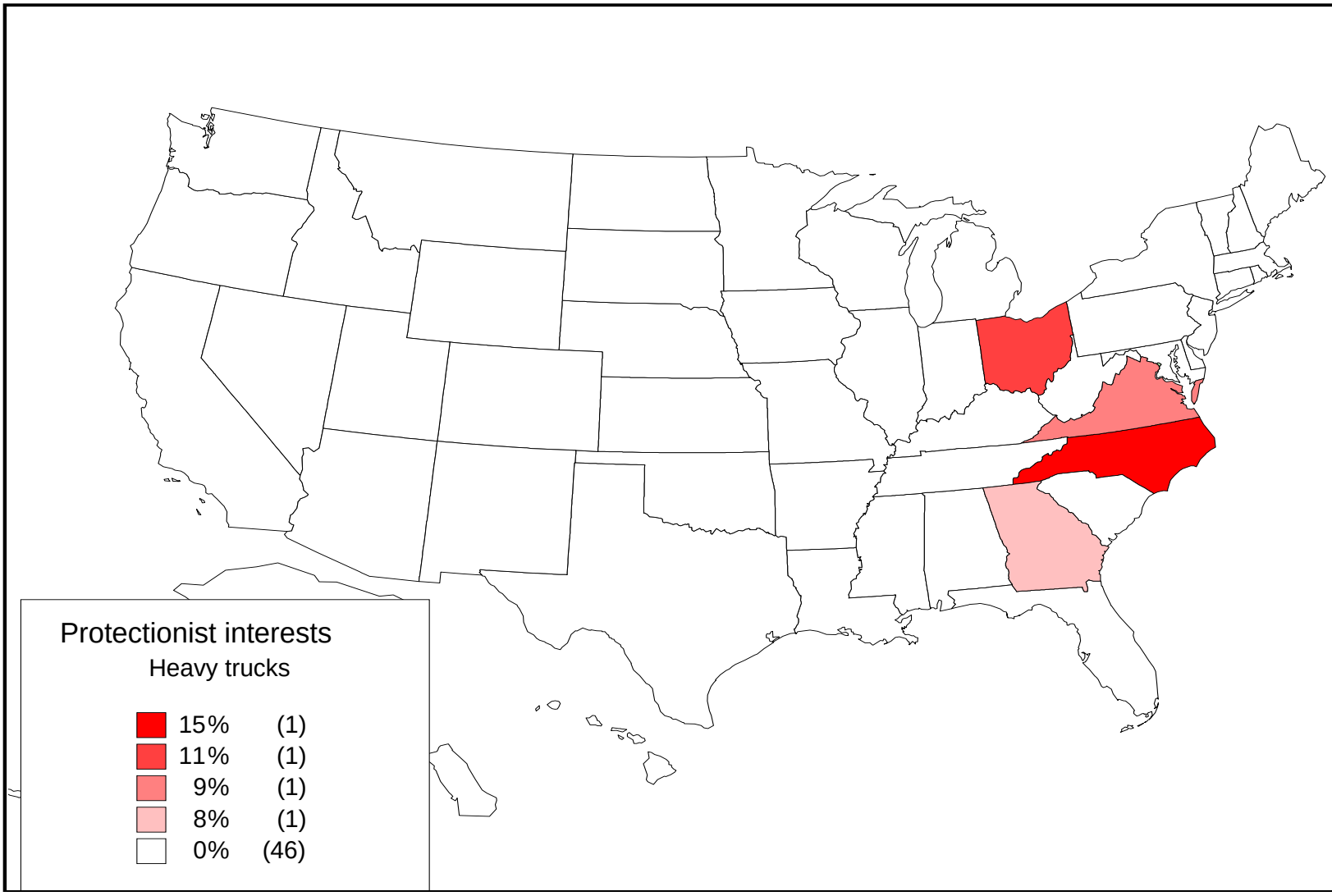
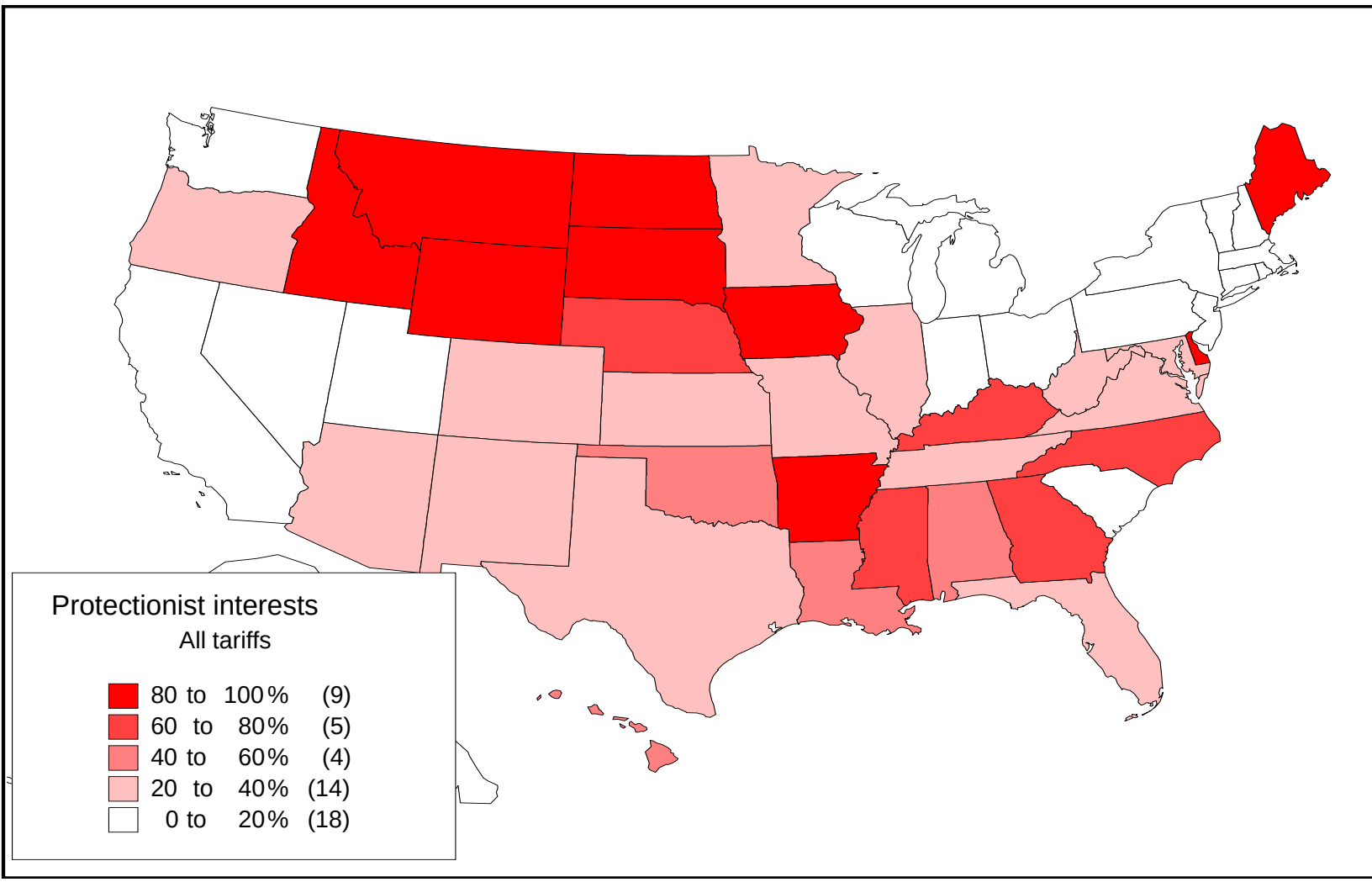


Figure 3.11 United States Protectionist interests: all tariffs



The high incidence of states with a reduced population among those states in principle more interested in maintaining protectionism introduces a strong electoral bias in favor of protection in the case of senatorial elections. A relatively small number of rural voters interested in maintaining protection tends to prevail upon interests of urban voters who tend to foot the bulk of the costs induced by protection by paying higher taxes or higher prices for agricultural products.

Data on how senators voted for the Trade Promotion Authority are difficult to interpret. The information is often used as an indication of a liberal stance in trade policy matters. But this may be misleading. Given the protectionist features of the constraints imposed on negotiators by the terms of the TPA it is does not seem reasonable to consider votes in favor of it as votes in favor of trade liberalization. And even less so when agricultural products play such an important role in conforming market access interests as is the case of Mercosur in the United States markets. The TPA included many constraints on agricultural trade liberalization which could be offered by US trade negotiators. To vote in favor of the TPA was a vote in favor of trade negotiations but also in some cases a vote in favor of maintaining US protection on agriculture.

The data do not show many senators from states where there is a marked interest in maintaining agricultural protectionism voting against TPA. Of the 18 senators (8 Republican, 10 Democrats) included in the 80-100% upper group of protectionist states only three democrats in the Dakotas voted against TPA. In the second and third groups (11R and 7D) only one Democrat in Hawaii and a Republican in Alabama voted against the TPA. Noes by Democrats become more frequent in states where the weight of protectionist CDs is lower. Republican senators voting against TPA are very rare: only one in Colorado, one in New Hampshire and one in South Carolina. In none of these states there are indications of a deep interest in protection.

There is a very extensive literature on voting patterns of political parties in the United States concerning trade policy matters over time. The standard interpretation for a long time has been that the 1934 Reciprocal Trade Agreements Act had been of crucial

importance to revert US commitment to protectionism as it delegated authority to the president and circumvented traditional Congressional logrolling.

Recent revisions have underlined the importance of exogenous changes as the effects of World War II on US exports and imports and of the erosion of protection induced by higher import prices while specific duties remained constant. More importantly it has been stressed how the traditional links between export and import-competing industries and the Democratic and Republican parties evolved over time. In the late nineteenth century and in the early twentieth century export industries were much more important in the Democratic than in the Republican constituencies. For import-competing industries the reverse was true. This pre-determined Democrat votes in favor of trade liberalization and Republican votes against it. These differences disappeared in the 1930s. The result was that votes on trade in Congress tended to show a falling degree of cohesion between members of the same party and that party unit tended to break down.[14] More recently there were signs of a reversal of this trend with increasing Democratic unity in opposing trade liberalization.[15] Once the focus is on significant agricultural trade liberalization one would expect a further disturbance of party unit now in the Republican side as there are many small Republican-controlled states where protected agriculture is particularly relevant.

Brazilian exports face not only high tariffs on some products in the United States but also other obstacles such as antidumping measures and also the effects of domestic support on agricultural products. Table 3.2 includes information on the share of protectionist CDs in total CDs for steel products (affected by AD measures) and for soybeans and pork meat (using hogs as a proxy) which are the products whose domestic support in the United States affects exports of competitive Brazilian products. Table 3.2 also includes three columns that summarize the information on aggregate interests favoring protection: one – is repeated from table 3.1 – including only CDs affected by tariffs, a second column

[14] See Hiscox (1999). For alternative views see Gilligan (1997). See also Irwin (2002).
[15] More Republican than Democrats voted for extending fast track authority to President Clinton both in 1993 and in 1998.

including congressional districts that are protectionists because of tariff and antidumping, and the third column including tariffs, antidumping and “subsidies”.

Output of steel products (NAICS 331111) was concentrated in seven states in 1997: Indiana (19.8% of US sales), Ohio (17.7%), Pennsylvania (14.9%), Illinois (6.3%) , Alabama, Michigan and West Virginia (about 4.6% each). The share of protectionist CDs is particularly high in West Virginia and Pennsylvania (more than 63%), high in Alabama (43%) and below 30% in the other states. See Figure 3.12 for the distribution by state of the share of CDs protected by AD measures producing steel products in total CDs. Figure 3.13 shows the map of protectionist CDs taking into account tariffs and AD measures. The main impact in relation to the map drawn based on tariffs is to increase the weight of protectionist interests in the Rust Belt and especially in Pennsylvania.

Pork meat production is likely to be affected by measures with an impact on corn and soybean prices. In 1997, 96.1% of the sales of hogs and pigs other than feeder pigs was concentrated in twenty states. In eleven of these states there was at least one “protectionist” CD: Iowa (21.4% of US sales), North Carolina (20.4%), Minnesota (10.5%), Illinois (7.6%), Indiana (6.1%), Missouri (5.6%), Nebraska (5.6%), Ohio (3.1%), Oklahoma (2.1%), Colorado (0.8%), Texas (0.7%) and Utah (less than 0.7%). See Figure 3.14 for the distribution by state of the share of CDs protected by AD measures producing hogs and pigs in total CDs.

In 1997, twenty states answered for 97.1% of US soybeans production. In ten of these states there was at least one “protectionist” CD: Iowa (17.8% of soybeans harvested for beans), Illinois (16.6%), Minnesota (9.3%), Indiana (8.4%), Missouri (6.6%), Nebraska (5.2%), Arkansas (4.2%), South Dakota (4%), Mississippi (3.6%) and North Dakota (1.3%). The share of “protectionist” CDs in total CDs for soybeans is 100% for Iowa and the Dakotas, in the 25-33% range for the other states with the exception of Indiana where it was (11%). See Figure 3.15 for the distribution by state of the share of CDs protected by AD measures producing soybeans in total CDs. Figure 3.16 shows the map of protectionist CDs taking into account tariffs, AD measures and agricultural support. It is

not very different from the map including tariffs and AD as corn producing CDs are often important producers of soybeans and hogs.

Table 3.2
United States: proportion of congressional districts with protectionist interests (tariffs, AD and subsidies) %

	Tariff	Antidumping	Tariff and AD	Subsidies		Tariff, AD and subsidies
	Total	Iron and steel products	Total	Soybeans	Pork based in hogs	Total
Alabama	57	43	86	0	0	86
Alaska	0	0	0	0	0	0
Arizona	38	0	38	0	0	38
Arkansas	100	0	100	25	0	100
California	9	0	9	0	0	9
Colorado	29	0	29	0	14	29
Connecticut	0	0	0	0	0	0
Delaware	100	0	100	0	0	100
Florida	24	0	24	0	0	24
Georgia	62	0	62	0	0	62
Hawaii	50	0	50	0	0	50
Idaho	100	0	100	0	0	100
Illinois	32	21	42	32	16	42
Indiana	0	22	22	11	11	33
Iowa	100	0	100	100	100	100
Kansas	25	0	25	0	0	25
Kentucky	67	0	67	0	0	67
Louisiana	57	0	57	0	0	57
Maine	100	0	100	0	0	100
Maryland	25	0	25	0	0	25
Massachusets	0	0	0	0	0	0
Michigan	0	27	27	0	0	27
Minnesota	25	0	25	25	25	25
Mississippi	75	0	75	25	0	75
Missouri	22	0	22	11	11	33
Montana	100	0	100	0	0	100
Nebraska	67	0	67	33	67	67
Nevada	0	0	0	0	0	0
New Hampshire	0	0	0	0	0	0
New Jersey	0	0	0	0	0	0

New Mexico	33	0	33	0	0	33
New York	3	0	3	0	0	3
North Carolina	62	0	62	0	38	77
North Dakota	100	0	100	100	0	100
Ohio	11	28	38	0	0	38
Oklahoma	40	0	40	0	20	40
Oregon	20	0	20	0	0	20
Pennsylvania	0	63	63	0	0	63
Rhode Island	0	0	0	0	0	0
South Carolina	17	0	17	0	0	17
South Dakota	100	0	100	100	0	100
Tennessee	22	0	22	0	0	22
Texas	25	0	25	0	3	25
Utah	0	0	0	0	33	33
Vermont	0	0	0	0	0	0
Virginia	27	0	27	0	0	27
Washington	11	0	11	0	0	11
West Virginia	33	67	100	0	0	100
Wisconsin	13	0	13	0	0	13
Wyoming	100	0	100	0	0	100

Sources: Congressional Districts 108th Congress (www.nationalatlas.gov), 1997 Economic Census (www.census.gov) and 1997 Census of Agriculture (www.usda.gov).

