

How Institutions and Geography Work Together to Shape Policy

Electoral institutions and economic geography work together to shape economic policy. Economic policy is agreed by incumbent politicians and government parties whose decisions are often influenced by a desire to win reelection. Incumbents' optimal reelection strategy depends on a country's electoral institutions. Economic geography defines the best means for incumbents to achieve their institutionally generated reelection strategy.

Economic geography and electoral institutions align at times to produce incentives for leaders to supply certain types of economic policies. In this chapter, I identify the conditions under which leaders face the greatest incentives to supply particularistic economic policies, such as subsidies. I discuss two mechanisms through which economic geography and electoral institutions work together to shape leaders' incentives: (1) effective vote maximization and (2) the nature of electoral competition.

Parties and politicians competing in democratic elections seek to maximize their effective votes – that is the votes needed to win office. To maximize their effective votes and consequently their chances of reelection, parties and politicians strategically employ economic policies. The efficacy of a particular economic policy for “effective vote maximization” depends on the geographic distribution of its beneficiaries. Policies that benefit geographically concentrated groups provide the best opportunity for politicians to maximize their effective votes in plurality systems. As a result, programs for geographically concentrated groups tend to be especially generous in plurality countries. In the United States, for example, where politicians win office by securing a plurality of votes in single-member districts, concentrated industries habitually win generous subsidies. US sugar cane farmers receive an extra \$369 million dollars a year from government-funded subsidies and nearly 60 percent of this money goes to just 17 growers in a single state: Florida (Beghin et al. 2003, Frieden et al. 2010). Similarly,

cotton producers concentrated in a single electoral district (the 19th district of Texas) won \$180 million dollars in subsidies from the government in 2014. Geographically concentrated producers of footwear and automobiles also receive generous government assistance in the United States.

Incumbents fund subsidies for business to win votes (Dewatripont and Seabright 2006, Buts, Jegers, and Jottier 2012). Subsidies engender economic benefits, which often garner votes for incumbents. Manufacturing subsidies, for example, benefit citizens who own production factors, such as labor or capital, used in manufacturing industries (Persson and Tabellini, 2003: 14). Subsidies raise producers' income beyond that which would be earned without intervention (Schwartz and Clements 1999). Subsidies can also increase wages to levels above those available in a purely competitive market (Mortensen and Pissarides 2001). Subsidies help to protect the industry from competition with lower-cost foreign imports and maintain wages and employment.¹

Subsidies have also been used to persuade producers to keep facilities open and to retain jobs which in other circumstances would not be viable (Sharp 2003). Subsidies to the British textile industry, for example, were funded by the government for precisely these reasons (Duchêne and Shepherd 1987, McGillivray 2004). Following a rapid increase in competition from foreign imports, the British government provided generous subsidies to the geographically concentrated textile industry in an attempt to maintain employment and wage levels in the industry (Duchêne and Shepherd 1987). More generally, subsidies can reduce the negative impacts of disturbances to the economy, economic downturns, or changes in trends. Subsidies may be necessary to help businesses survive, preserve jobs, and prevent the loss of skills. Subsidies can also help to “ensure the security of particular supply chain considered essential for the functioning of modern industrialized economy” (OFT 2009).² Sector-specific subsidies can also serve to improve export performance (Aghion et al. 2011, Stöllinger and Holzner 2016) and increase employment and investment (Criscuolo et al. 2012). In short, subsidies engender economic benefits, which may garner votes for incumbent politicians and parties.

¹ Other similar programs may include tax incentives, relief from industry-specific regulations, and industry-specific trade barriers. See, for example, Singer (2004).

² The Office of Fair Trading (OFT) was responsible for protecting consumer interests throughout the UK. It closed on April 1, 2014, with its responsibilities passing to a number of different organizations including the Competition and Markets Authority (CMA) and the Financial Conduct Authority.

Although subsidies engender economic benefits, they