Figure 3.12 United States
Protectionist interests: steel products

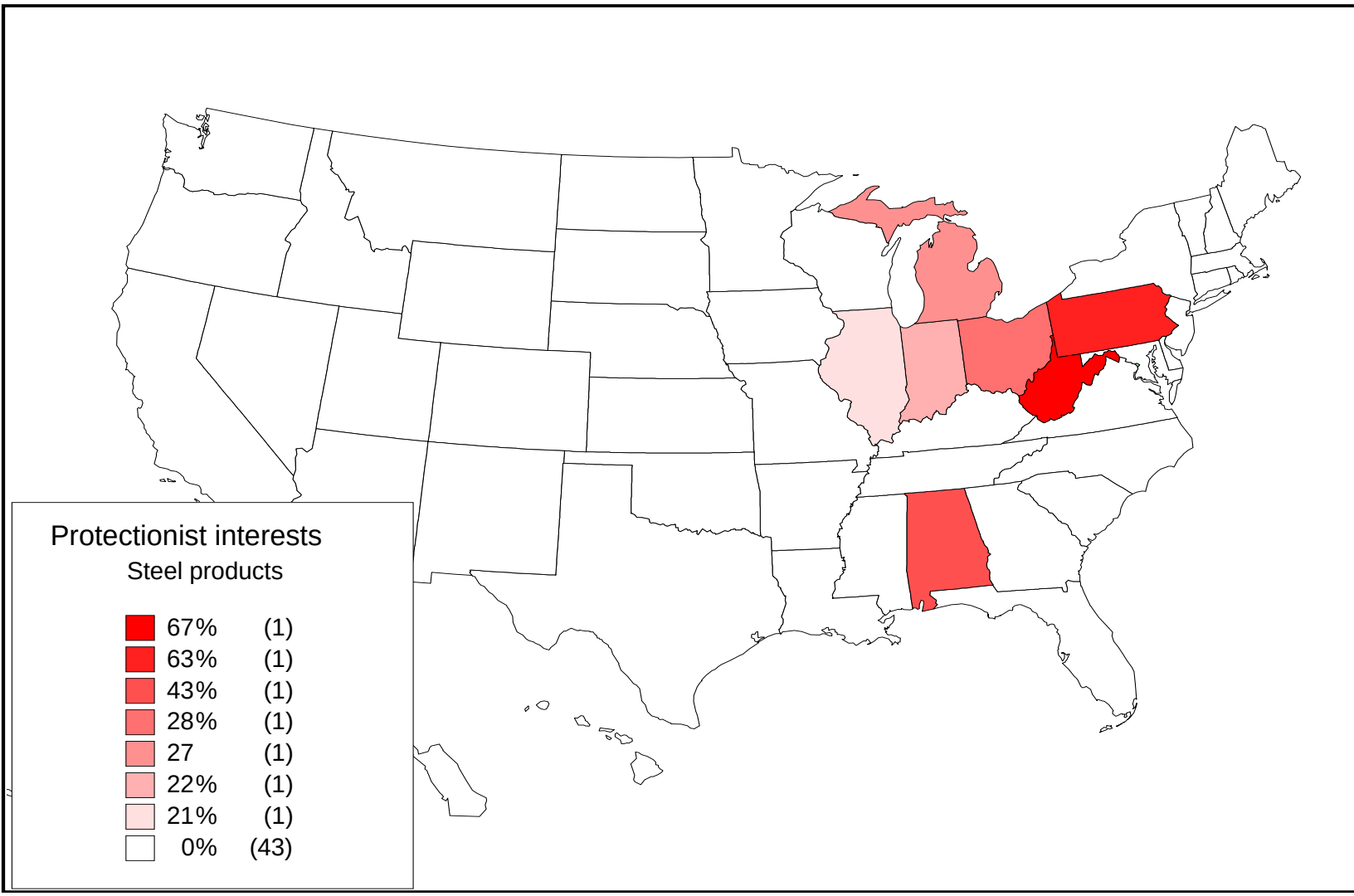


Figure 3.13 United States
Protectionist interests: tariffs and AD

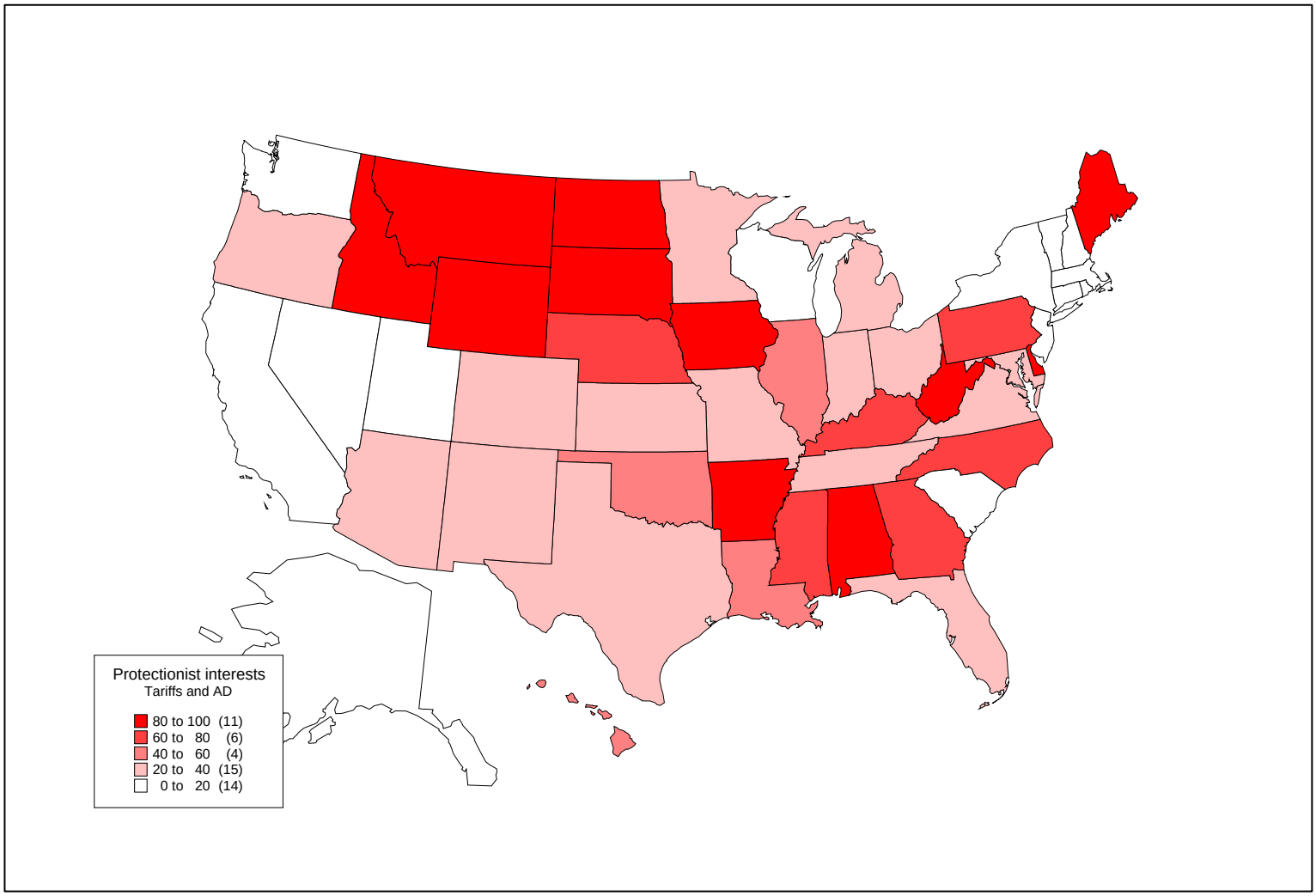


Figure 3.14 United States

Protectionist interests: pork meat

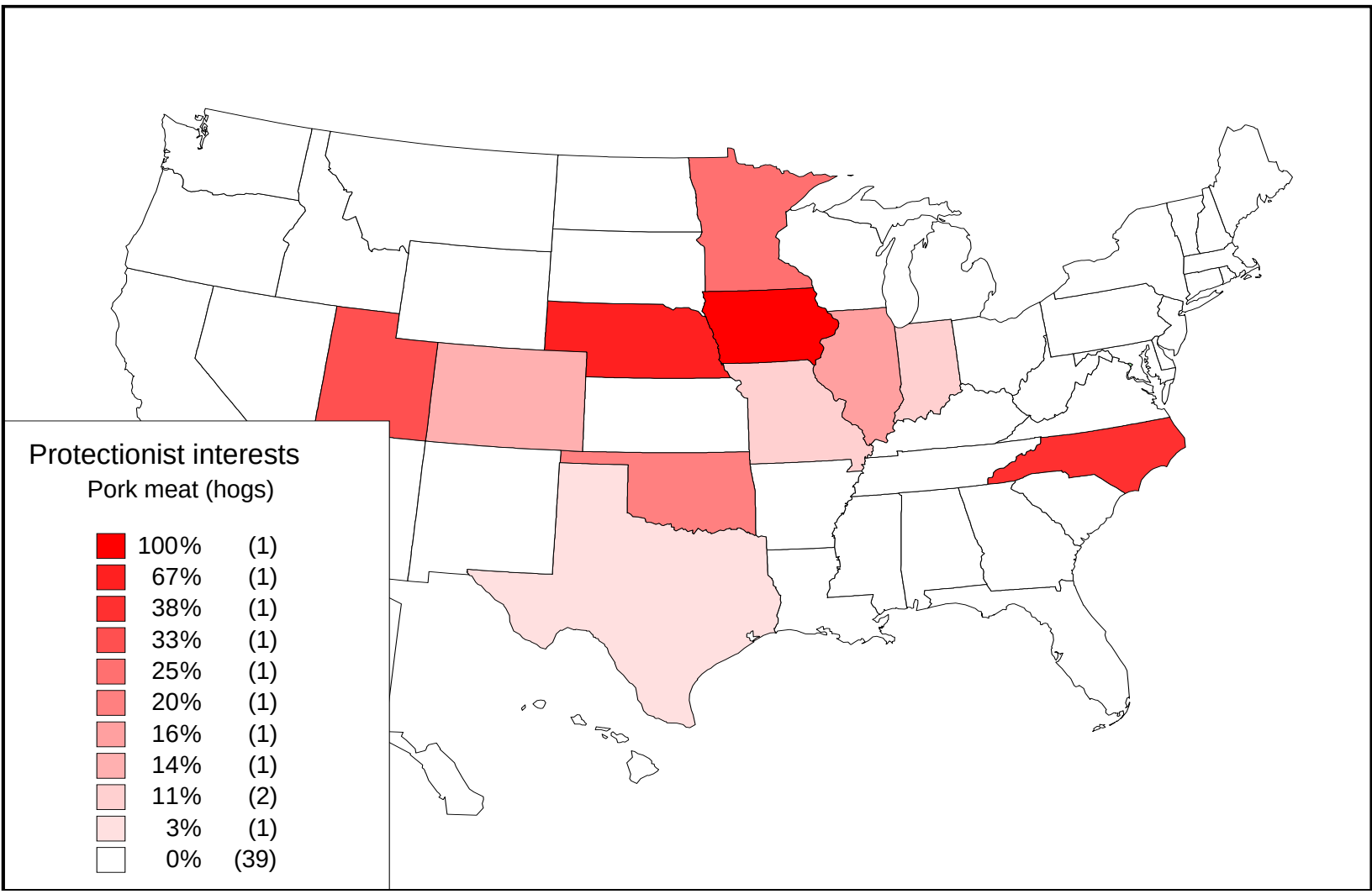


Figure 3.15 United States Protectionist interests: soybeans

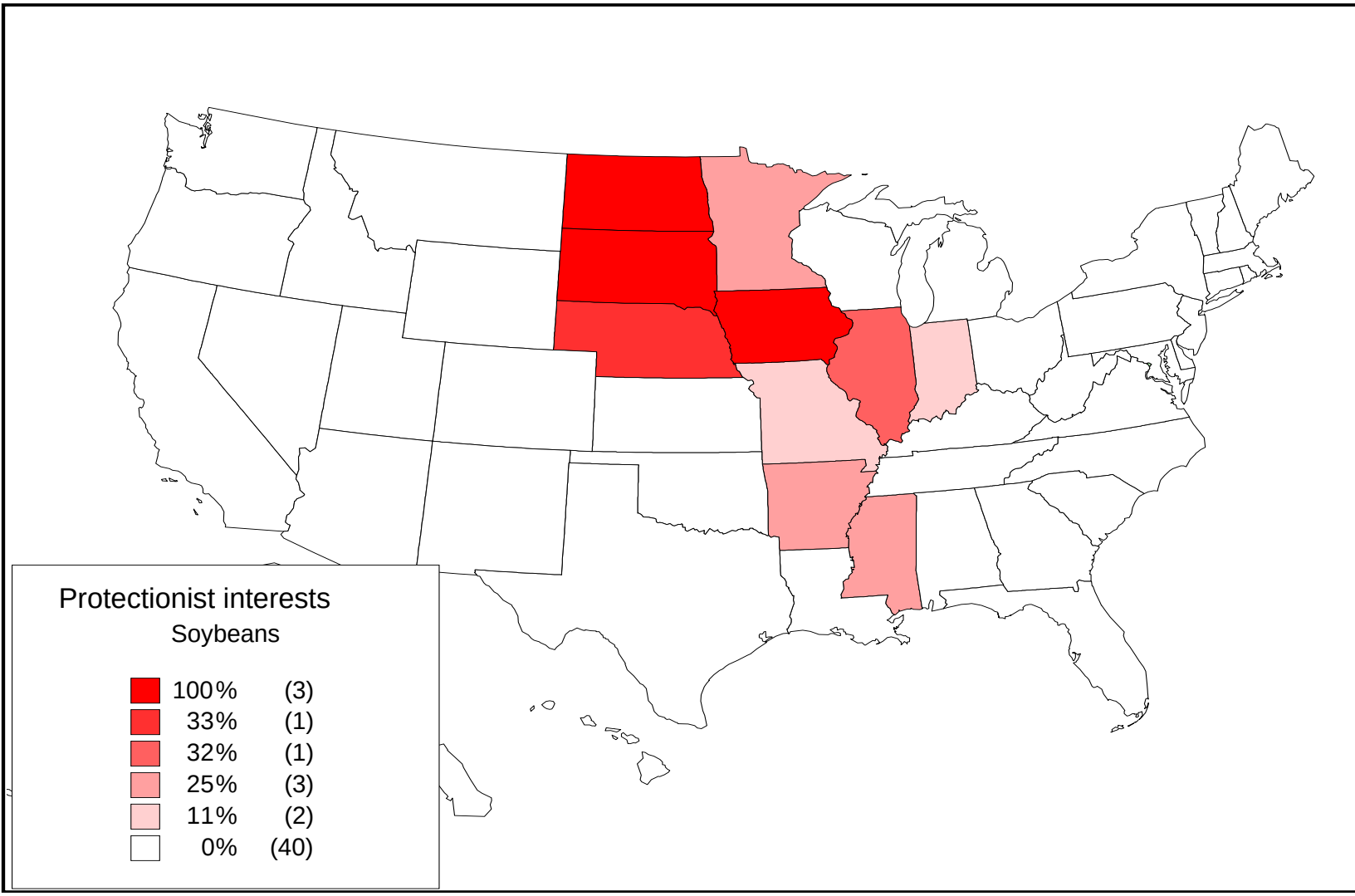
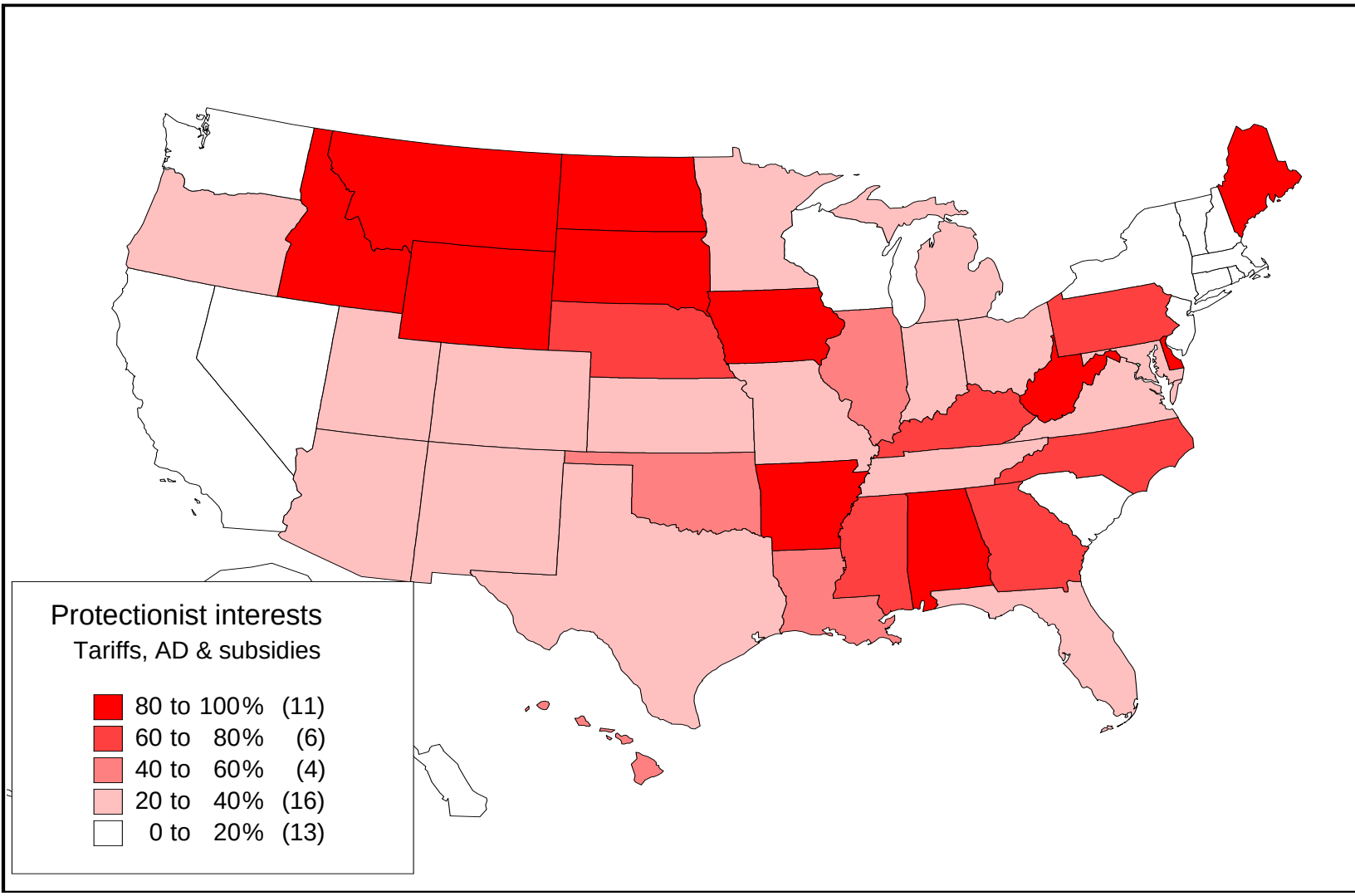


Figure 3.16 United States
Protectionist interests: tariffs, AD and subsidies



An alternative way of analyzing the data on protection at the Congressional District level is to focus on the number of CDs affected by state rather than on their share on total CDs. This would be an angle more akin to assessing the weight of protectionist interests in the House of Representatives contrasting with the previous analysis which focused on the Senate.

Tables 3.3 and 3.4 summarize the information on the number of CDs by state and product affected by tariffs, AD and agricultural support in the United States. Figures 3.17 to 3.20 present the same information for a few selected products (sugar cane and poultry). Figure 3.17 shows the number of relevant CDs for sugar cane (tariffs), Figure 3.18 for poultry (tariff), Figure 3.19 for all products for which tariff protection is relevant (107 CDs) and Figure 3.20 for all products for which tariff protection, AD protection and agricultural support are relevant (140 CDs).

From the angle of tariff protection the states with more CDs affected are Georgia (9 CDs), North Carolina and Texas (8), Florida and Illinois (6), California, Iowa and Virginia (5), Alabama, Arkansas, Kentucky and Louisiana (4). For the 107 affected CDs in all United States 72 representatives are Republican and 35 Democrats. For tariff protection, AD protection and agricultural support the main change in relation to the distribution of CDs based only on tariff protection is that steel producing states become important: Pennsylvania (11 CDs), Ohio (7CDs), Michigan (4 CDs) and Indiana (3CDs). Of the 140 relevant representatives 90 are Republican and 50 Democrats

Table 3.3
United States: number of "protectionist" CDs by state (tariff protection)

	Oranges	Sugar cane	Sugar beets	Corn for sugar	Tobacco	Poultry	Beef	Cotton	Footwear	Heavy trucks	All tariffs
Alabama (7)	0	0	0	0	0	4	0	0	0	0	4
Alaska (1)	0	0	0	0	0	0	0	0	0	0	0
Arizona (8)	0	0	0	0	0	0	2	2	0	0	3
Arkansas (4)	0	0	0	0	0	0	3	2	0	0	4
California (53)	0	0	1	0	0	0	1	4	0	0	5
Colorado (7)	0	0	0	1	0	0	2	0	0	0	2
Connecticut (5)	0	0	0	0	0	0	0	0	0	0	0
Delaware (1)	0	0	0	0	0	1	0	0	0	0	1
Florida (25)	6	2	0	0	0	0	0	0	0	0	6
Georgia (13)	0	0	0	0	0	8	0	3	0	1	9
Hawaii (2)	0	1	0	0	0	0	0	0	0	0	1
Idaho (2)	0	0	1	0	0	0	1	0	0	0	1
Illinois (19)	0	0	0	6	0	0	0	0	0	0	6
Indiana (9)	0	0	0	0	0	0	0	0	0	0	0
Iowa (5)	0	0	0	5	0	0	1	0	0	0	5
Kansas (4)	0	0	0	1	0	0	1	0	0	0	1
Kentucky (6)	0	0	0	0	4	0	0	0	0	0	4
Louisiana (7)	0	3	0	0	0	2	0	1	0	0	4
Maine (2)	0	0	0	0	0	0	0	0	2	0	2
Maryland (8)	0	0	0	0	1	1	0	0	0	0	2
Massachusetts (10)	0	0	0	0	0	0	0	0	0	0	0
Michigan (15)	0	0	0	0	0	0	0	0	0	0	0
Minnesota (8)	0	0	1	2	0	0	0	0	0	0	2
Mississippi (4)	0	0	0	0	0	3	0	1	0	0	3
Missouri (9)	0	0	0	0	0	1	0	1	0	0	2
Montana (1)	0	0	1	0	0	0	1	0	0	0	1
Nebraska (3)	0	0	1	2	0	0	2	0	0	0	2
Nevada (3)	0	0	0	0	0	0	0	0	0	0	0
New Hampshire (2)	0	0	0	0	0	0	0	0	0	0	0
New Jersey (13)	0	0	0	0	0	0	0	0	0	0	0
New Mexico (3)	0	0	0	0	0	0	1	0	0	0	1
New York (29)	0	0	0	0	0	0	0	0	1	0	1
North Carolina (13)	0	0	0	0	4	3	0	0	0	2	8
North Dakota (1)	0	0	1	0	0	0	0	0	0	0	1

Ohio (18)	0	0	0	0	0	0	0	0	0	2	2
Oklahoma (5)	0	0	0	0	0	1	1	1	0	0	2
Oregon (5)	0	0	0	0	0	0	1	0	0	0	1
Pennsylvania (19)	0	0	0	0	0	0	0	0	0	0	0
Rhode Island (2)	0	0	0	0	0	0	0	0	0	0	0
South Carolina (6)	0	0	0	0	1	0	0	0	0	0	1
South Dakota (1)	0	0	0	1	0	0	1	0	0	0	1
Tennessee (9)	0	0	0	0	1	0	0	1	0	0	2
Texas (32)	0	0	0	0	0	3	4	5	0	0	8
Utah (3)	0	0	0	0	0	0	0	0	0	0	0
Vermont (1)	0	0	0	0	0	0	0	0	0	0	0
Virginia (11)	0	0	0	0	2	2	0	0	0	1	5
Washington (9)	0	0	0	0	0	0	1	0	0	0	1
West Virginia (3)	0	0	0	0	0	1	0	0	0	0	1
Wisconsin (8)	0	0	0	0	0	0	0	0	1	0	1
Wyoming (1)	0	0	1	0	0	0	1	0	0	0	1
Total	6	3	7	18	13	30	24	21	4	6	107

Table 3.4
United States: number of "protectionist" CDs by state (defined by tariff, AD and subsidies)

	All tariffs	Iron and steel products	All tariffs and AD	Soybeans	Pork based in hogs	All tariffs, AD and subsidies
Alabama (7)	4	3	6	0	0	6
Alaska (1)	0	0	0	0	0	0
Arizona (8)	3	0	3	0	0	3
Arkansas (4)	4	0	4	1	0	4
California (53)	5	0	5	0	0	5
Colorado (7)	2	0	2	0	1	2
Connecticut (5)	0	0	0	0	0	0
Delaware (1)	1	0	1	0	0	1
Florida (25)	6	0	6	0	0	6
Georgia (13)	9	0	9	0	0	9
Hawaii (2)	1	0	1	0	0	1
Idaho (2)	1	0	1	0	0	1
Illinois (19)	6	4	8	6	3	8
Indiana (9)	0	2	2	1	1	3
Iowa (5)	5	0	5	5	5	5

Kansas (4)	1	0	1	0	0	1
Kentucky (6)	4	0	4	0	0	4
Louisiana (7)	4	0	4	0	0	4
Maine (2)	2	0	2	0	0	2
Maryland (8)	2	0	2	0	0	2
Massachusetts (10)	0	0	0	0	0	0
Michigan (15)	0	4	4	0	0	4
Minnesota (8)	2	0	2	2	2	2
Mississippi (4)	3	0	3	1	0	3
Missouri (9)	2	0	1	1	1	3
Montana (1)	1	0	1	0	0	1
Nebraska (3)	2	0	2	1	2	2
Nevada (3)	0	0	0	0	0	0
New Hampshire (2)	0	0	0	0	0	0
New Jersey (13)	0	0	0	0	0	0
New Mexico (3)	1	0	1	0	0	1
New York (29)	1	0	1	0	0	1
North Carolina (13)	8	0	8	0	5	10
North Dakota (1)	1	0	1	1	0	1
Ohio (18)	2	5	7	0	0	7
Oklahoma (5)	2	0	2	0	1	2
Oregon (5)	1	0	1	0	0	1
Pennsylvania (19)	0	11	11	0	0	11
Rhode Island (2)	0	0	0	0	0	0
South Carolina (6)	1	0	1	0	0	1
South Dakota (1)	1	0	1	1	0	1
Tennessee (9)	2	0	2	0	0	2
Texas (32)	8	0	8	0	1	8
Utah (3)	0	0	1	0	1	1
Vermont (1)	0	0	0	0	0	0
Virginia (11)	5	0	5	0	0	5
Washington (9)	1	0	1	0	0	1
West Virginia (3)	1	2	3	0	0	3
Wisconsin (8)	1	0	1	0	0	1
Wyoming (1)	1	0	1	0	0	1
Total	107	31	135	20	23	140

Figure 3.17 United States
Number of protectionist CDs in sugar cane (tariffs)

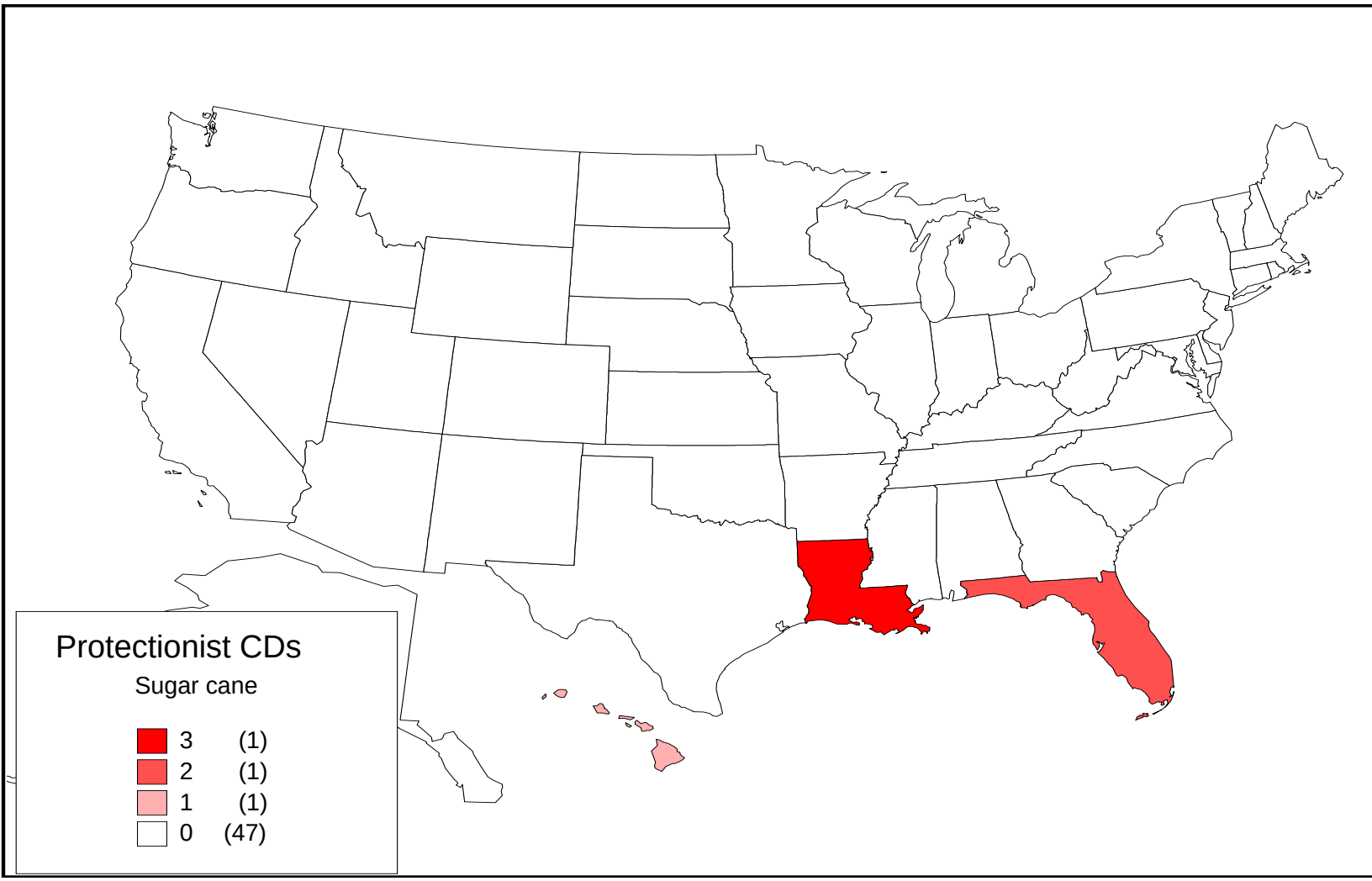


Figure 3.18 United States
Number of protectionist CDs in poultry (tariffs)

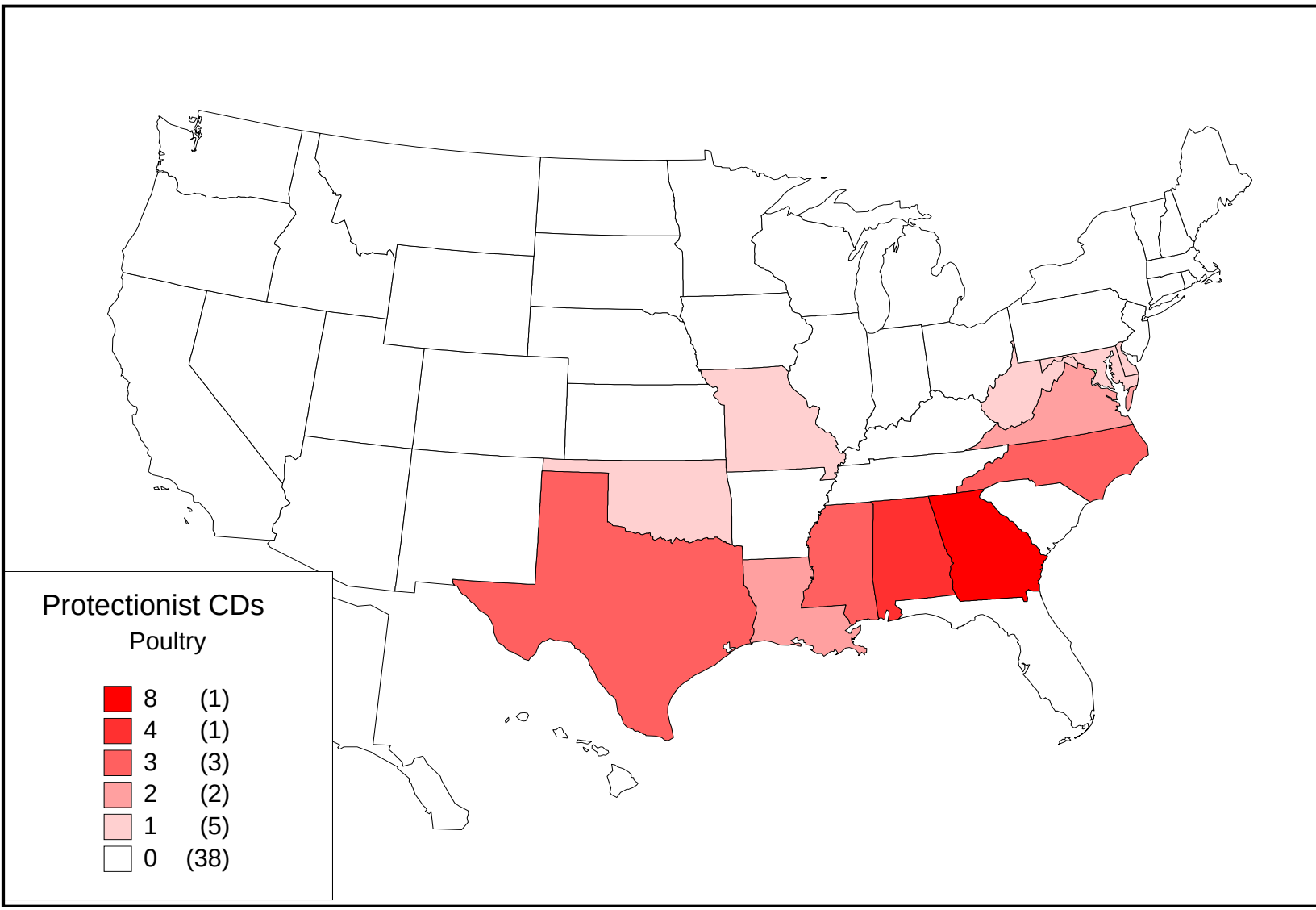


Figure 3.19 United States
Number of protectionist CDs in all products (tariffs)

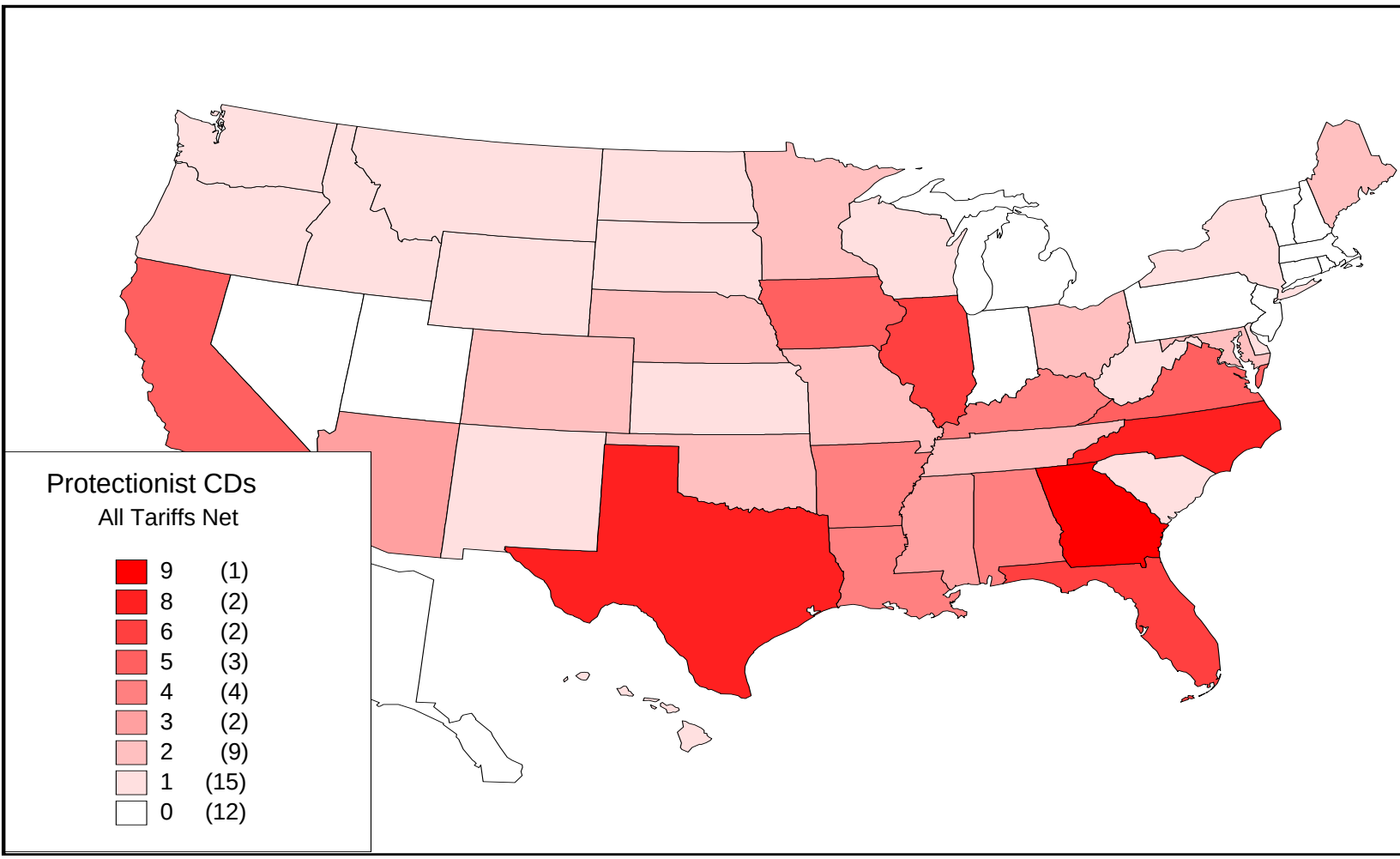
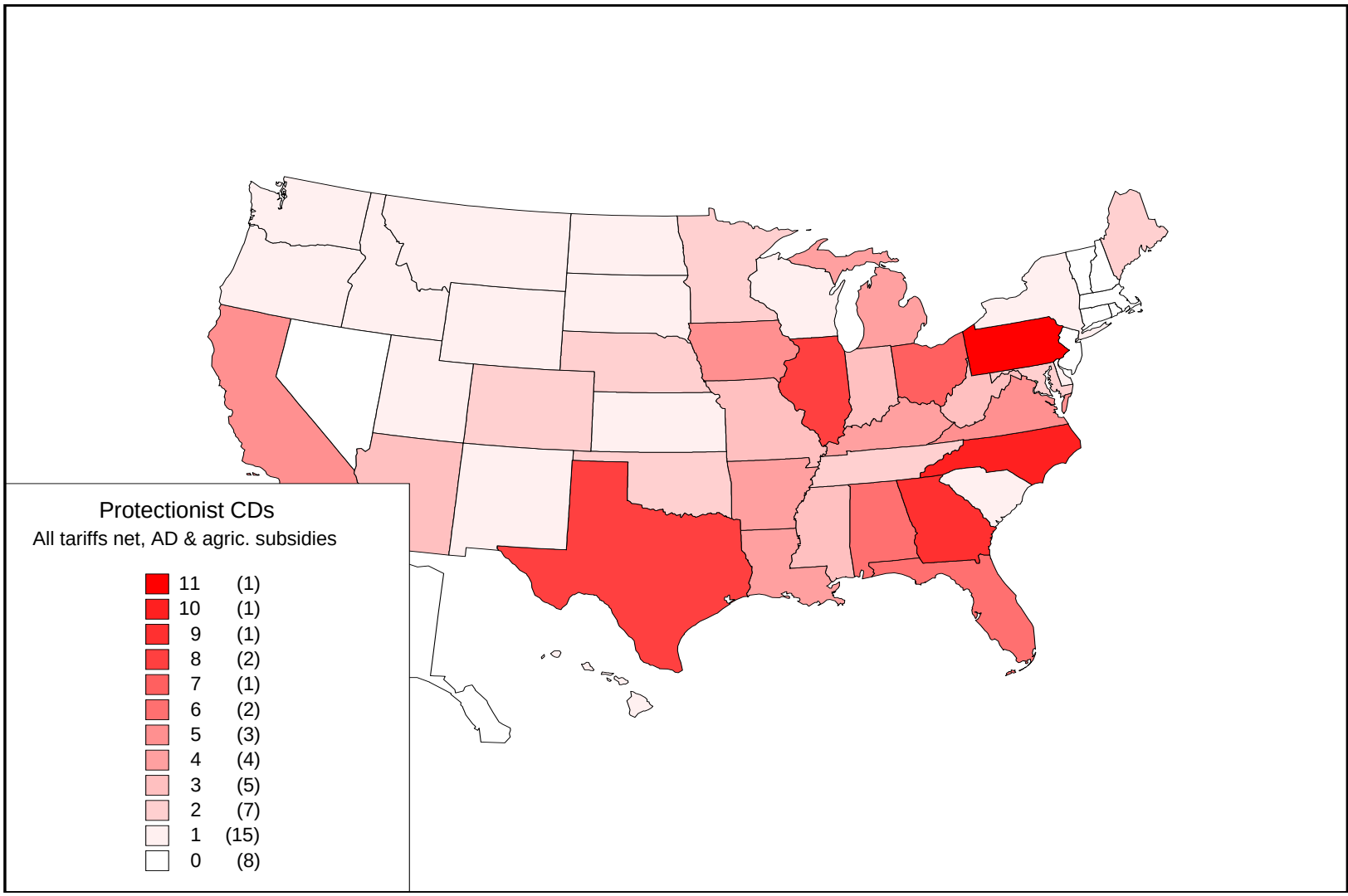


Figure 3.20 United States
Number of protectionist CDs in all products (tariffs, AD and subsidies)



4. Export interests in the United States

US export interests targeted to Brazil were identified based on the Brazilian tariff of 2002 and on US export data for 2001. The objective was to identify products which faced tariff peaks in Brazil (above 15%) and were relevant US exports (above US$ 1,000 million in the 6-digit Harmonized System). Using the correspondence between trade data in the Harmonized System and the NAICS North American Industry Classification System it is possible to estimate how exports were distributed by industry at the 5-digit level. Using 1997 Economic Census data these exports were distributed by state. The exercise was restricted to states answering for at least 10% of US total sales of each specific NAICS 5-digit aggregate. Both at the product level and for all exports data were normalized by the size of the economy of each state.

Results were aggregated at the 3-digit NAICS level and it became apparent that export interests were massively concentrated on very few 3-digit aggregates concentrated in computer and electronic products (51% of relevant exports), transport equipment (14.5%) and electrical products (2%). Table 4.1 includes data on the state distribution of normalized export interests for these three aggregates and also for all relevant exports. Figures 4.1 to 4.4 present the same data in a friendlier format.

Export interests in the electronic aggregate are very concentrated in California and Texas. In this, perhaps more than in any other case, the fact that rules of origin will be an important feature of regional integration indicates that these figures should be considered as upper bounds as a measure of export interests. This is due to the fact that US electronic exports embody imported components much above the limits on origin likely to be established in a hemispheric negotiation.[1] Export interests related to transport equipment are located mainly in Indiana, Michigan and Ohio and to a lesser extent in Missouri. Export interests related to electrical products are concentrated in Wisconsin. This distribution of interests is fully reflected in the overall map of export interests for all products.

[1] The author thanks Flavio Marega for drawing his attention to this point.

Table 4.1
United States: export interests related to tariff peaks in Brazil

	Electronic products incl. computers	Electrical products	Transport equipment	Export interests
Alabama	0	0	0	5
Alaska	0	0	0	0
Arizona	0	0	0	0
Arkansas	0	0	0	0
California	100	3	5	84
Colorado	0	0	0	0
Connecticut	0	0	0	0
Delaware	0	0	0	0
Florida	0	0	0	0
Georgia	0	0	0	9
Hawaii	0	0	0	0
Idaho	0	0	0	0
Illinois	20	19	0	37
Indiana	9	0	70	91
Iowa	0	0	0	16
Kansas	0	0	0	0
Kentucky	0	0	0	20
Louisiana	0	0	0	4
Maine	0	0	0	0
Maryland	0	0	0	0
Massachusetts	13	0	0	9
Michigan	0	0	100	100
Minnesota	0	0	0	0
Mississippi	0	0	0	0
Missouri	0	0	23	22
Montana	0	0	0	0
Nebraska	0	0	0	0
Nevada	0	0	0	0
New Hampshire	0	0	0	0
New Jersey	0	0	0	12
New Mexico	0	0	0	0
New York	0	0	0	11
North Carolina	0	0	0	18
North Dakota	0	0	0	0
Ohio	0	0	51	53
Oklahoma	0	0	0	3
Oregon	0	0	0	0
Pennsylvania	0	0	0	11
Rhode Island	0	0	0	54
South Carolina	0	0	0	0

South Dakota	0	0	0	0
Tennessee	9	19	9	20
Texas	71	0	0	57
Utah	0	0	0	0
Vermont	0	0	0	0
Virginia	0	0	0	9
Washington	0	0	0	0
West Virginia	0	0	0	0
Wisconsin	0	100	0	44
Wyoming	0	0	0	0

Figure 4.1 United States
Export interests: electronic products incl. computers

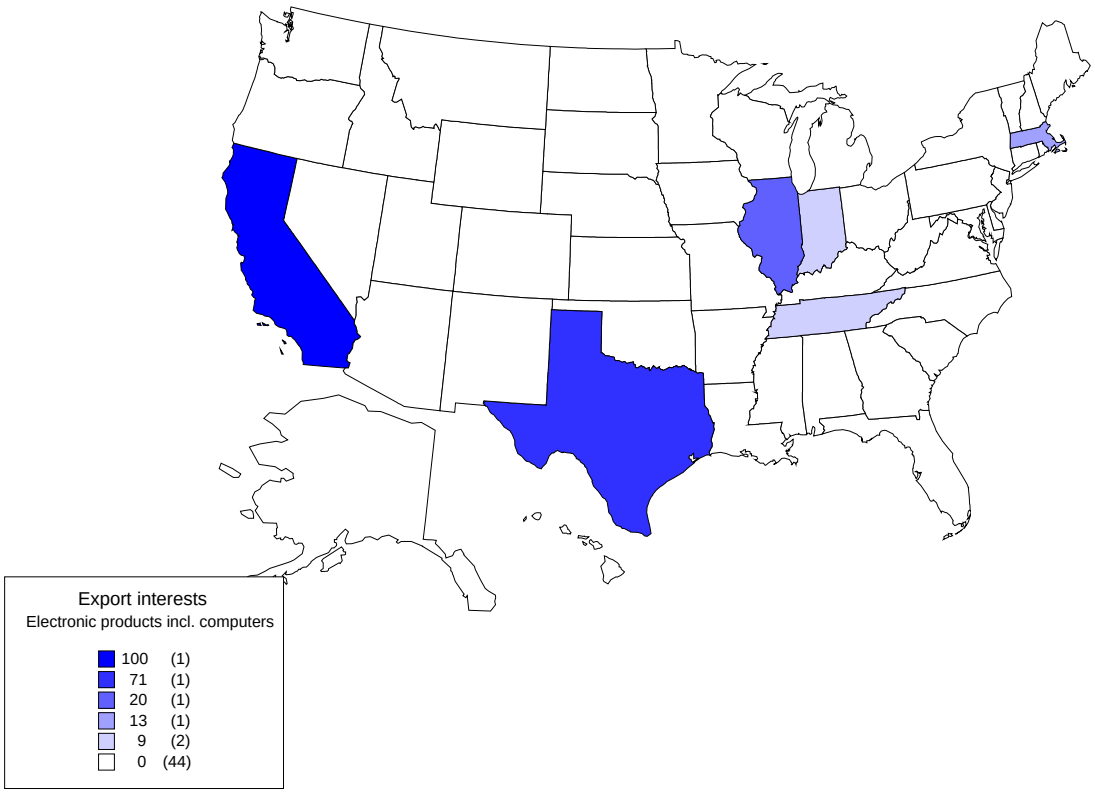


Figure 4.2 United States
Export interests: electrical products

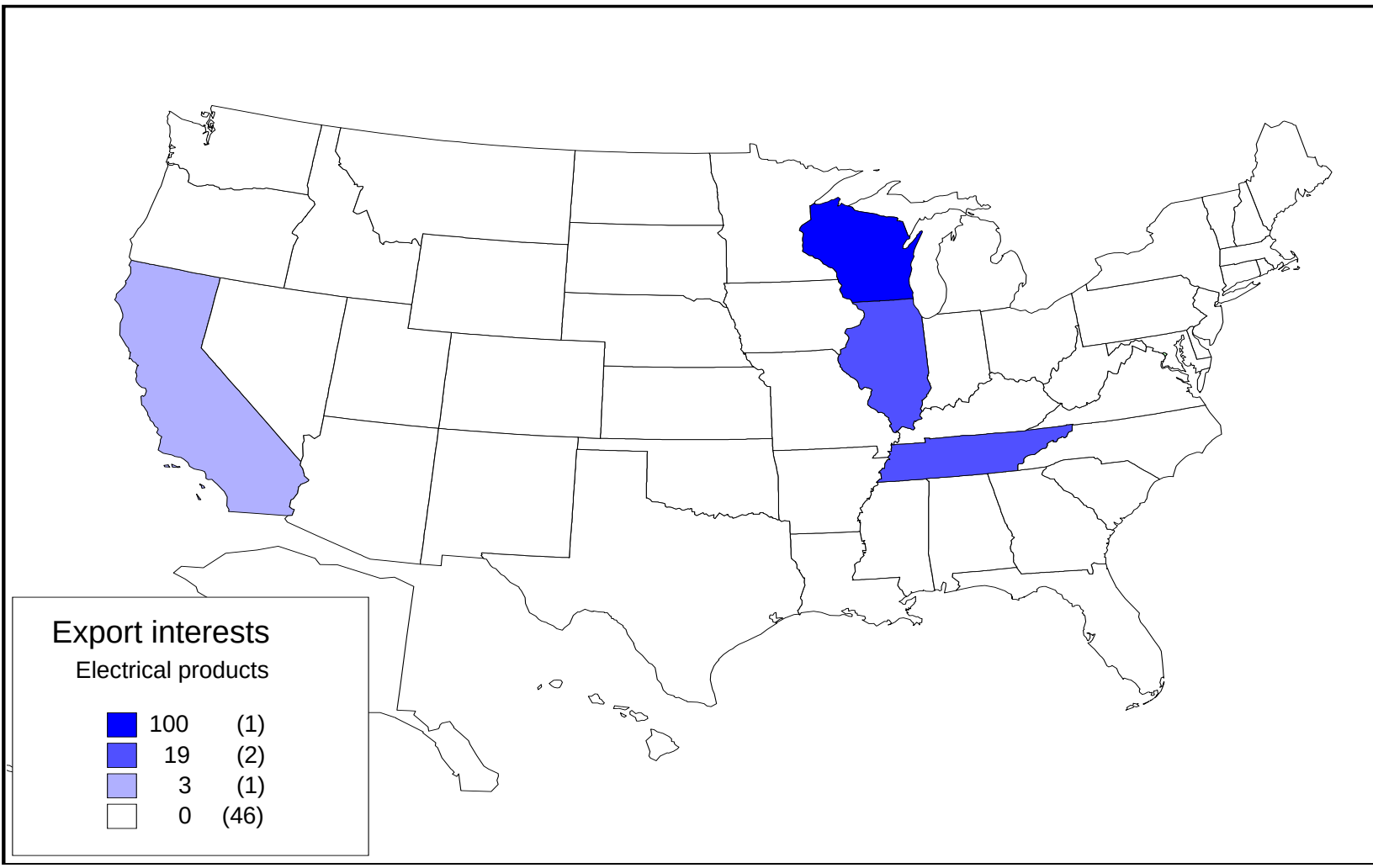


Figure 4.3 United States
Export interests: transport equipment

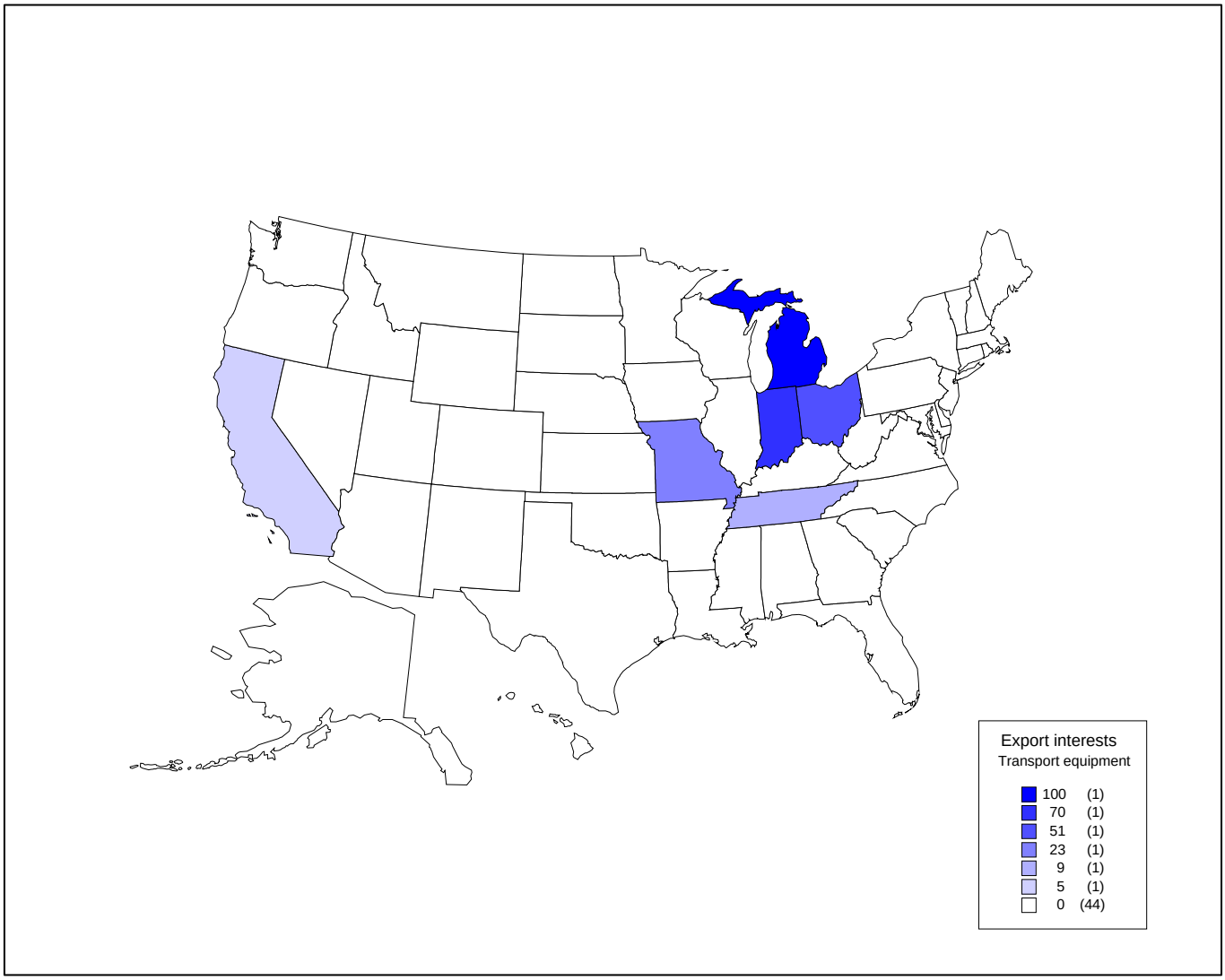
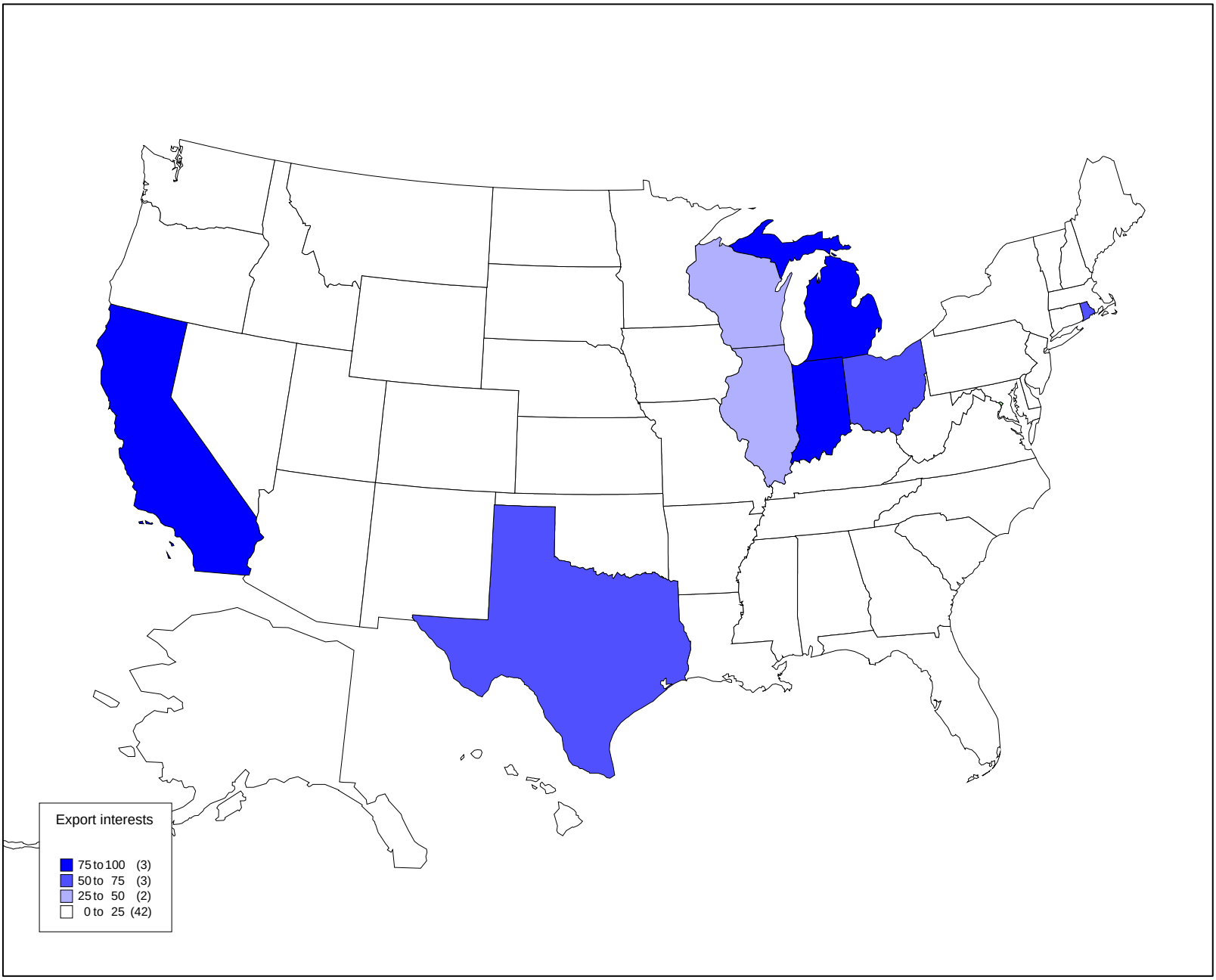


Figure 4.4 United States
Export interests: all products



5. Balance of interests in the United States

The indices on protectionist interests discussed in section 3 were superimposed to the indices on export interests presented in section 4 and the results normalized. The data presented in Table 5.1 summarize the findings for three alternative measures of protection: tariffs only; tariffs and AD; tariffs, AD and US domestic support affecting agricultural products (subsidies). Figures 5.1 to 5.3 show the same data.

Differences between the three maps are marginal. The most interesting findings are about the polar positions. The states that should be more interested in trade liberalization are California, Indiana and Michigan and to lesser extent a number of states in the Rust Belt and in the Northeast. In the extreme anti-liberalization position would be the states in the Northern part of the Mountain Division in the West (Idaho, Montana, Wyoming, the Dakotas, Nebraska and Iowa), some states in the South (Arkansas, Alabama and Mississippi), Maine and West Virginia.

The process of netting protectionist and export interests by using the same weights implies that output and job losses arising from the expansion of imports and job gains arising from the expansion of exports. It is reasonable to make some allowance for the lack of symmetry between the two processes. Protectionist interests are well entrenched because, among other things, there are workers in activity that would lose their jobs if trade is liberalized. A way of taking this asymmetry into account is to increase the weight of the indices which reflect protectionist interests so as to make net interests less inclined to liberalize in relation to the assumption that is implied in the computation which assumes perfect symmetry. The last column of Table 5.1 and Figure 5.4 show the result of adopting such an assumption (only for tariffs). The consequence is to reduce the heterogeneity in the stance of different states on trade liberalization. But there is no impact on those favoring trade liberalization: they continue to be mainly California, Texas and the Rust Belt.

Table 5.1 United States
Balance of interests: protectionist (tariff, AD and subsidies-related) versus export interests

	Tariff-related protection	Tariff and AD-related protection	Tariff, AD and subsidies-related protection	Tariffs double weighted
Alabama	24	11	11	23
Alaska	50	57	57	50
Arizona	31	35	35	40
Arkansas	0	0	0	0
California	37	100	100	66
Colorado	36	41	41	35
Connecticut	50	57	57	50
Delaware	0	0	0	0
Florida	38	43	43	38
Georgia	24	27	27	21
Hawaii	25	29	29	25
Idaho	0	0	0	0
Illinois	2	54	54	43
Indiana	45	97	90	73
Iowa	8	9	9	4
Kansas	38	43	43	37
Kentucky	27	30	30	21
Louisiana	24	27	27	22
Maine	0	0	0	0
Maryland	38	43	43	37
Massachusetts	54	62	62	52
Michigan	100	99	99	100
Minnesota	38	43	43	44
Mississippi	13	14	14	31
Missouri	50	57	51	55
Montana	0	0	0	25
Nebraska	17	19	19	33
Nevada	50	57	57	50
New Hampshire	50	57	57	50
New Jersey	56	64	64	56
New Mexico	34	38	38	42
New York	54	62	62	55
North Carolina	28	32	23	43
North Dakota	0	0	0	25
Ohio	71	66	66	74
Oklahoma	32	36	36	41
Oregon	40	46	46	45

Pennsylvania	55	27	27	55
Rhode Island	77	88	88	77
South Carolina	42	47	47	42
South Dakota	0	0	0	25
Tennessee	49	56	56	54
Texas	56	75	75	72
Utah	50	57	38	50
Vermont	50	57	57	50
Virginia	41	47	47	48
Washington	45	51	51	47
West Virginia	34	0	0	42
Wisconsin	65	75	75	69
Wyoming	0	0	0	25

Figure 5.1 United States
Balance of interests: protectionist (tariffs) versus export interests

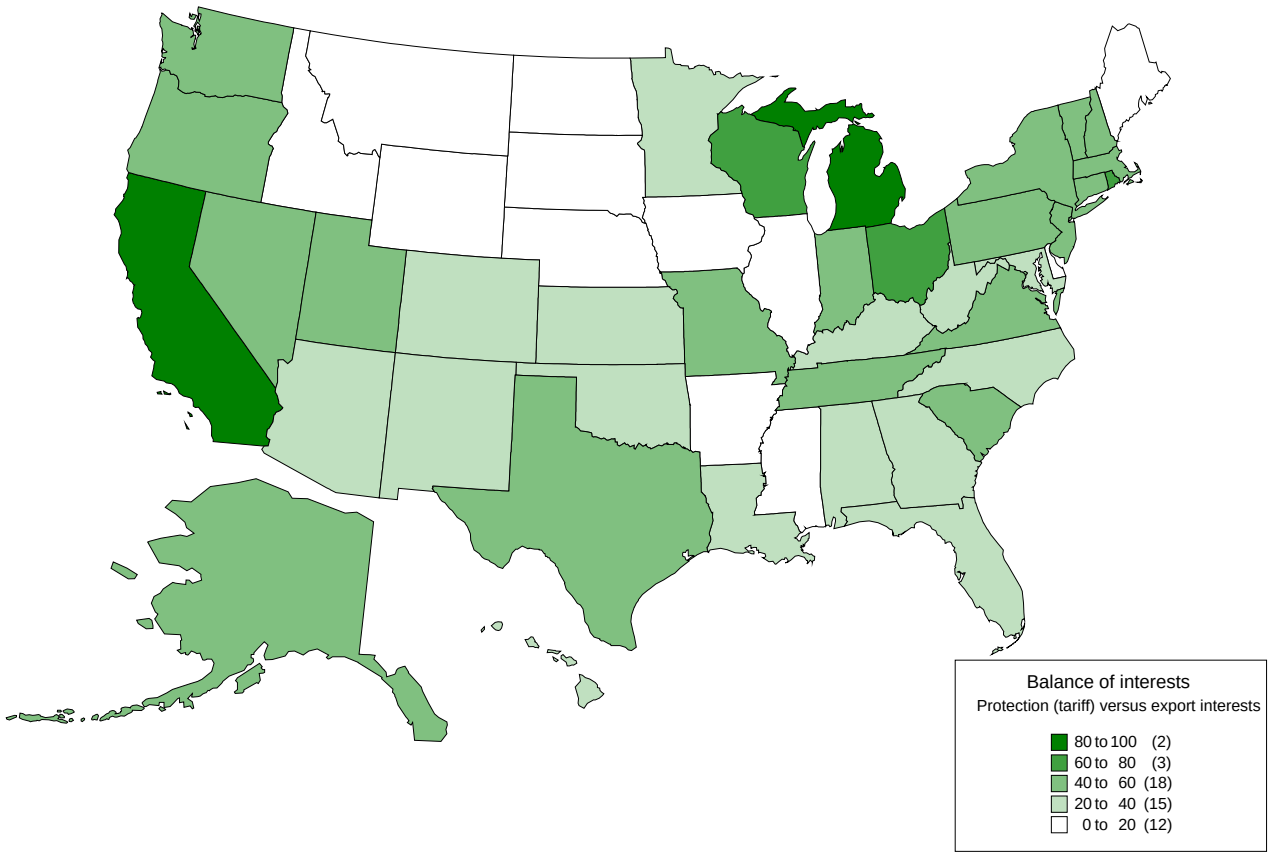


Figure 5.2 United States
Balance of interests: protectionist (tariffs and AD) versus export interests

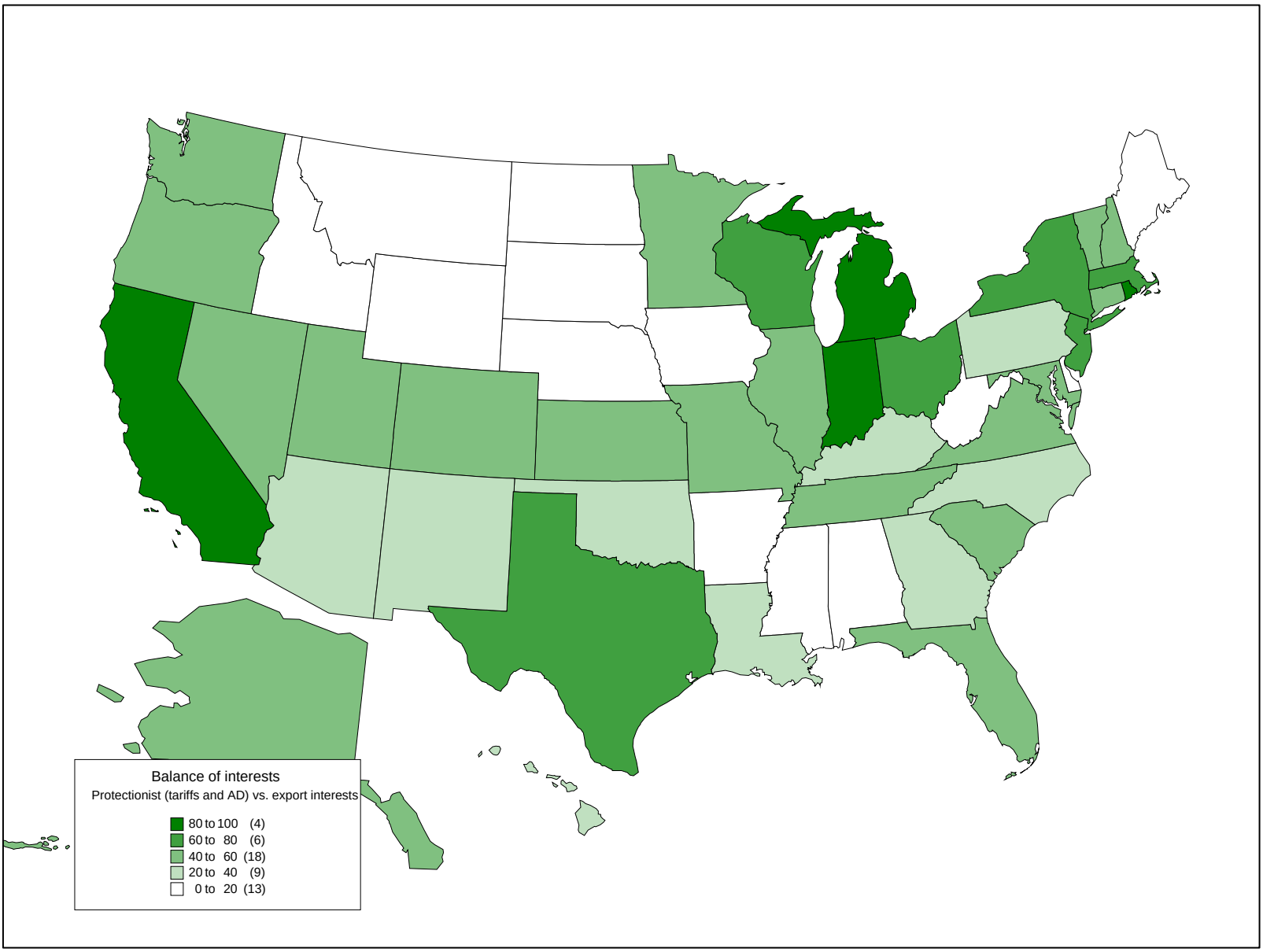


Figure 5.3 United States
Balance of interests: protectionist (tariffs, AD and subsidies-related) versus export interests

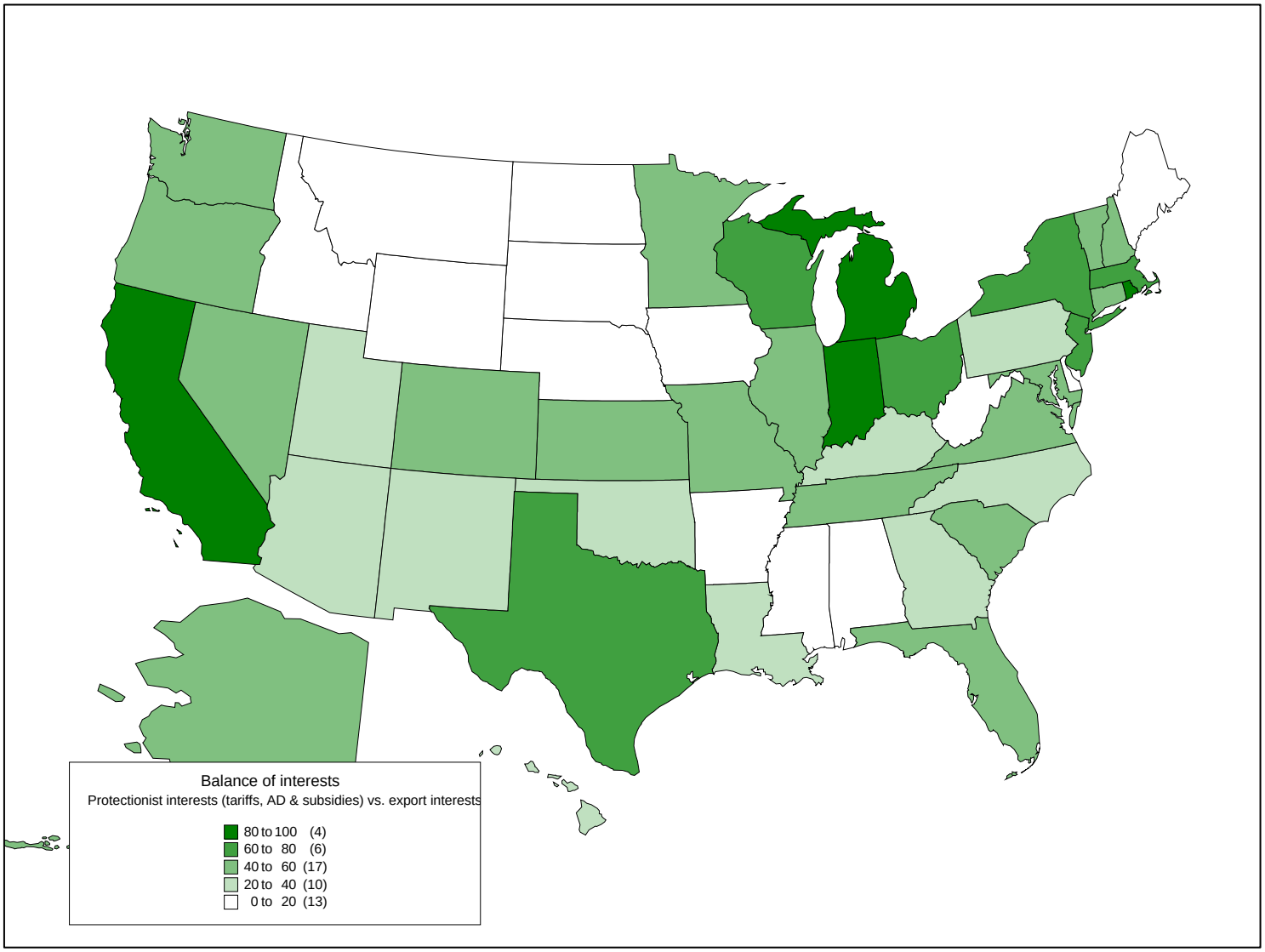
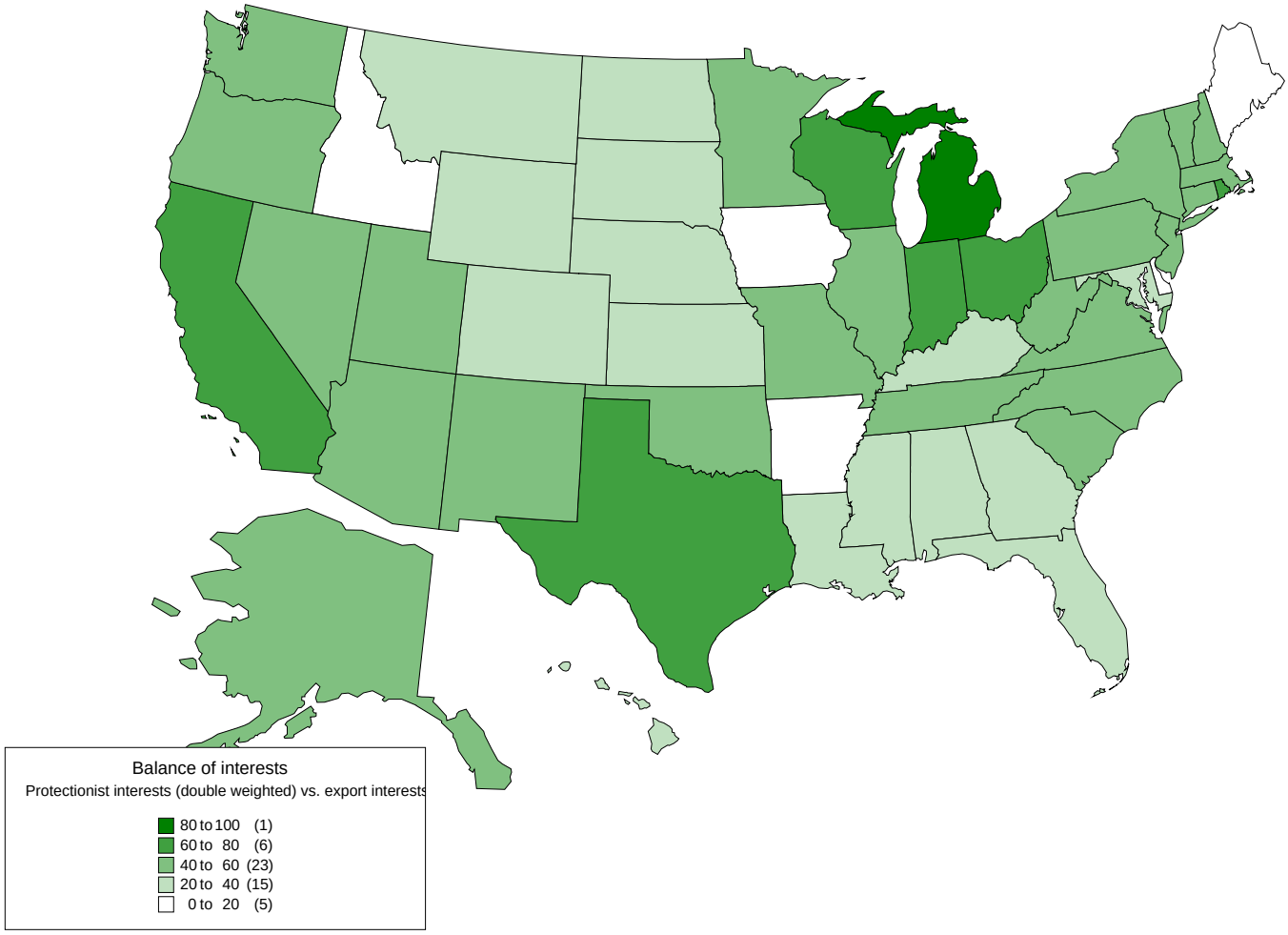


Figure 5.4 United States
Balance of interests: protectionist interests (tariffs) versus export interests with double weighted protection



6. Protectionist interests in Brazil

Ideally one should undertake an analysis for Brazil which is symmetrical to the one presented for the United States: first considering protectionist interests, then export interests, and finally how do they balance for relevant products and in aggregate for the different states of Brazil. A perfectly symmetrical analysis, however, is prevented by the fact that representatives in the lower house are elected by Congressional District in the United States while in Brazil they are elected in statewide electoral colleges. Economic and electoral data required to pinpoint exactly which Brazilian *deputados* were voted in more protectionist *municípios* are simply not available.

The Brazilian electoral system is biased against proportional representation both in the senatorial elections and in the elections for the lower house. The distortions related to the senatorial elections are similar to those found in the United States. There are three senators per state and wide contrasts between state populations. Each senator for Roraima represents a population of about 110,00 while senators for São Paulo represent no less than 12.5 million people. The ratio of representation coefficients between California and Wyoming is 72. Between Roraima and São Paulo is 114.

House representation in the US is roughly proportional of voters but in Brazil it is not. In theory representation in the lower house is proportional but there is a minimum representation of eight *deputados* and maximum of 70 per state (512 in total). São Paulo has 21.8 % of total population and 13.6% of *deputados*. The least populous state has less than 2% of total population: one *deputado* from Roraima represents 40,550 persons, one from São Paulo 529,100.

The relevant products from the viewpoint of protectionist interests in Brazil are those which are relevant for US export interests. State distribution of output in 2001 was normalized by the size of state GDP and to a 1 to 100 scale. Table 6.1 shows the data for the three types of industrial products which comprise the bulk of relevant products – office equipment and computers, electronics and telecoms equipment, transport

equipment – and also for the aggregate for all sectors. Aggregation for all products is weighted by the composition of US exports to all destinations in 2001. Figures 6.1 to 6.4 present the same data. Attention has centered on the most relevant states in at least one type of product and in some cases data have been averaged out for the residual of less relevant states which explains their lack of volatility.

Protectionist interests in office equipment and computers, and electronics and telecoms equipment are heavily concentrated in the Zona Franca de Manaus in the state of Amazonas. In office equipment and computers there significant interests also in Rio de Janeiro, and in electronics and telecoms equipment in São Paulo and Paraná. Protectionist interests related to transport equipment are concentrated in the Southeast, especially in São Paulo and Minas Gerais.

In Brazil, in contrast with the United States, the distortions in proportional representation in the Senate and in the Câmara de Deputados, in principle, act in the sense of watering down the representation of special interests related to protection as São Paulo is by far the most important state in the federation and is keenly interested in maintaining protection especially for transport equipment. The overrepresented smaller states tend not to favor protection.

Table 6.1
Brazil: protectionist interests by state and by most relevant industrial sectors

	Office equipment and computers	Electronic and telecoms equipment	Transport equipment	All sectors
Rondônia	4	0	0	5
Acre	4	0	0	5
Amazonas	100	100	0	100
Roraima	4	0	0	5
Pará	4	0	0	5
Amapá	4	0	0	5
Tocantins	4	0	0	5
Maranhão	4	0	0	5
Piauí	4	0	0	5
Ceará	4	0	0	5
Rio Grande do Norte	4	0	0	5
Paraíba	4	0	0	5
Pernambuco	4	0	0	5
Alagoas	4	0	0	5
Sergipe	4	0	0	5
Bahia	4	0	0	5
Minas Gerais	1	1	89	8
Espírito Santo	4	0	0	5
Rio de Janeiro	19	1	5	14
São Paulo	5	11	100	20
Parana	3	11	61	13
Santa Catarina	1	2	83	12
Rio Grande do Sul	3	2	61	16
Mato Grosso do Sul	4	0	0	5
Mato Grosso	4	0	0	5
Goiás	4	0	0	5
Distrito Federal	4	0	0	5

Figure 6.1 Brazil
Protectionist interests: Office equipment and computers

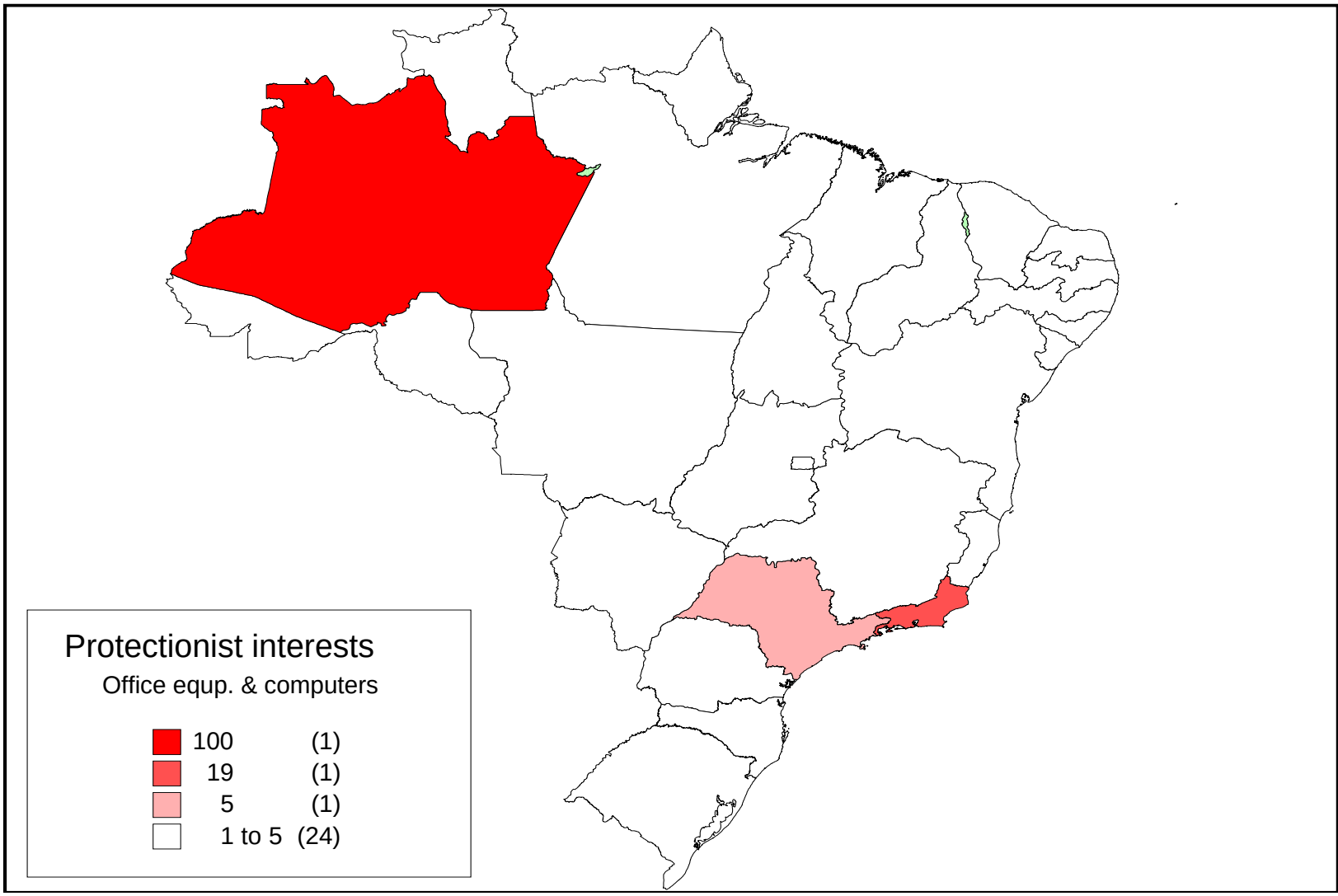


Figure 6.2 Brazil
Protectionist interests: electronic and telecom equipment

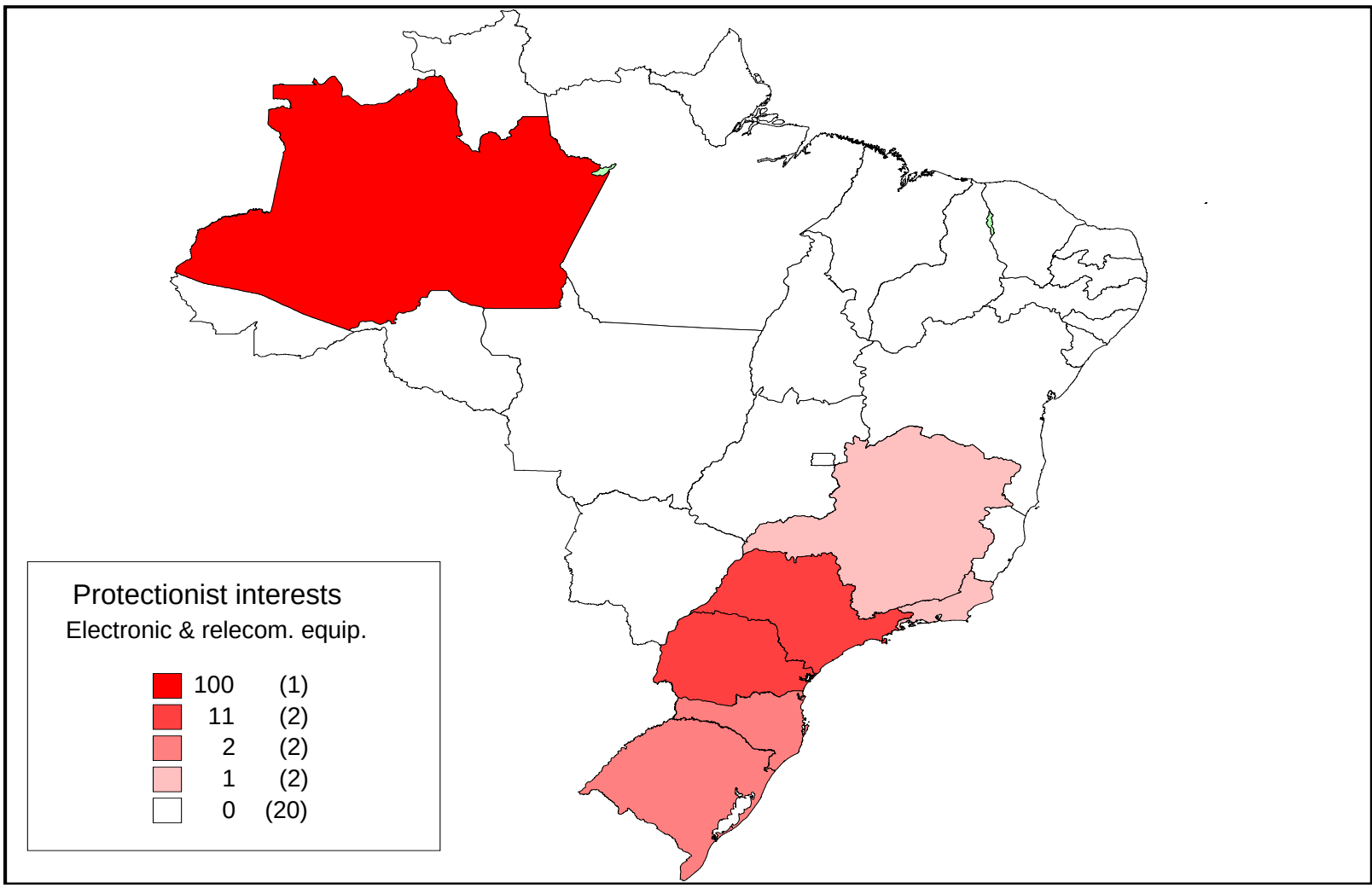


Figure 6.3 Brazil
Protectionist interests: transport equipment

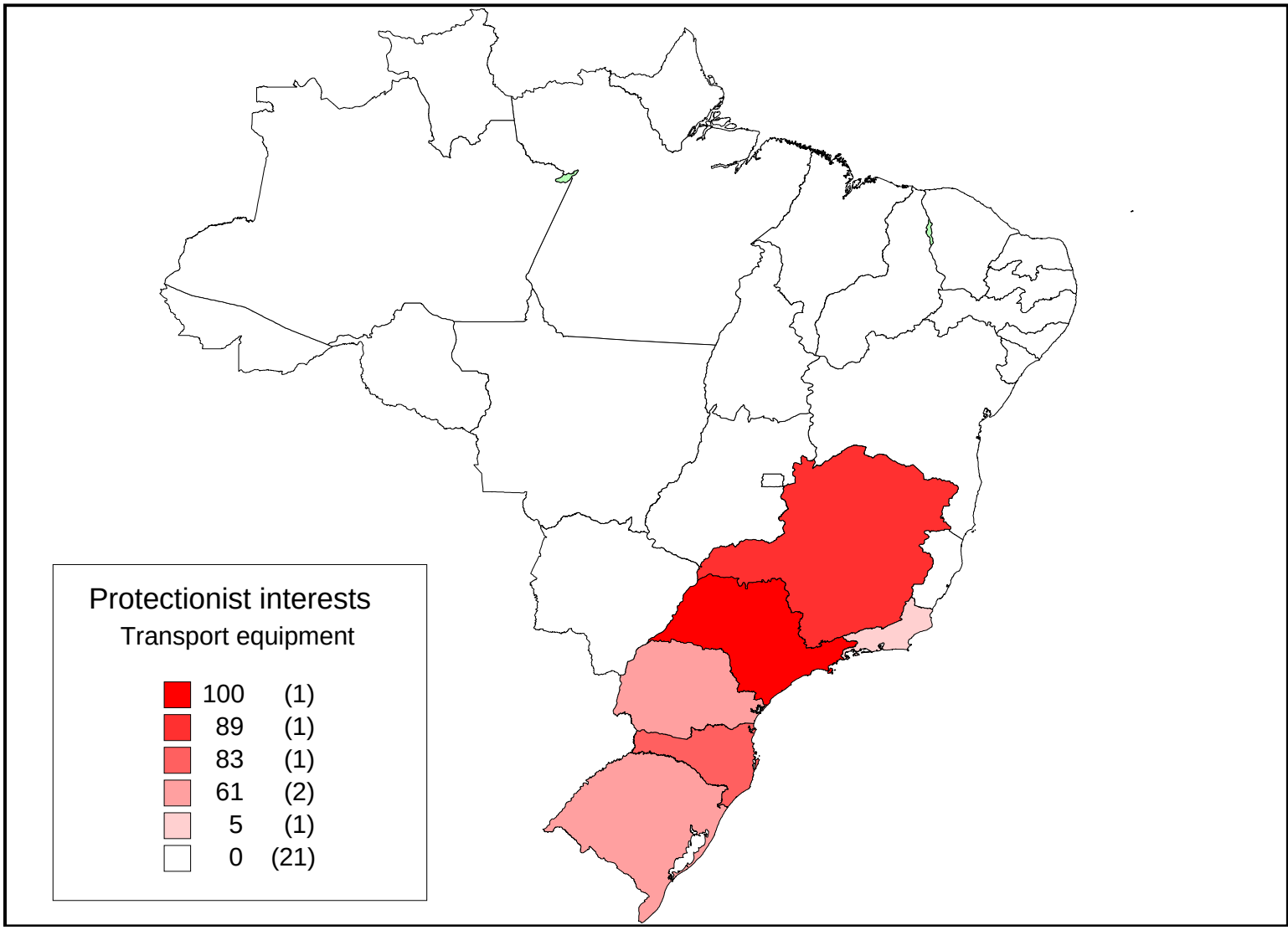
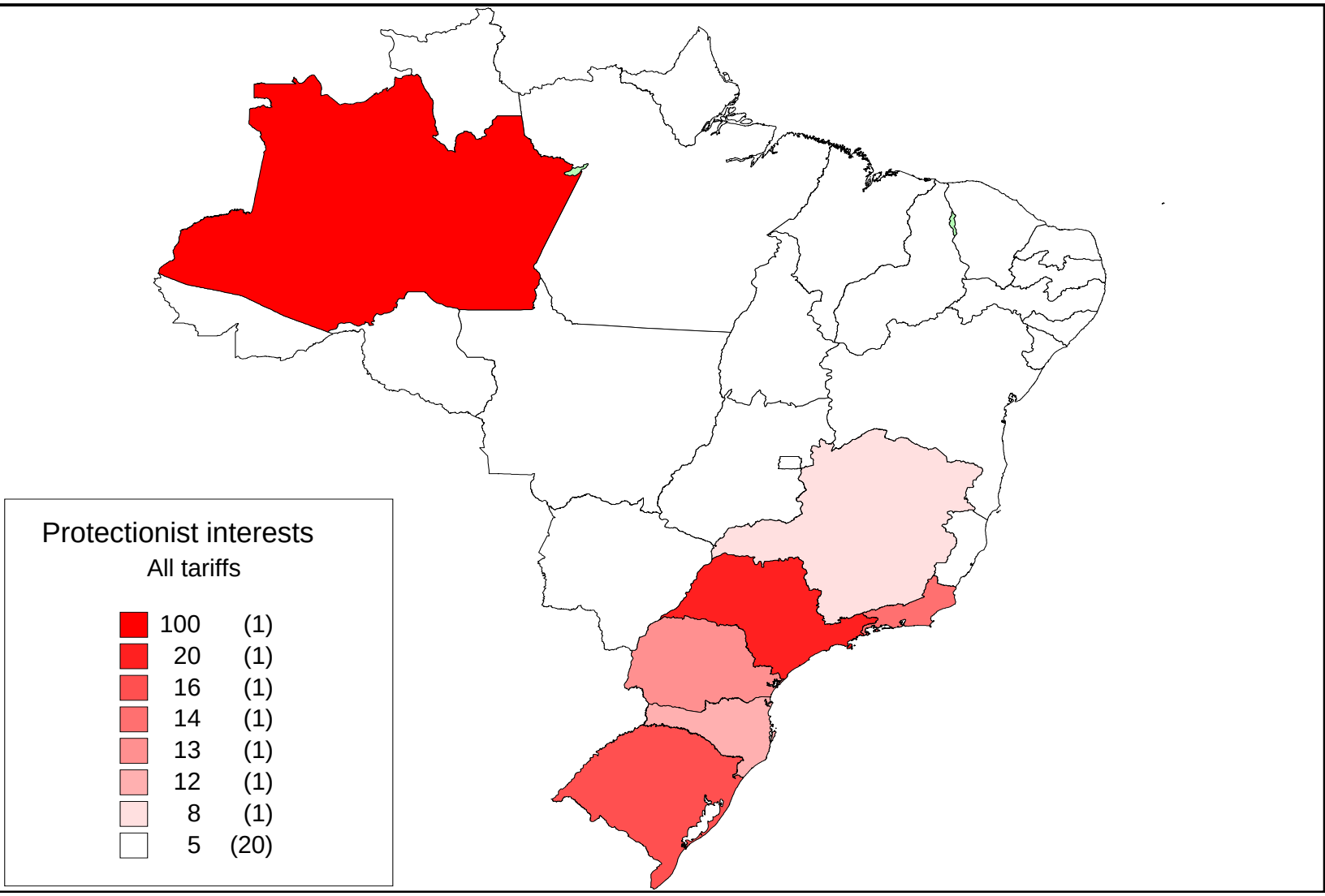


Figure 6.4 Brazil
Protectionist interests: all sectors



7. Export interests in Brazil

Export interests in Brazil are the same as sensitive imports from the US viewpoint. State shares in output were corrected by size of state GDP and normalized for a scale from 1 to 100. Three aggregate vectors of Brazilian export interests were generated. One related to tariff peaks in the United States. The second to tariff peaks and antidumping duties. The third to tariffs, antidumping duties and subsidies that affect agricultural products. These aggregates were obtained using weights based on the shares of sales in the United Sates in 1997 (Agricultural Census and Economic Census).

Data are presented in Table 7.1 for the nine products affected by tariffs and the corresponding aggregate and in Table 7.2 for products affected by antidumping (steel products) and subsidies (pork meat and soybeans) and the two relevant aggregates. Figures 7.1 to 7.10 present the data graphically for tariff protection, Figures 7.11 and 7.12 for antidumping protection and Figures 7.13 to 7.15 for protection related to agricultural subsidies.

For oranges, the output in states other than São Paulo was considered to be zero as it is known as the only state where oranges are produced for juice exports. For other products this was not done and in some cases as poultry and pork meat which are important for subsistence, some very poor states appear as having relevant export interests as our estimates of export interests are based on overall output to avoid the difficult problem of identifying the origin of imports by state.

Sugar export interests are widespread in the South, Northeast and Center West states. The concentration in Alagoas is a result of the low diversification of economic activity in that state. Corn-related interests include new and traditional states in the Center West (Mato Grosso, Mato Grosso do Sul and Goiás) and traditional states as Paraná and , to a lesser extent, other states in South Brazil. Tobacco is a major interest in Rio Grande do Sul and Santa Catarina. Export beef interests are also important in the Center West but extend to the North (Tocantins and Rondônia). Santa Catarina and Paraná are the major exporters

of poultry but the Center West states are rapidly gaining ground. Cotton interests are concentrated overwhelmingly in Mato Grosso.

The two industrial products affected by tariffs are footwear and heavy trucks. The traditional footwear exporter was Rio Grande do Sul but recently parts of the industry have moved to the Northeast (Ceará and Paraíba) seeking lower labor costs. Heavy trucks are mostly produced in the traditional industrial states in the Southeast (Rio de Janeiro and São Paulo) and in the South (mainly Paraná). In the aggregate for products affected by tariffs, export interests in Brazil are concentrated in the efficient agricultural producers of the Center West (Mato Grosso, Mato Grosso do Sul, Goiás) and Northern (Tocantins, Rondônia) regions. Other export interests tend to be diffuse.

Export interests related to steel products affected by antidumping are overwhelmingly located in Minas Gerais and Espírito Santo, and less importantly in Rio de Janeiro, in the Southeast. Those interests affected by agricultural subsidies, besides some also affected by high tariffs as corn, are pork meat and soybeans. The distribution of export interests for pork meat is affected by the subsistence argument already mentioned and this shows in the case of the states of Piaui and Maranhão. Otherwise export interests are diffuse. Export soybean interests are concentrated in the granary states in the Center West and in established producers as Paraná.

Overall export interests are little affected by these other forms of protection. As in the case of tariffs export interests are concentrated in the Center West and in the North. The main difference shown in Figure 7.15 (or 7.12 for that matter), when compared to Figure 7.10, is that Minas Gerais and Espírito Santo show stronger export interests.

Table 7.1
Brazil: export interests related to tariff protection in the United States

	Oranges	Sugar	Corn	Tobacco	Poultry	Beef	Cotton	Footwear	Heavy trucks	All products
Rondônia	0	0	23	0	28	76	1	0	0	48
Acre	0	0	11	0	28	27	0	0	0	19
Amazonas	0	0	0	0	3	2	0	0	0	10
Roraima	0	0	0	0	36	34	0	0	0	22
Pará	0	0	14	0	24	27	0	0	0	19
Amapá	0	0	0	0	0	0	0	0	0	0
Tocantins	0	2	17	0	14	82	0	0	0	51
Maranhão	0	5	20	0	46	27	1	0	0	21
Piauí	0	2	17	0	71	23	1	0	0	19
Ceará	0	2	7	0	31	6	0	100	0	9
Rio Grande do Norte	0	6	0	0	11	6	1	0	0	4
Paraíba	0	17	0	0	28	7	0	77	0	8
Pernambuco	0	15	0	0	22	3	0	0	0	3
Alagoas	0	100	3	36	14	6	1	0	0	7
Sergipe	0	5	3	8	14	6	0	0	0	6
Bahia	0	2	10	5	15	10	3	12	0	10
Minas Gerais	0	5	20	0	24	10	0	10	22	10
Espírito Santo	0	3	3	0	9	4	0	0	0	3
Rio de Janeiro	0	1	0	0	3	1	0	0	100	4
São Paulo	0	14	6	0	11	2	0	9	78	6
Parana	0	11	93	24	74	7	2	0	59	20
Santa Catarina	0	0	45	100	100	3	0	6	0	14
Rio Grande do Sul	0	0	36	87	43	8	0	97	11	16
Mato Grosso do Sul	0	18	100	0	59	100	11	0	0	75
Mato Grosso	0	26	79	0	43	85	100	0	0	100
Goiás	0	13	92	0	33	41	11	0	0	38
Distrito Federal	0	0	2	0	5	0	0	0	0	1

Table 7.2
Brazil: export interests related to products facing antidumping and subsidies in the United States

	Tariffs	Steel	Tariffs & AD	Pork meat	Soybeans	Tariffs, AD & subsidies
Rondônia	48	0	46	34	0	38
Acre	19	0	23	27	0	15
Amazonas	10	0	2	5	0	1
Roraima	22	0	0	23	0	0
Pará	19	0	18	20	0	15
Amapá	0	0	0	5	0	0
Tocantins	51	0	58	18	4	38
Maranhão	21	0	23	67	8	23
Piauí	19	0	23	100	4	23
Ceará	9	2	12	15	0	9
Rio Grande do Norte	4	0	6	5	0	4
Paraíba	8	0	12	5	0	8
Pernambuco	3	2	4	3	0	3
Alagoas	7	0	6	3	0	4
Sergipe	6	0	6	3	0	4
Bahia	10	4	12	11	3	10
Minas Gerais	10	45	41	8	2	27
Espírito Santo	3	100	73	4	0	44
Rio de Janeiro	4	17	17	0	0	10
São Paulo	6	4	9	1	0	6
Parana	20	2	17	17	15	22
Santa Catarina	14	0	12	30	1	14
Rio Grande do Sul	16	3	20	13	9	17
Mato Grosso do Sul	75	0	73	17	33	62
Mato Grosso	100	0	100	20	100	100
Goiás	38	0	35	14	21	35
Distrito Federal	1	0	0	1	0	1

Figure 7.1 Brazil
Export interests: oranges

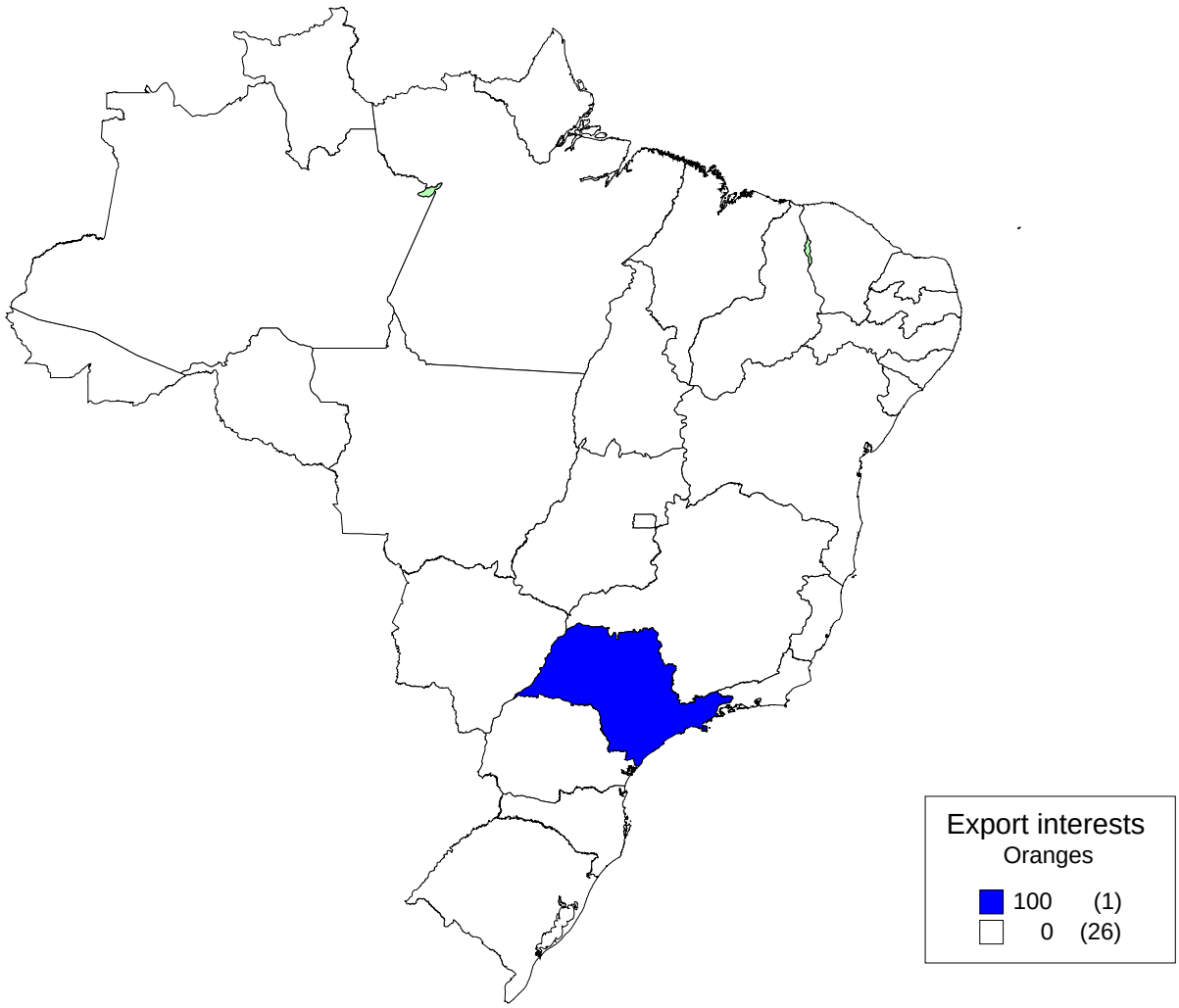


Figure 7.2 Brazil
Export interests: sugar

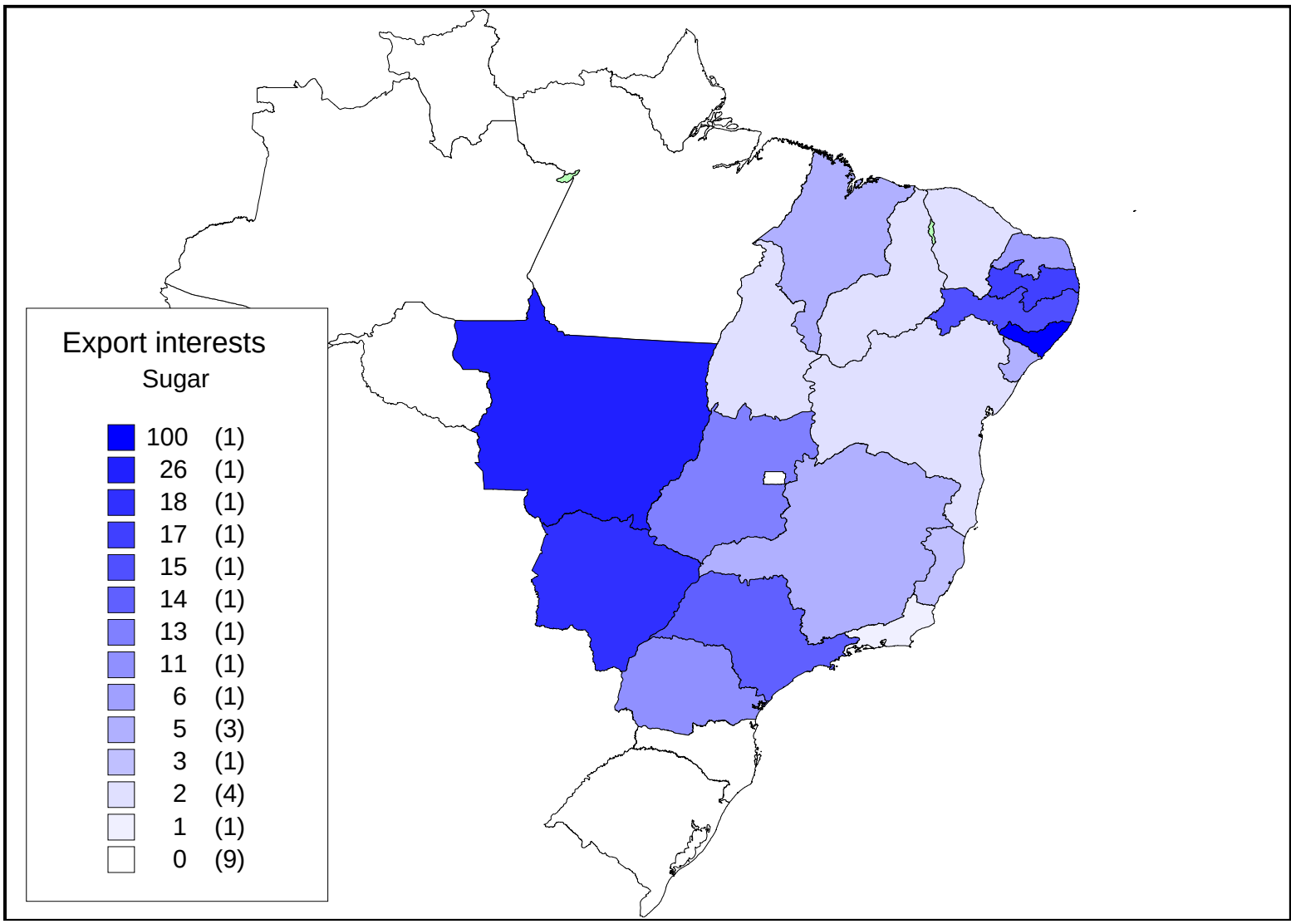


Figure 7.3 Brazil
Export interests: corn

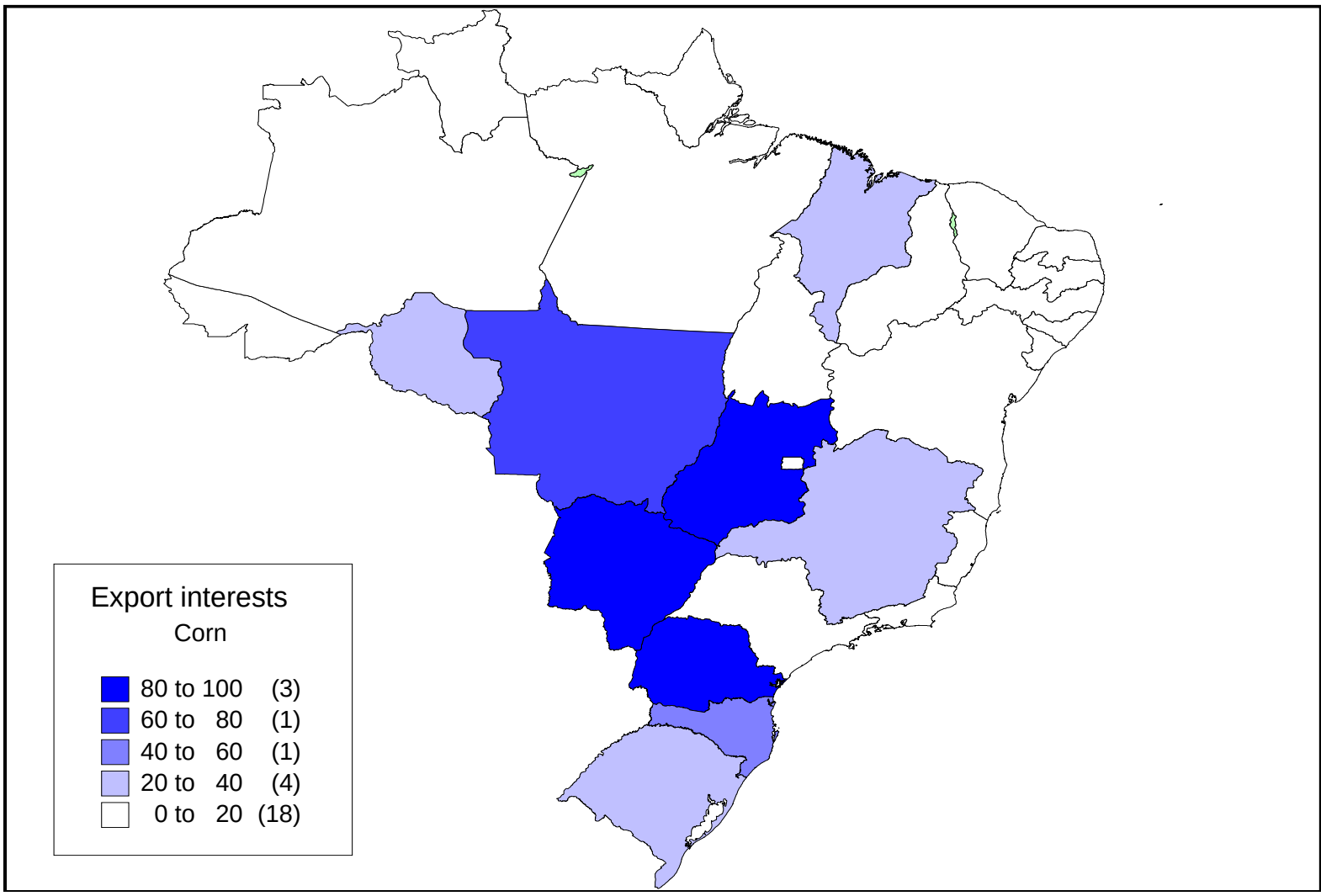


Figure 7.4 Brazil
Export interests: tobacco

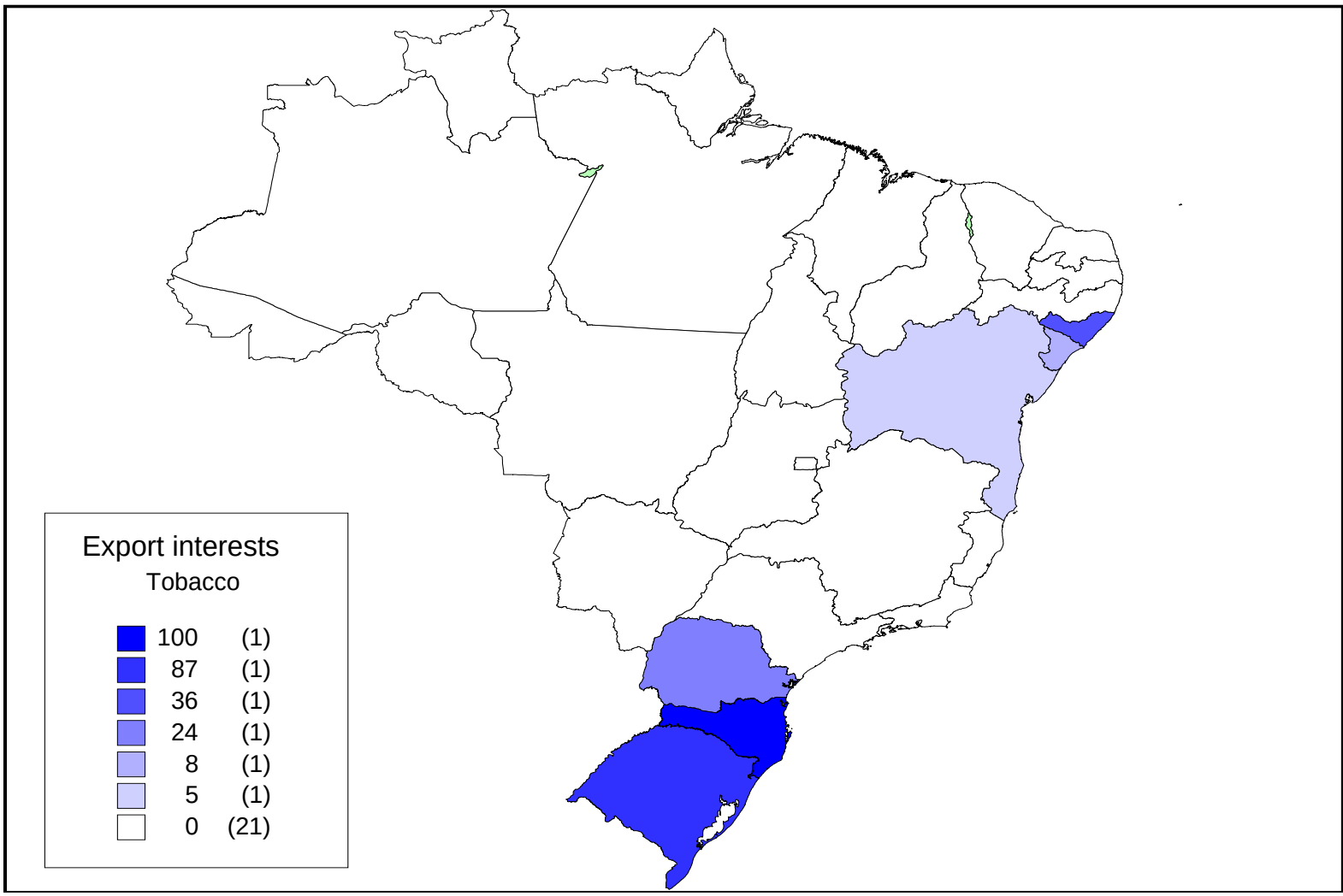


Figure 7.5 Brazil
Export interests: poultry

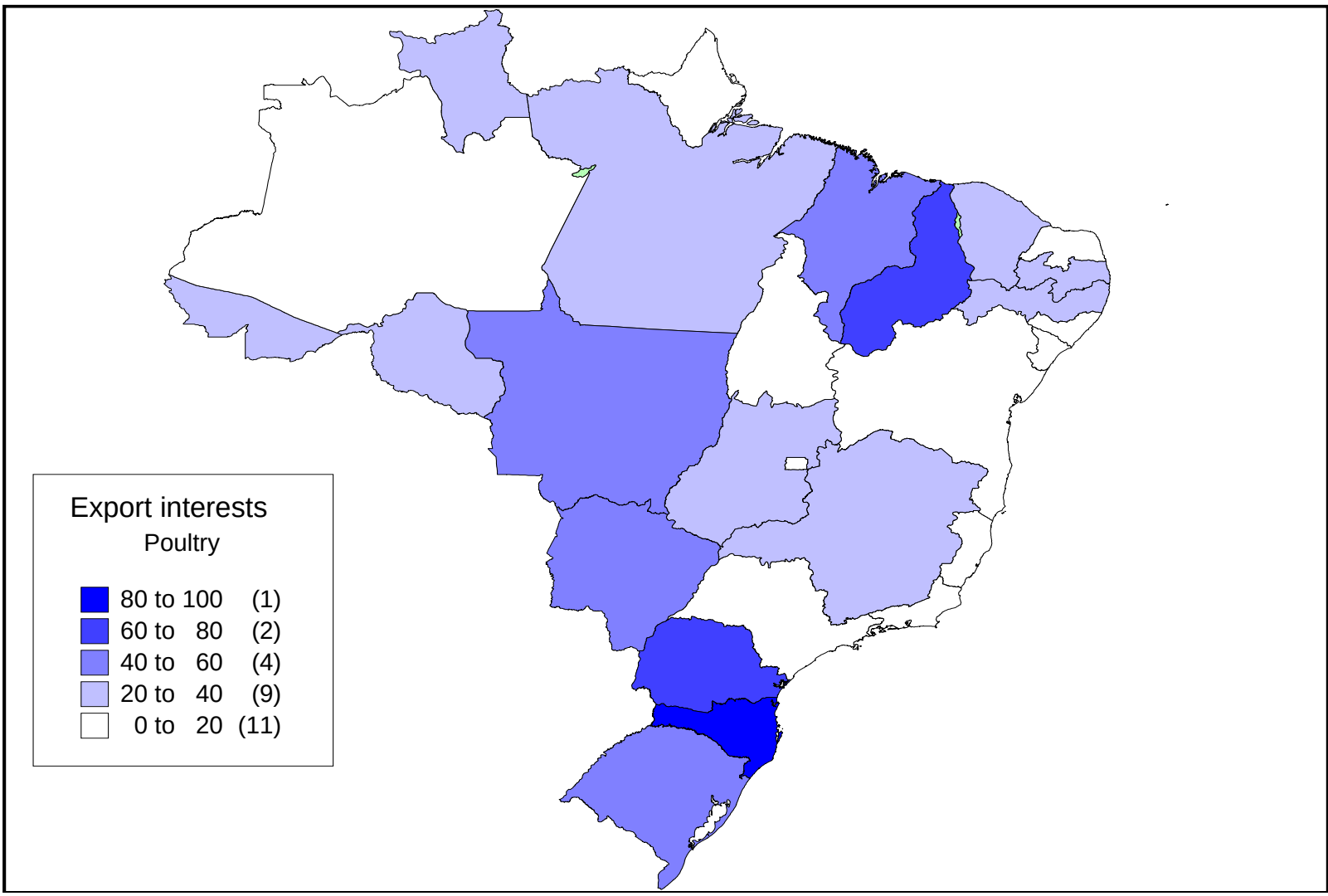


Figure 7.6 Brazil
Export interests: beef

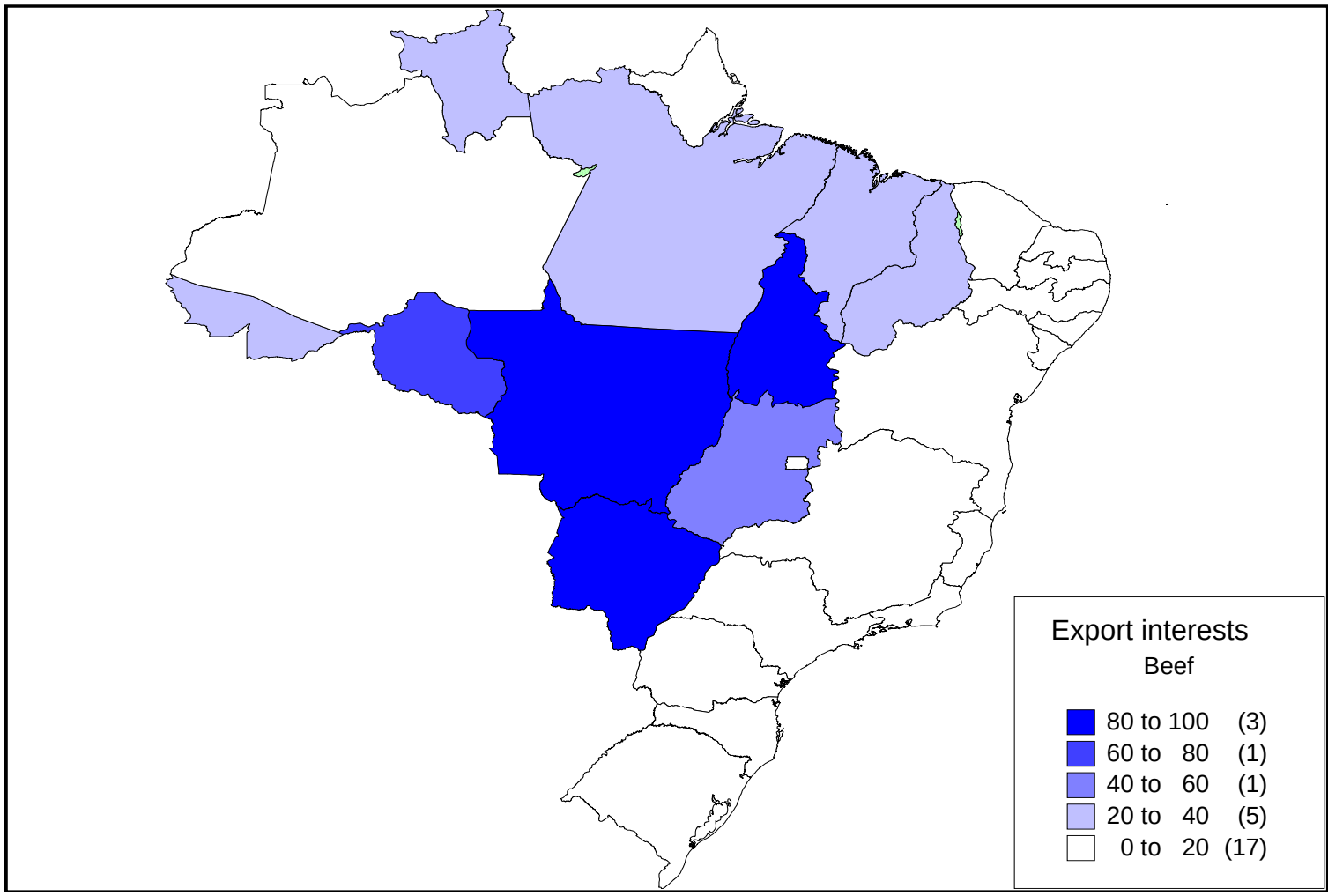


Figure 7.7 Brazil
Export interests: cotton

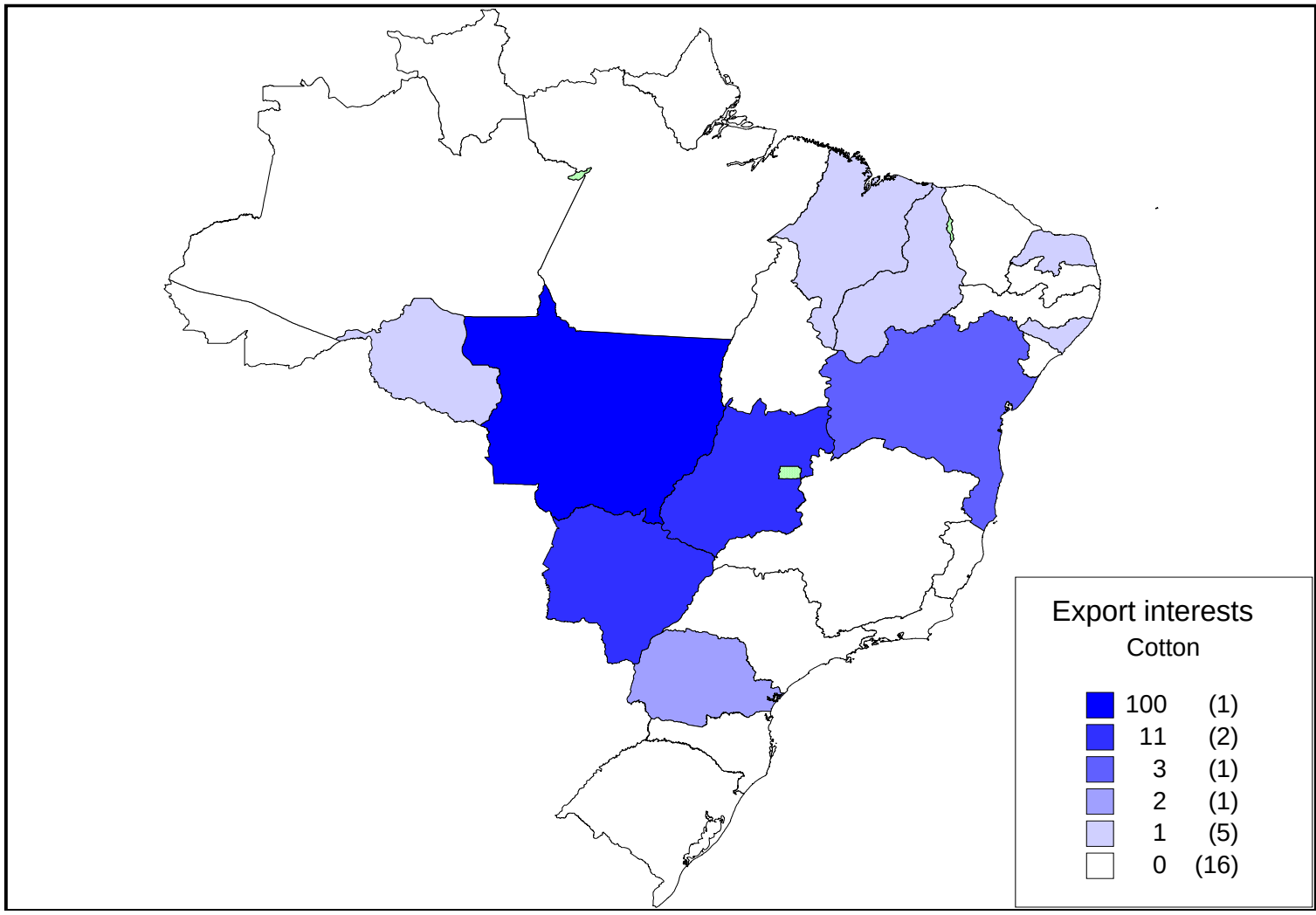


Figure 7.8 Brazil
Export interests: footwear

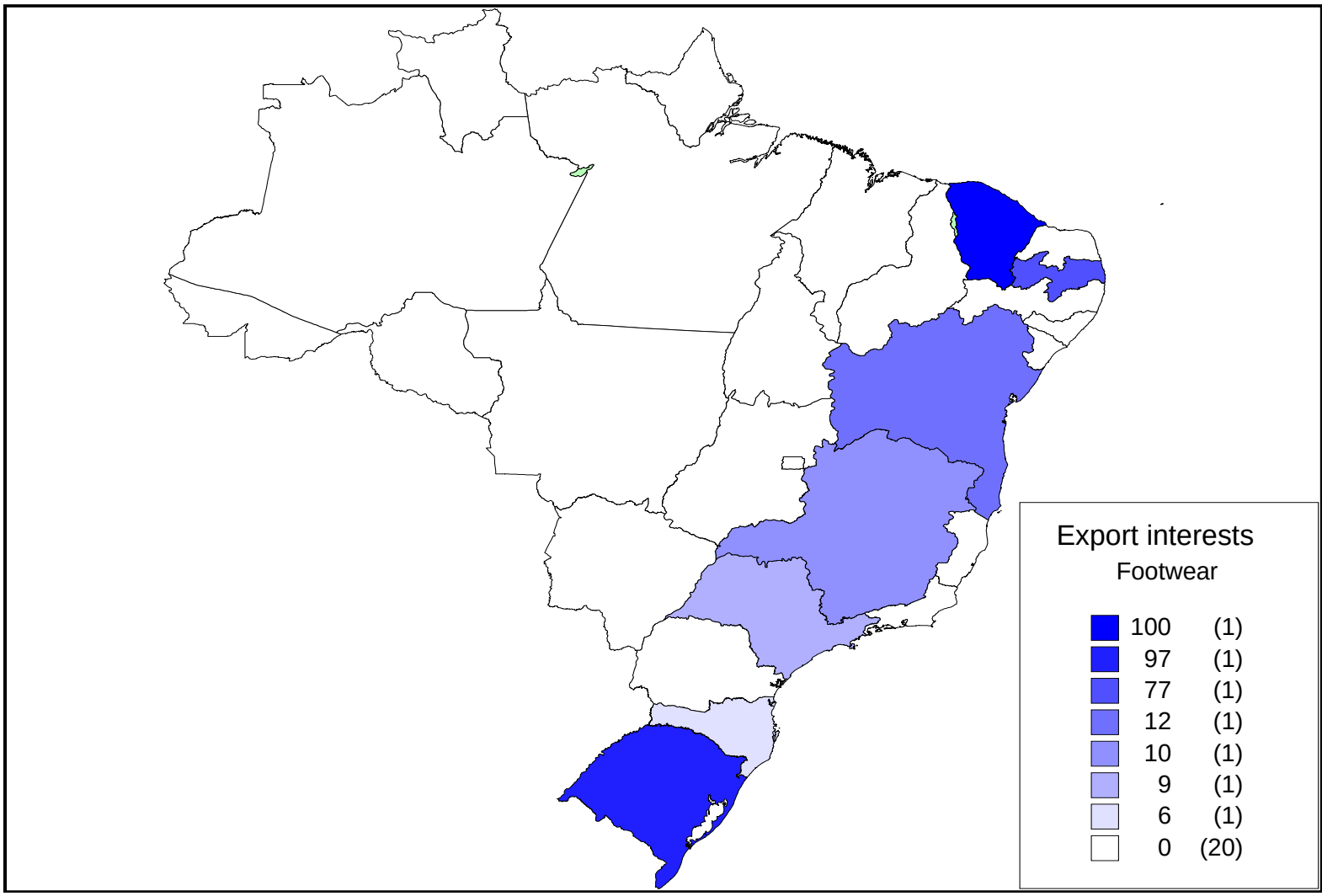


Figure 7.9 Brazil
Export interests: heavy trucks

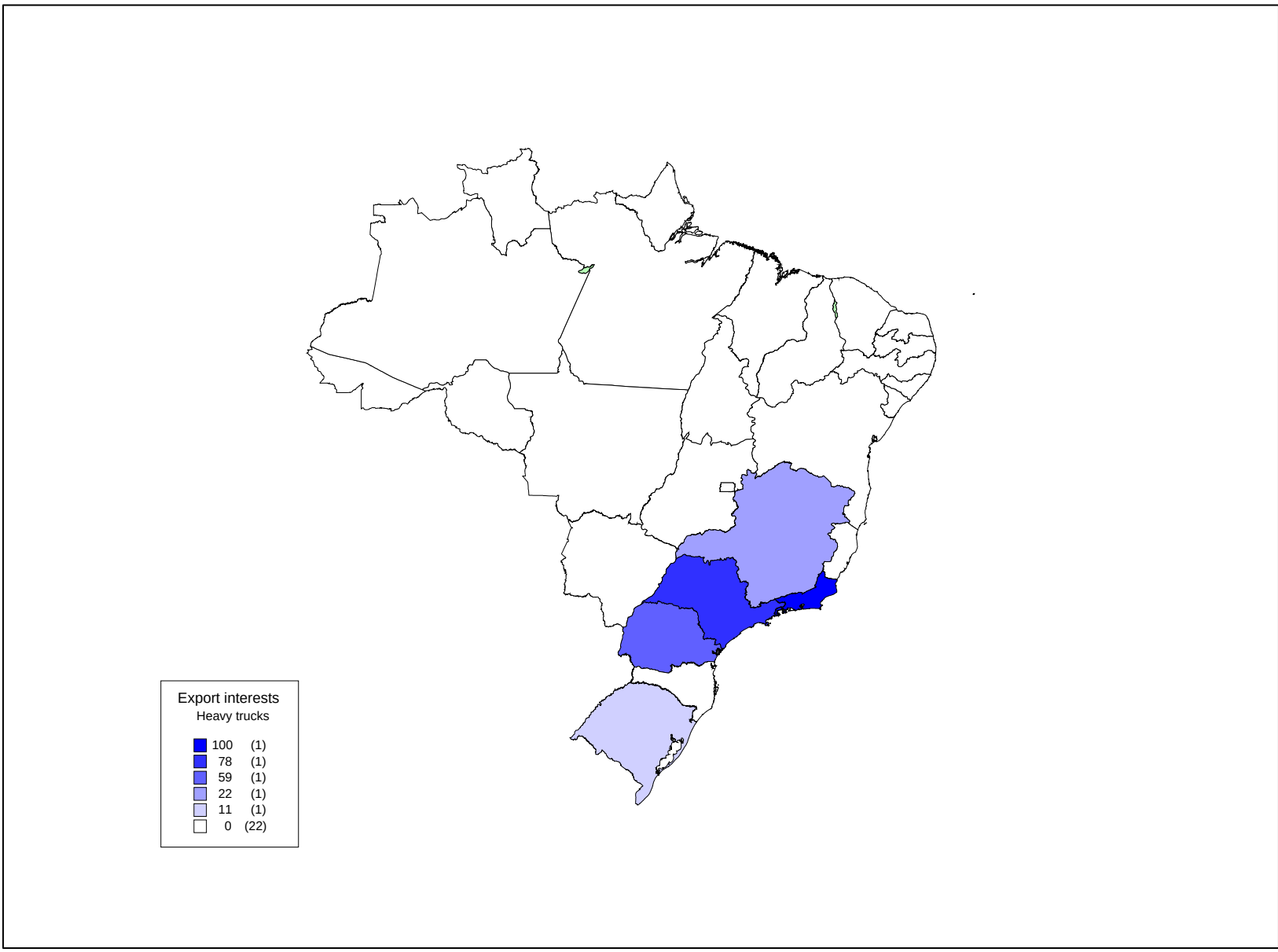


Figure 7.10 Brazil
Export interests: tariffs

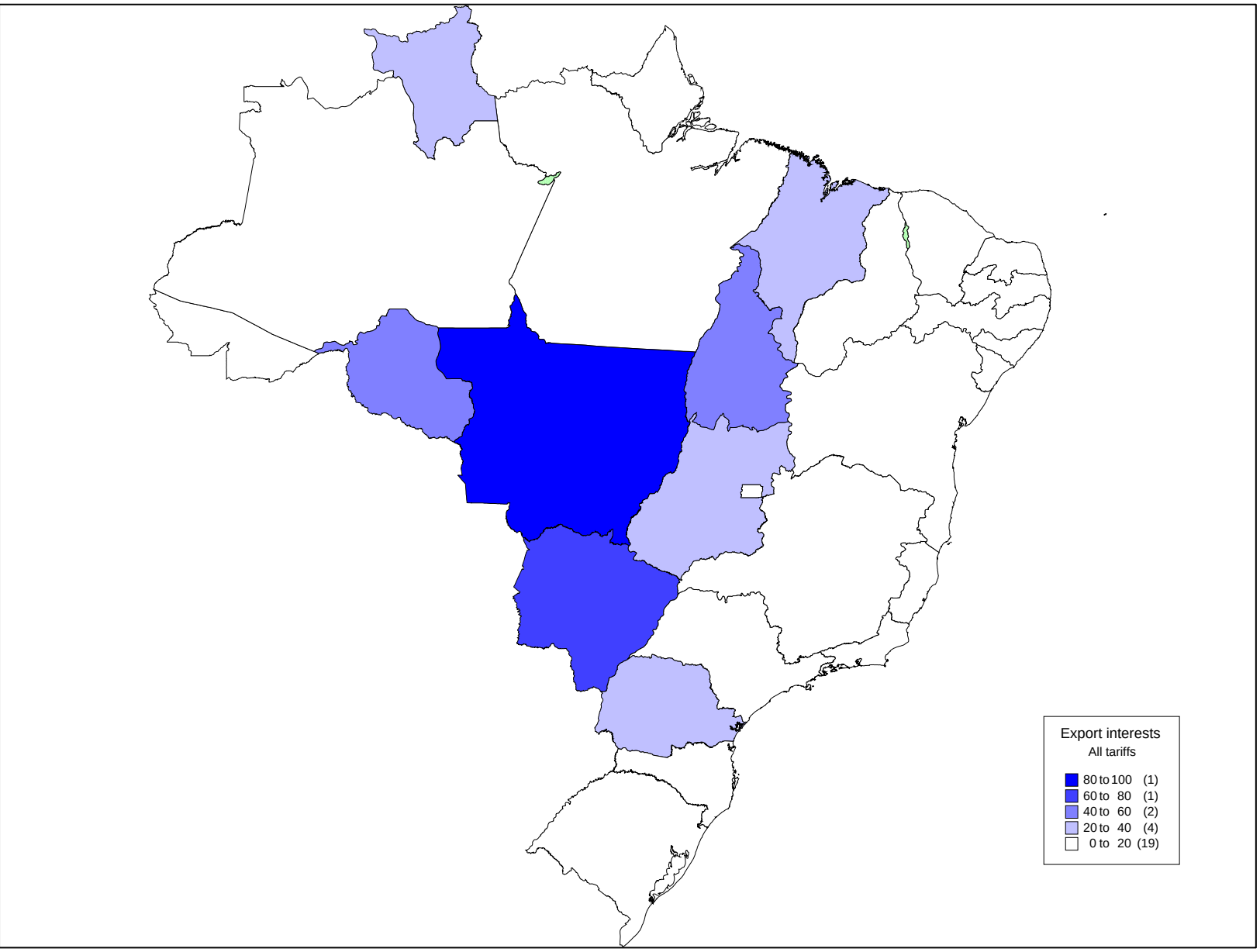


Figure 7.11 Brazil
Export interests: steel

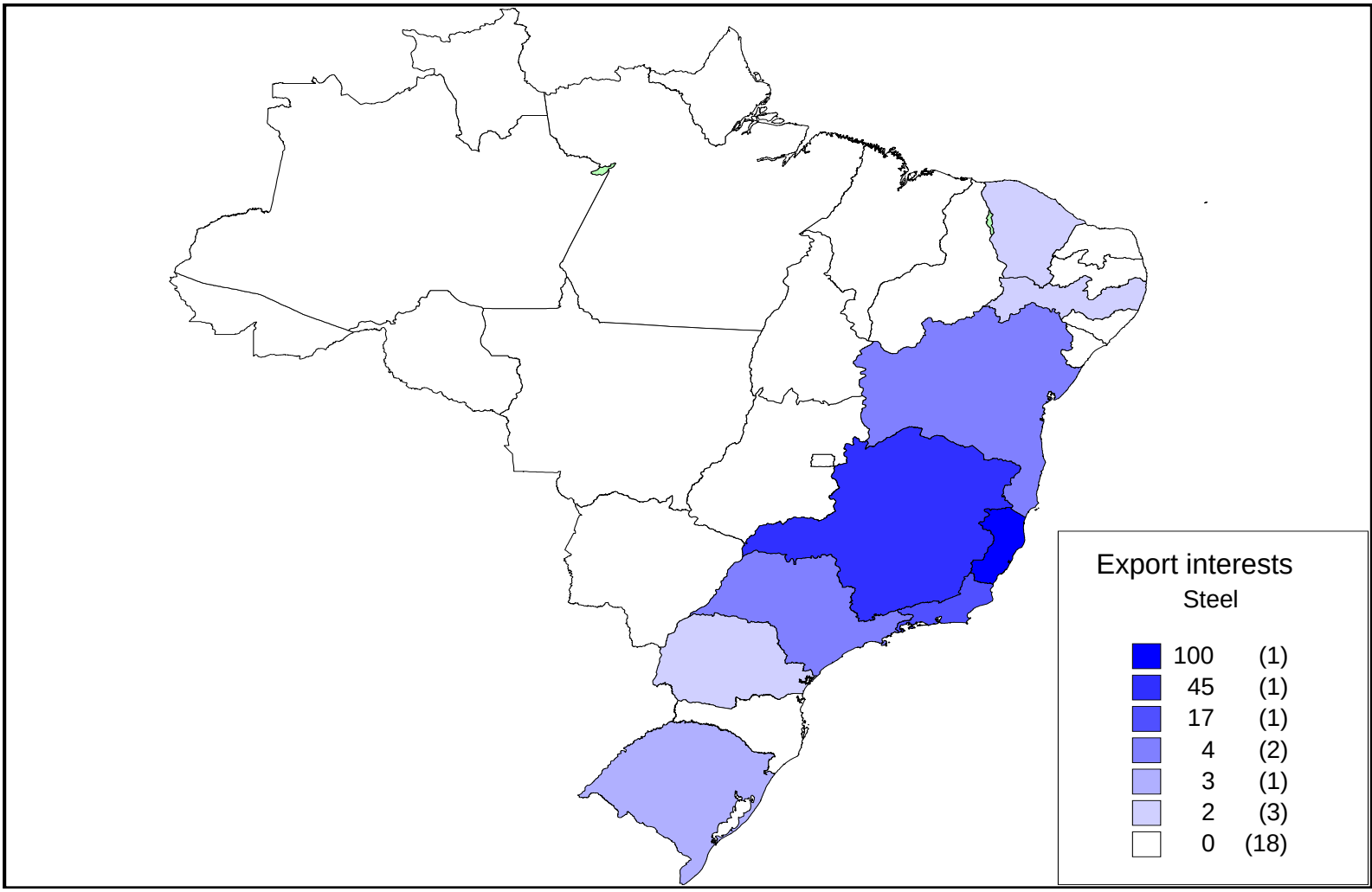


Figure 7.12 Brazil
Export interests: tariffs and AD

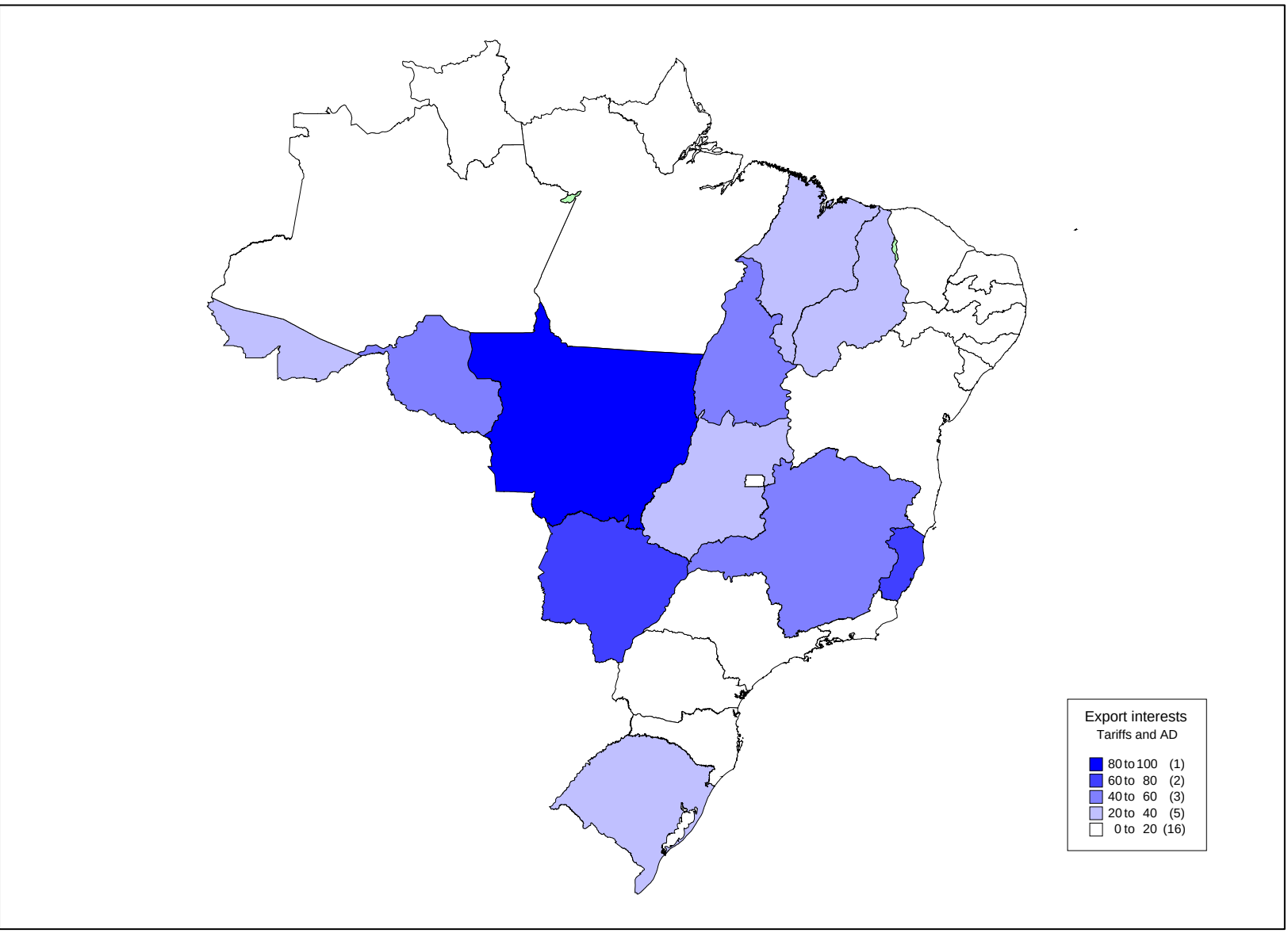


Figure 7.13 Brazil
Export interests: pork meat

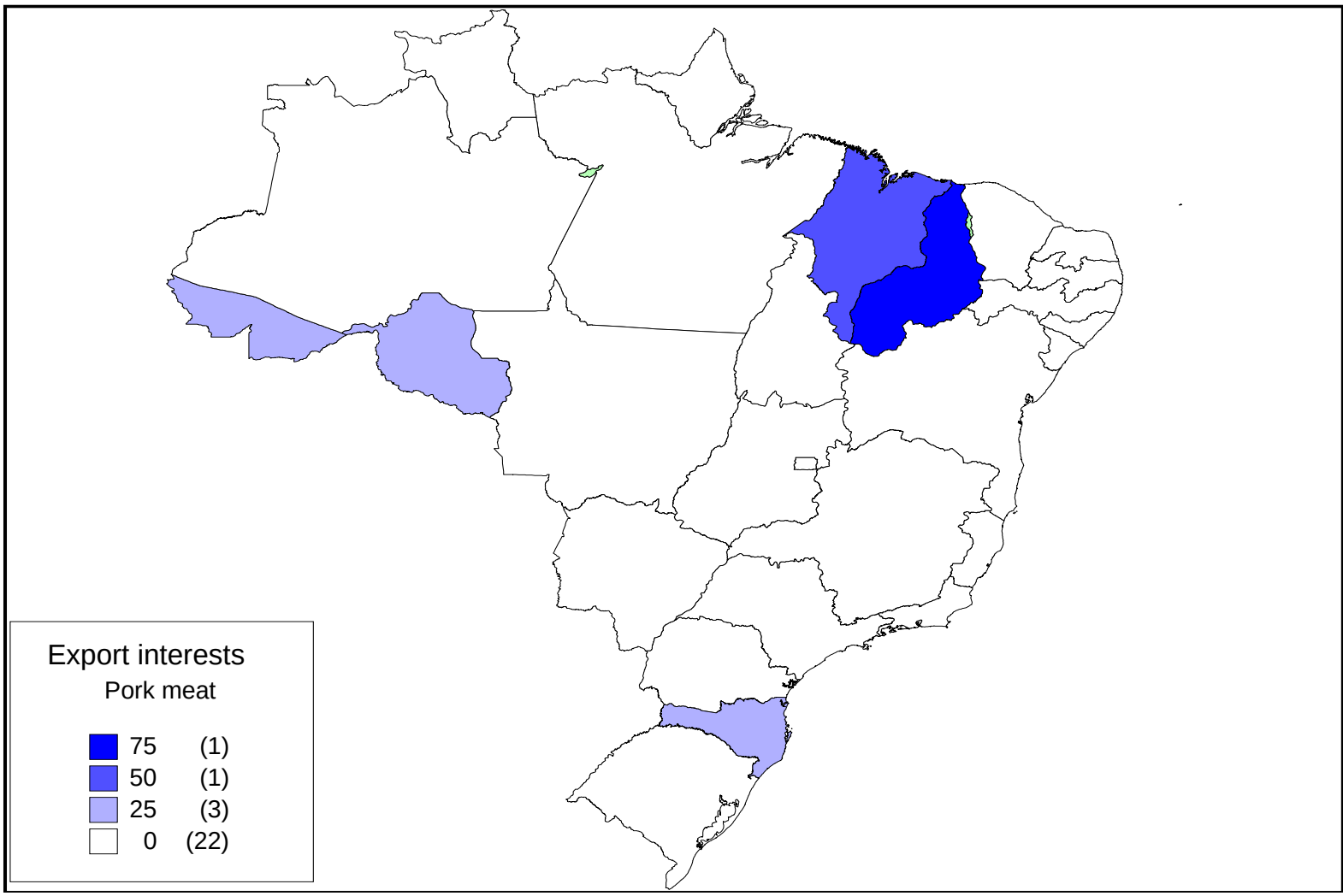


Figure 7.14 Brazil
Export interests: soybeans

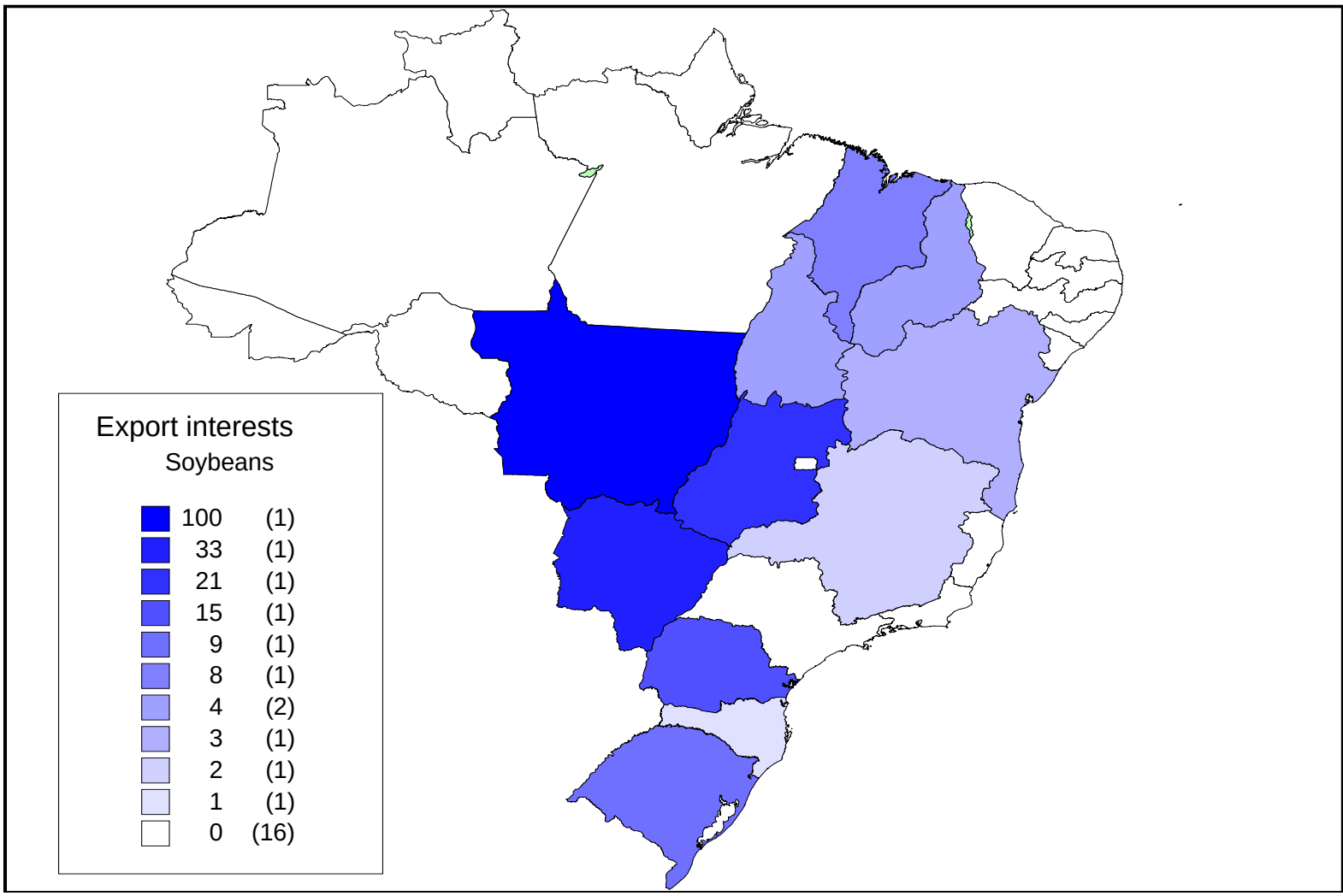
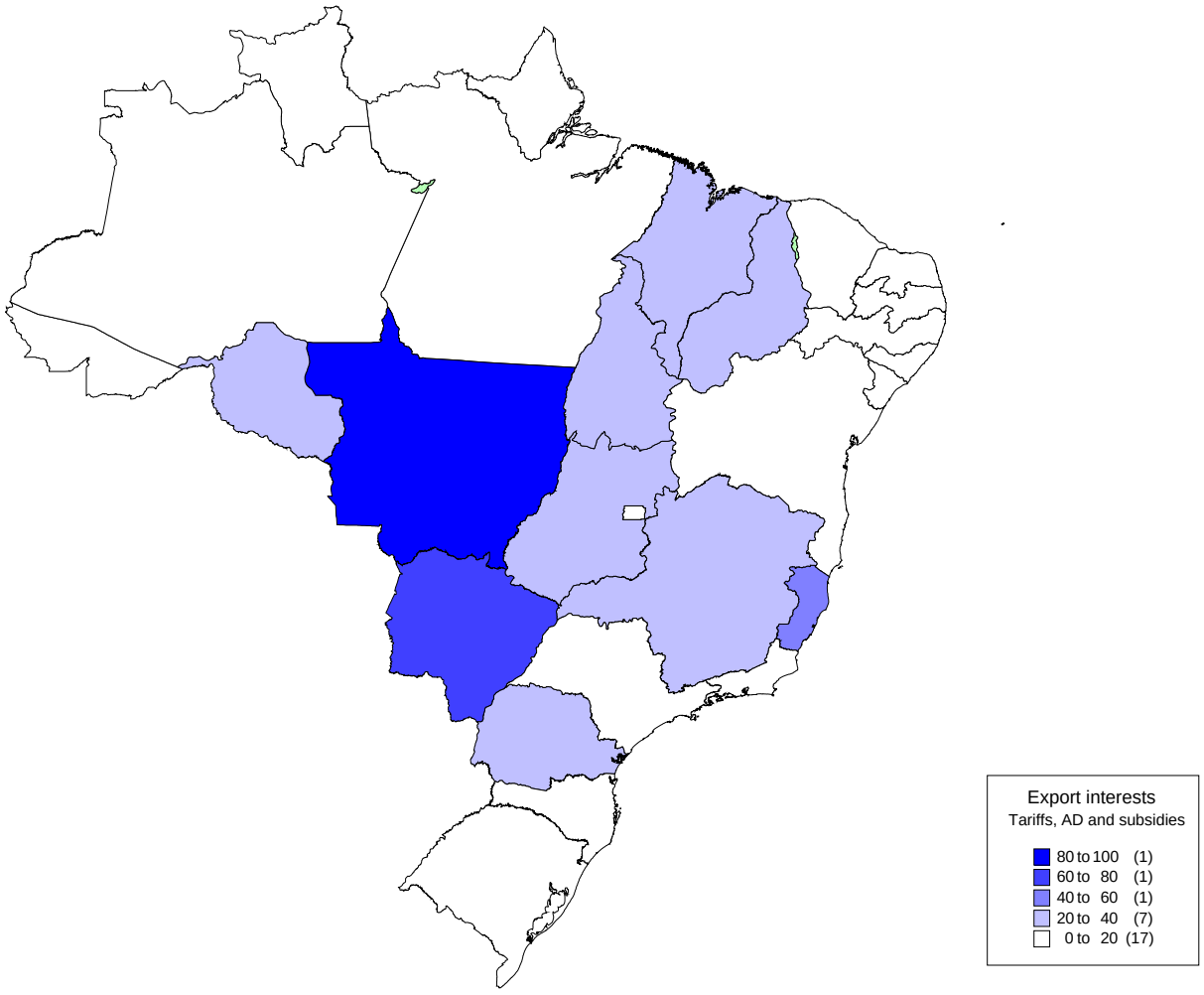


Figure 7.15 Brazil
Export interests: tariffs, AD and subsidies



8. Balance of interests in Brazil

The indices on protectionist interests for Brazil discussed in section 7 were superimposed to the indices on export interests presented in section 8 and the results normalized. The data presented in Table 8.1 summarize the findings for three alternative measures of export interests taking into account different instruments of protection in the United States: tariff-related protection only; tariff and AD-related; tariff-, AD- and subsidies-related protection. Figures 8.1 to 8.3 present the same information graphically.

Amazonas is the extreme case where the balance of interests is against trade liberalization as strong protectionist interests are not compensated by important export interests. In the other extreme are the states in central Brazil and Northern Brazil where the reverse is true: strong export interests are not countered by significant import protectionist interests. If account is taken of protection afforded by antidumping duties to the steel industry in the United States this group is reinforced by Minas Gerais and Espírito Santo, important steel producers.

As data on the balance of interests in Amazonas significantly influence the measurement of such interests in the other states, the last column of Table 8.1 presents data excluding Amazonas. The same information is presented in Figure 8.4. As expected, then São Paulo is the state where there is less net interest in the implementation of reciprocal trade liberalization between Brazil and the United States. Interests in favor of trade liberalization remain unchanged.

Table 8.1
Brazil: balance of interests between protectionist and export interests

	Tariff protection only	Tariffs & AD	Tariffs, AD & subsidies	Tariff protection excluding Amazonas
Rondônia	72	72	68	50
Acre	56	60	56	25
Amazonas	0	0	0	-
Roraima	58	48	48	27
Pará	56	58	56	25
Amapá	46	48	48	8
Tocantins	74	78	68	53
Maranhão	57	60	60	26
Piauí	56	60	60	25
Ceará	51	54	53	16
Rio Grande do Norte	48	51	51	11
Paraíba	50	54	53	15
Pernambuco	48	50	50	11
Alagoas	50	51	51	11
Sergipe	49	51	51	11
Bahia	51	54	54	8
Minas Gerais	50	68	61	11
Espírito Santo	48	86	71	14
Rio de Janeiro	43	52	49	12
São Paulo	41	45	44	0
Paraná	52	53	56	18
Santa Catarina	50	51	52	14
Rio Grande do Sul	49	53	52	12
Mato Grosso do Sul	86	86	80	74
Mato Grosso	100	100	100	100
Goiás	66	66	66	41
Distrito Federal	46	48	49	9

Figure 8.1 Brazil
Balance of interests: protectionist versus export (tariff-related) interests

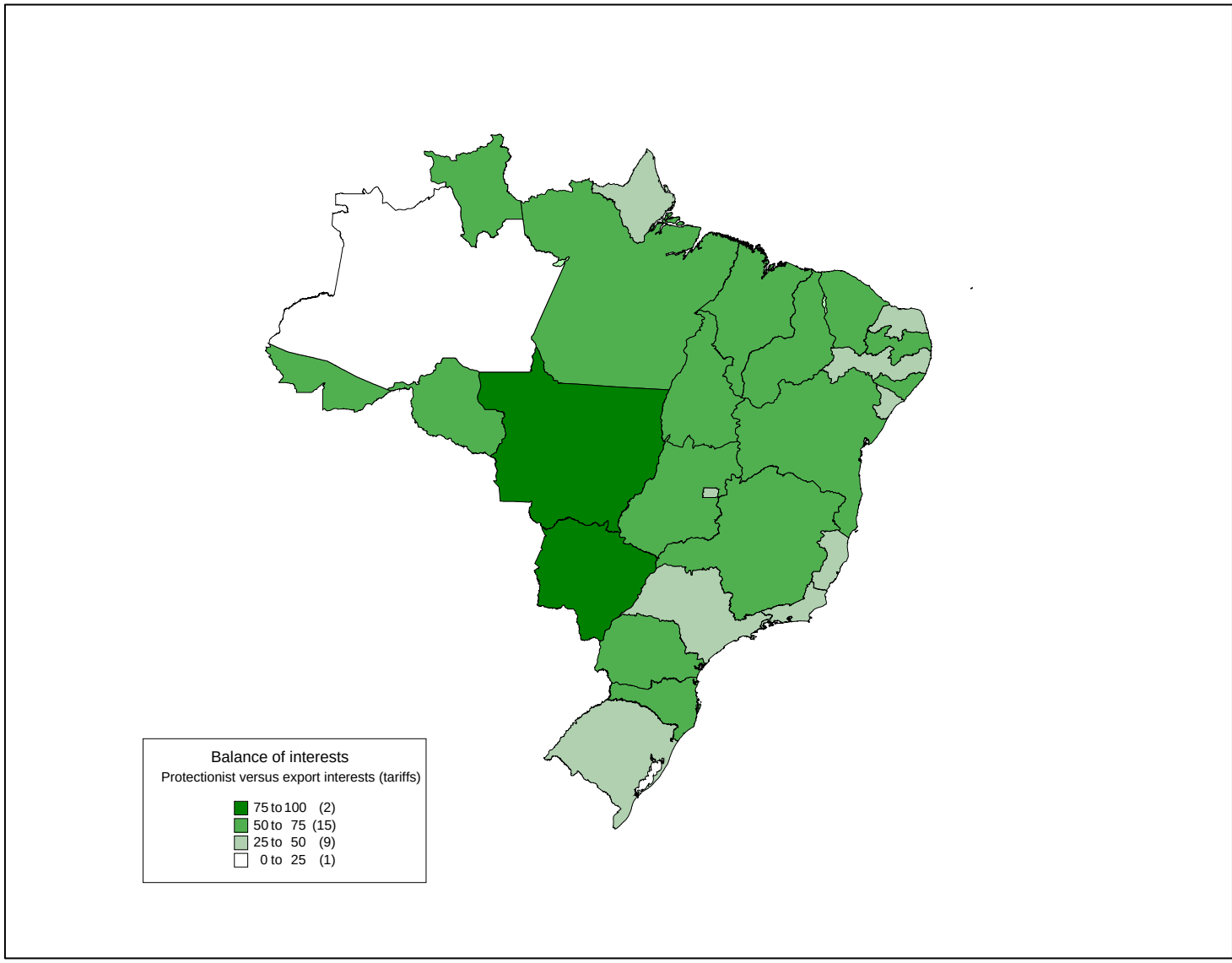


Figure 8.2 Brazil
Balance of interests: protectionist versus export (tariff- and AD-related) interests

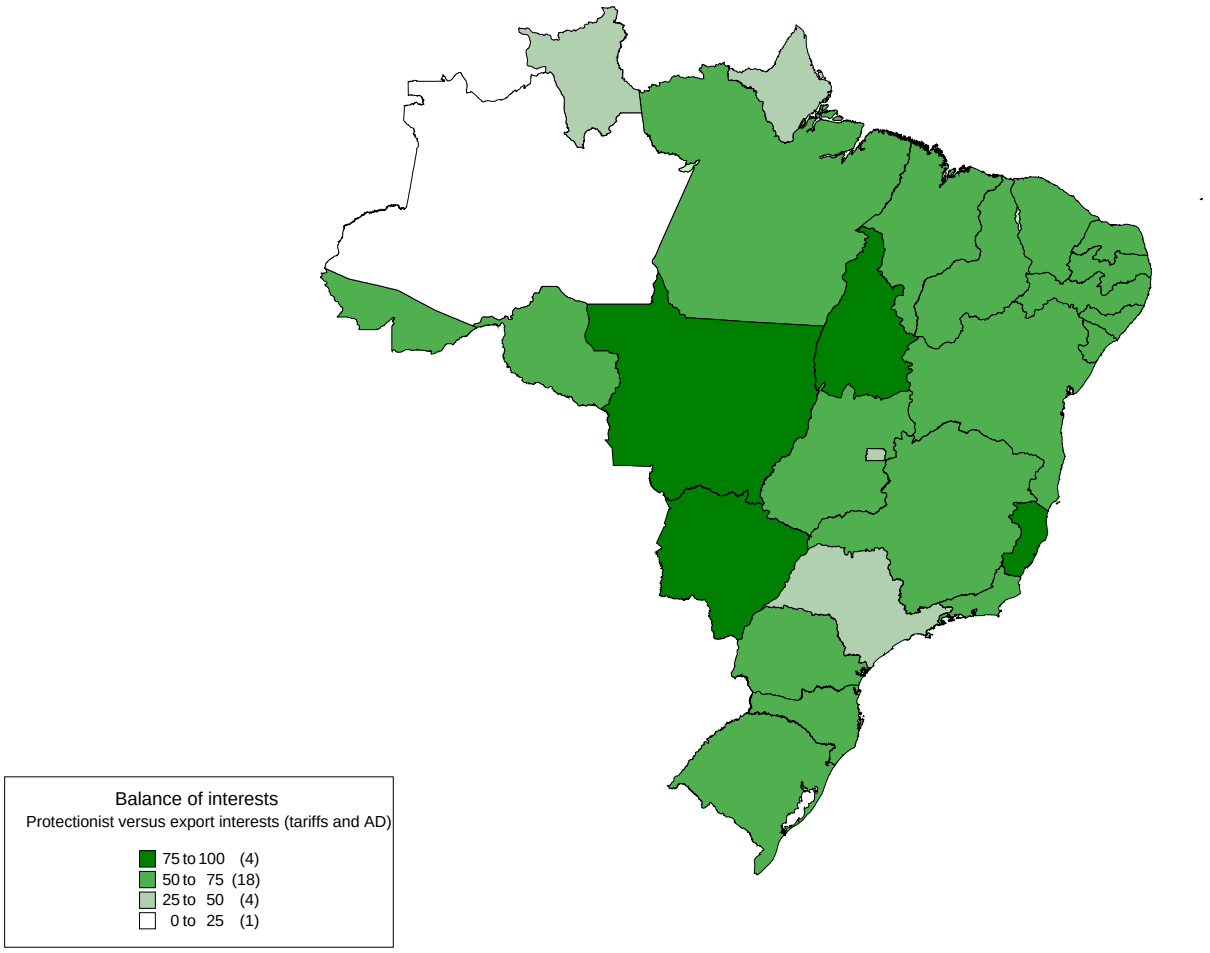


Figure 8.3
Balance of interests: protectionist versus export (tariff- , AD- and subsidies related) interests

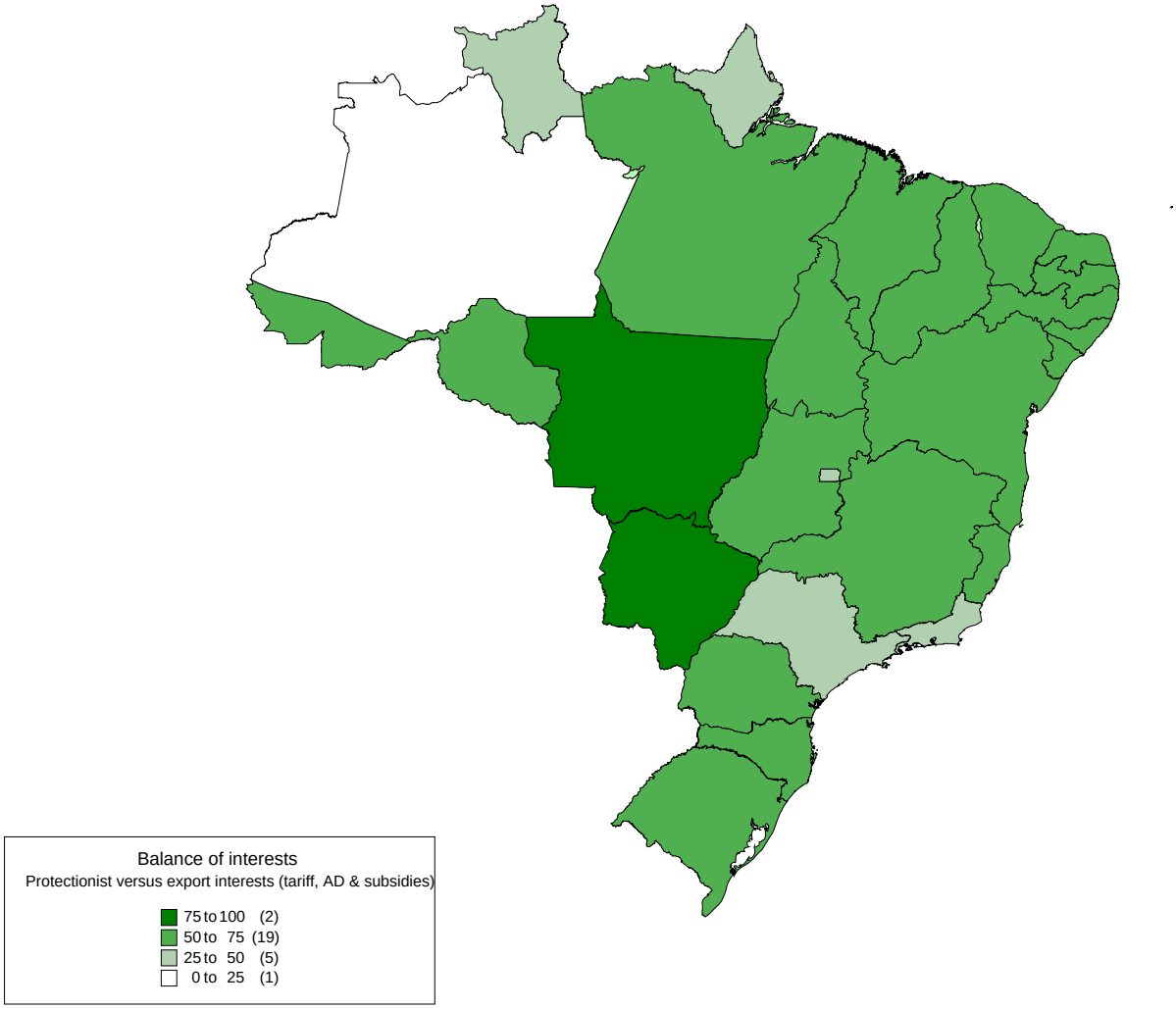
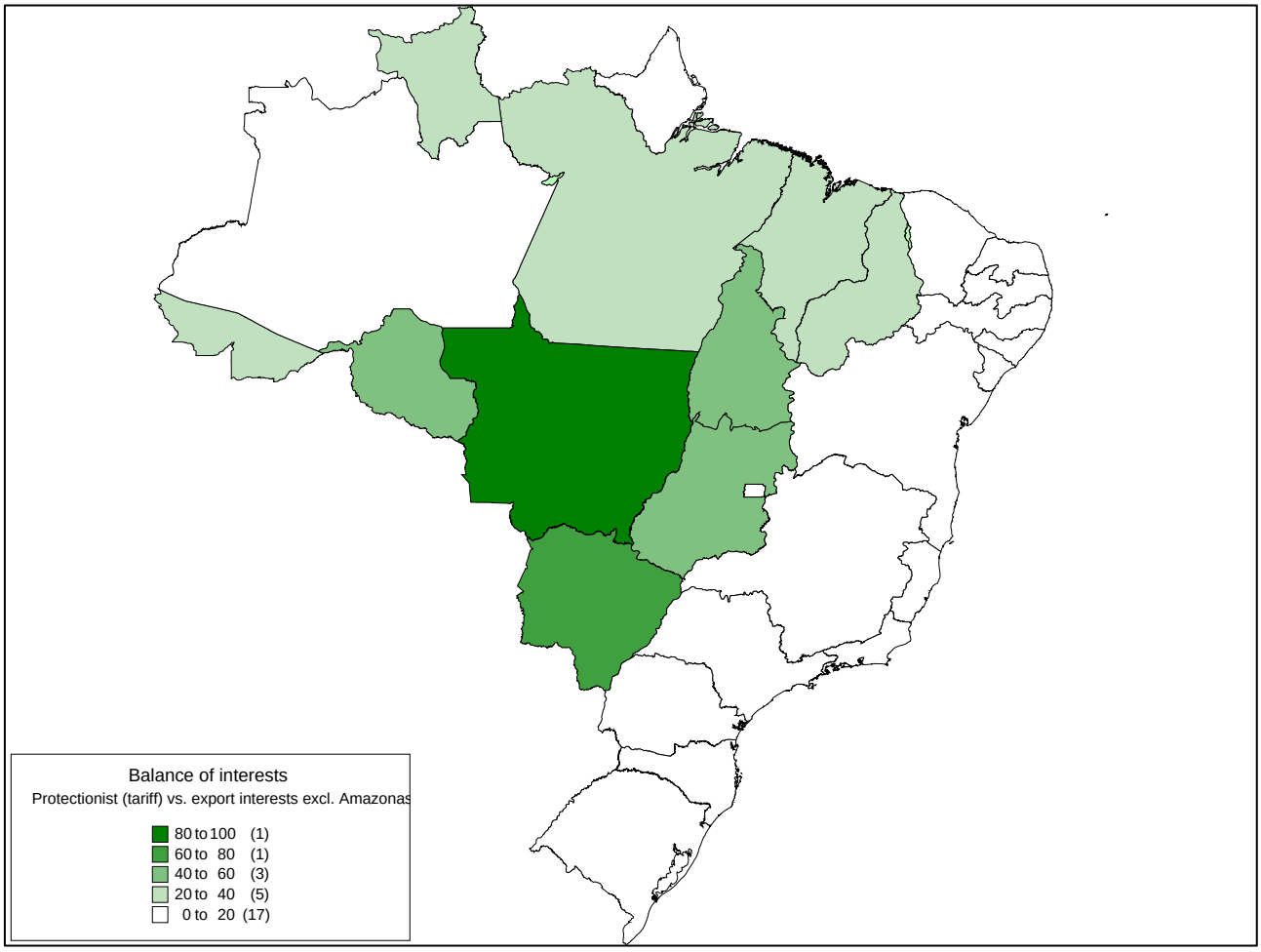


Figure 8.4
Balance of interests: protectionist interests versus export (tariff-related) interests excluding Amazonas



9. Conclusions

This study provides a framework for the analysis of the domestic distribution of interests involved in trade liberalization from a regional and a sectoral point of view. It shows the balance of interests in Brazil and the US in favor of trade liberalization considering three scenarios: tariff reduction; tariff reduction and removal of antidumping duties; tariff reduction, removal of antidumping duties and end of agricultural domestic support.

There are of course methodological shortcomings in the analysis. Criticisms can be made in relation to the assessment of state and sectoral export interests in the US and protectionist and export interests in Brazil by the distribution of sales or output corrected by size of state GDP. The determination of net interests is by its very nature also fragile and crude as there is no aggregation criterion easy to define. The analysis excludes upstream and downstream activities and so underestimates the retrenchment of protectionist interests. Trade liberalization would also affect the location of agricultural processing facilities. This is a heavily concentrated industry in the United States. Four firms answer for about ¾ of the output in beef slaughter, flour milling, soybean crushing and corn milling. Other relevant agriculture-related activities are also not considered and would be certainly affected by a contraction of agricultural production at least with the present mix: inputs (fertilizers, seeds, tractors), storage, food processing, marketing and sales, transportation. In the case of industrial products no allowances are made to accommodate problems related to rules of origin.

Many of the conclusions referring to protectionist and export interests concerning specific products are spread over the text and are not repeated here. In more general terms interests in favor of trade liberalization in the United States are located mainly in California, some of the Rust Belt states and Texas. This reflects export interests overwhelmingly concentrated in the electronic products including computers and, to a lesser extent, in transport equipment and electrical equipment. Interests against trade liberalization involving tariff protection affect most of the states in the South (especially Mississippi and Arkansas), Illinois, and in parts of the West North Central (Iowa,

Dakotas, Nebraska) and the Mountain West (Wyoming, Montana and Idaho). Interests against trade liberalization are also dominant in states where steel production is protected by AD duties (West Virginia, Pennsylvania and most of the Rust Belt). Some industrial products are also protected by tariffs (footwear and trucks), but steel products protected by AD legislation are much more important. These are also the regions where eventual reconversion programs involving land and manpower – and other possible side payments – should be concentrated.

In Brazil, trade liberalization interests are heavily concentrated in the agricultural Central West. Interests against trade liberalization are located in Amazonas – the Free Zone of Manaus – and, to a lesser in São Paulo, Rio de Janeiro and Rio Grande do Sul, if the focus is on tariff protection in the United States. If the focus expands to include AD and agricultural subsidies, net interests in favor of trade liberalization tend to be much weaker in Amazonas and São Paulo, and to a lesser extent Rio de Janeiro, than in all other states.

The number of lower house representatives likely to defend protectionist policy stances in Brazil and in the United States is not dissimilar. If anything, the number of *deputados* in Brazil directly concerned with protectionism, mainly in Amazonas and São Paulo (78 out of 512) is likely to be proportionately less important than in the United States where it may vary between one quarter and one third out of 435 representatives depending on the ambition of the trade liberalization proposed. But the political weight of São Paulo goes much beyond its share of representatives in the lower house as well indicated by last three presidential elections in Brazil.

There are important contrasts between Brazil and the United States to be taken into account. These tend to favor trade liberalization interests in Brazil rather than in the United States. Protectionist interests in the United States are concentrated in a relatively large number of states while export interests affect a small number of states with a large population. There is consequently a relatively large number of senators who tend not to favor dismantling protection. In Brazil what happens is the reverse: there are several states with a rather low population keenly interested in the opening up of export markets

in the United States while the number of states where there is likely to be strong commitment to protectionism is relatively small. The same is true of the lower houses. The Brazilian legislation of assuring a minimum representation of eight *deputados* for each state contributes to overrepresentation of the states where export interests are concentrated. Similarly, the cap of a maximum number of 70 *deputados* weakens the representation of São Paulo which is the one likely to be more interested in defending the protectionist interests. The electoral legislation in the US tends to introduce a bias in favor of protectionism, given the concentration of Brazil's export interests in agricultural and steel products, while the reverse is true in Brazil.

Cross border coalitions in favor of trade liberalization would ideally concentrate on the focus of favorable net interests in both economies. In a stylized vision: California electronics and Brazilian Central West efficient agriculture. The stylized mirror image of entrenched protectionist interests in both economies would include the inefficient agricultural and steel producers – South, West North Central, Mountain West, Illinois and Pennsylvania – in the United States and, in the other side, Amazonas and São Paulo in Brazil.

References

Abreu, M. de P., 'The political economy of economic integration in the Americas: Latin American interests', in A. Estevadeordal, D. Rodrik, A. Taylor, A. and A. Velasco *The FTAA and Beyond: Prospects for Integration in the America*, Harvard University David Rockfeller Center for Latin American Studies, Cambridge (Massachusetts) and London (England), 2004. [a]

Abreu, M. de P., 'The political economy of high protection in Brazil before 1987'. Buenos Aires: IADB-INTAL , Special Initiative on Trade and Integration Working paper SITI-08a, 2004. [b]

Abreu, M. de P., 'Trade liberalization and the political economy of protection in Brazil since 1987'. Buenos Aires: IADB-INTAL , 2004. Special Initiative on Trade and Integration Working paper SITI-08b, 2004. [c]

Bigwell Kyle and Robert W. Staiger, *The Economics of the World Trading System*, MIT Press, Cambridge (Mass.), 2002.

Center for Responsive Politics, www.crp.org.

Centro Brasileiro de Relações Internacionais, *The Free Trade Area of the Americas and the Brazil-U.S. Trade Agenda in the U.S. Congress*, study prepared for CEBRI by Renard P. Aron and Roxana Jordan, coordinated by Sandra Rios, [Washington D.C.], [2001].

Gilligan, Michel J., *Empowering Exporters: Reciprocity, delegation, and collective action in American trade policy*, Ann Arbor, University of Michigan Press, 1997.

Hiscox, Michel J., 'The Magic Bullet? The RTAA, Institutional Reform, and Trade Liberalization', *International Organization*, 53 (4), Autumn 1999.

Instituto Brasileiro de Geografia e Estatística, *Anuário Estatístico do Brasil 2001*, volume 61, Rio de Janeiro, 2003

Instituto Brasileiro de Geografia e Estatística, *Pesquisa Industrial 2001*, volume 20 número 1, Rio de Janeiro, 2001

Irwin, Douglas A., 'Reciprocity and the Origins of U.S. Trade Liberalization'in Jagdish Bhagwati (ed.), *Going Alone: The Case for Relaxed Reciprocity in Freeeing Trade*, MIT press, 2003

Jank, Marcos Jank et al (2003), 'Agricultural Liberalization in Multilateral and Regional Trade Negotiations', INTAL Working Paper SITI 03, 2003.

National Atlas, Congressional Districts 108th Congress, www.nationalatlas.gov.

Putnam, Robert D., 'Diplomacy and Domestic Politics: The Logic of Two-Level Games', *International Organization*, 42 (3), Summer, 1988.

United States Economic Census 1997, www.census.gov/epcd/www/econ97.htlm

United States Agricultural Census 1997, www.nass.usda.gov/census/index1997.htm

World Trade Organization, *Analytical Index. Guide to GATT Law and Practice*, volume 2, Geneva, 1995.

Annex 1
Criteria to include specific US states as relevant producers of selected products

	Leading producing counties	Number of leading states	Remarks
Tobacco	100 (72.1%)	20 (98.1%)	1 county (St Mary's, MD) in the list of leading counties but not in the list of leading states.
Cotton	100 (70.4%)	10 (91.6%)	4 counties (Orangeburg, SC; Jackson, OK; Monroe, AL; Southampton, VA) in the list of leading counties but not in the list of leading states.
Oranges	50 (100%) 2	2 (99.0%)	Many counties in California (oranges not for juice) and some in other states (also not for juice) in the list of leading counties but not in the list of leading states. But only Florida oranges are relevant for juice.
Corn	100 (28.4%)	20 (95.6%)	
Sugar beet	50 (84.0%)	10 (97.1%)	1 county (Malheur, OR) in the list of leading counties but not in the list of leading states.
Sugar cane	19 (96.4%)	4 (99.9%)	Only counties with more than 1% of US output included (1 TX;2 HW; 3 FLA; 13 parishes in LA).
Beef	100 (32.7%)	20 (83.2%)	Cattle and calves sold
Poultry	100 (65%)	20 (98.1%)	4 counties (Grant, WA; Yakima, WA: Sioux, IA; Malheur, OR) in the list of leading counties but not
Footwear		7 (60.3%)	Estimated sales based on estimated number of paid employees (middle of intervals) NAICS 31621 (Footwear manufacturing)
Heavy trucks		9 (83.5%)	Estimated sales based on estimated number of paid employees (middle of intervals) NAICS 336120 (heavy duty truck manufacturing). States where output was more than 5% of US output selected. All counties identified in the Economic Census were selected.
Steel products		7 (74%)	Estimated sales based on estimated number of paid employees (middle of intervals) NAICS 331111 (Iron and steel mills).States where output was more than 5% of US output selected. All counties identified in the Economic Census were selected.
Pork meat	100 (50%)	20 (96.1%)	Hogs and pigs other than feeder pigs sold
Soybeans	100 (27.3%)	20 (97.1%)	

Annex 2

Methodological remarks

US protectionist interests

1. Selection of products: Brazilian exports (5 or 6 digits HS) to the world above US$ 50 million in 2001 WITS (World Bank) facing tariff peaks in the United States US ITC (more than 15%).
2. Object of antidumping measures: WTO, ITC, Brazilian Embassy Washington.
3. Markets distorted by US subsidies: Jank (2003).
4. Determination based on Agricultural Census 1997 in which counties (50 or 100) in the main producing states (up to 20) sales of the products exceeded 10% of industrial sales. Economic Census 1997 for states where sales exceeded 5% of US total. These were deemed to be counties were protectionist interests were strong.
5. All congressional districts which contained in 1997 a county or part of a county with protectionist interests were deemed to be "protectionist".
6. Indices of protection reflect the share of protectionist CDs in total CDS.
7. These indices by product were aggregated avoiding double counting, that is CDs which were classified as protectionist based in more than one product were counted just once.
8. Three aggregates were generated including, respectively, tariff protection (T); tariffs and antidumping (TAD); tariffs, antidumping and products affected by subsidies (TADS).

US export interests

1. Products included: those at the 6-digit HS which faced tariff peaks of more than 15% in Mercosur (FTAA data base) and whose US exports to the world exceeded US 1 billion in 2001 (US DOC).
2. Identification of states where share of sales in total US sales exceed 10%. US exports in 2001 were distributed by state according the shares of sales by state in the 1997 Economic Census (NAICS 5 digit)
3. Both at the product level and for all exports data were normalized by the size of the economy of each state. A 0-100 range normalization was undertaken.

US balance of interests

1. The vector of protectionist interests was subtracted from the vector of export interests and the result normalized to 0-100 range.

Brazil

Protectionist interests in Brazil

1. Products as in US exports.
2. State distribution of output of relevant products (3-digit)
3. Normalization for state size.
4. Aggregation for all products weighted by composition of US exports to all destinations 2001.

5. Number 4 above also normalized for the 0-100 range.

Export interests in Brazil

1. Products as in US imports.
2. Shares of states in output corrected by size of state GDP.
3. Three vectors of export interests were generated: T, TAD and TADS, as defined above for the US.
4. Aggregates (T, TAD, TADS) weighted by shares in US sales

Balance of interests in Brazil

1. The vector of protectionist interests was subtracted from the vectors of export interests (T, TAD and TADS) and the results normalized to 0-100 range.

Table A3.1
United States: specific CDs affected by tariffs, AD and subsidies

	Affected CDs	Oranges	Sugar cane	Sugar beets	Corn for sugar	Tobacco	Poultry	Beef	Cotton	Footwear	Heavy trucks	Iron and steel products	Soybeans	Pork based in hogs
Alabama (7)	6	0	0	0	0	0	CD2 CD3 CD4 CD5	0	0	0	0	CD4 CD6 CD7	0	0
Alaska (1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arizona (8)	3	0	0	0	0	0	0	CD1 CD7	CD2 CD7	0	0	0	0	0
Arkansas (4)	4	0	0	0	0	0	CD2 CD3 CD4	0	CD1 CD4	0	0	0	CD1	0
California (53)	5	0	0	CD51	0	0	0	CD51	CD18 CD19 CD20 CD21	0	0	0	0	0
Colorado (7)	2	0	0	0	CD4	0	0	CD3 CD4	0	0	0	0	0	CD4
Connecticut (5)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware (1)	1	0	0	0	0	0	CD1	0	0	0	0	0	0	0
Florida (25)	6	CD13 14,15 16,23 25	CD16 CD23	0	0	0	0	0	0	0	0	0	0	0
Georgia (13)	9	0	0	0	0	0	CD1 CD2 CD3 CD6 CD7 CD9 CD10 CD12	0	CD2 CD3 CD12	0	CD8	0	0	0

Hawaii (2)	1	0	CD2	0	0	0	0	0	0	0	0	0	0	0
Idaho (2)	1	0	0	CD2	0	0	0	CD2	0	0	0	0	0	0
Illinois (19)	8	0	0	0	CD11 CD14 CD15 CD17 CD18 CD19	0	0	0	0	0	0	CD12 CD14 CD16 CD17	CD11 CD14 CD15 CD17 CD18 CD19	CD15 CD17 CD19
Indiana (9)	3	0	0	0	0	0	0	0	0	0	0	CD1 CD2	CD1	CD8
Iowa (5)	5	0	0	0	CD1 CD2 CD3 CD4 CD5	0	0	CD5	0	0	0	0	CD1 CD2 CD3 CD4 CD5	CD1 CD2 CD3 CD4 CD5
Kansas (4)	1	0	0	0	CD1	0	0	CD1	0	0	0	0	0	0
Kentucky (6)	4	0	0	0	0	CD1 CD2 CD4 CD6	0	0	0	0	0	0	0	0
Louisiana (7)	4	0	CD3 CD5 CD6	0	0	0	CD4 CD5	0	CD5	0	0	0	0	0
Maine (2)	2	0	0	0	0	0	0	0	0	CD1 CD2	0	0	0	0
Maryland (8)	2	0	0	0	0	CD5	CD1	0	0	0	0	0	0	0
Massachusets (10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Michigan (15)	4	0	0	0	0	0	0	0	0	0	0	CD11 CD13 CD14 CD15	0	0
Minnesota (8)	2	0	0	CD7	CD1 CD7	0	0	0	0	0	0	0	CD1 CD7	CD1 CD7
Mississippi (4)	3	0	0	0	0	0	CD2 CD3	0	CD2	0	0	0	CD2	0

							CD4							
Missouri (9)	3	0	0	0	0	0	CD7	0	CD8	0	0	0	CD8	CD6
Montana (1)	1	0	0	CD1	0	0	0	CD1	0	0	0	0	0	0
Nebraska (3)	2	0	0	CD3	CD1 CD3	0	0	CD1 CD3	0	0	0	0	CD1	CD1 CD3
Nevada (3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Hampshire (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey (13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico (3)	1	0	0	0	0	0	0	CD3	0	0	0	0	0	0
New York (29)	1	0	0	0	0	0	0	0	0	CD23	0	0	0	0
North Carolina (13)	10	0	0	0	0	CD1 CD3 CD5 CD13	CD5 CD8 CD9	0	0	0	CD6 CD12	0	0	CD1 CD2 CD3 CD7 CD8
North Dakota (1)	1	0	0	CD1	0	0	0	0	0	0	0	0	CD1	0
Ohio (18)	7	0	0	0	0	0	0	0	0	0	CD7 CD18	CD1 CD4 CD8 CD16 CD17	0	0
Oklahoma (5)	2	0	0	0	0	0	CD2	CD3	CD3	0	0	0	0	CD3
Oregon (5)	1	0	0	0	0	0	0	CD2	0	0	0	0	0	0
Pennsylvania (19)	11	0	0	0	0	0	0	0	0	0	0	CD3, 4 CD5, 6 CD7, 9 CD12 CD 14 CD16 CD17 CD18	0	0
Rhode Island (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

South Carolina (6)	1	0	0	0	0	CD6	0	0	0	0	0	0	0	0
South Dakota (1)	1	0	0	0	CD1	0	0	CD1	0	0	0	0	CD1	0
Tennessee (9)	2	0	0	0	0	CD6	0	0	CD8	0	0	0	0	0
Texas (32)	8	0	0	0	0	0	CD1 CD2 CD14	CD13 CD14 CD17 CD19	CD13 CD15 CD17 CD19 CD27	0	0	0	0	CD13
Utah (3)	1	0	0	0	0	0	0	0	0	0	0	0	0	CD3
Vermont (1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Virginia (11)	5	0	0	0	0	CD4 CD5	CD2 CD7	0	0	0	CD9	0	0	0
Washington (9)	1	0	0	0	0	0	0	CD4	0	0	0	0	0	0
West Virginia (3)	3	0	0	0	0	0	CD2	0	0	0	0	CD1 CD3	0	0
Wisconsin (8)	1	0	0	0	0	0	0	0	0	CD7	0	0	0	0
Wyoming (1)	1	0	0	CD1	0	0	0	CD1	0	0	0	0	0	0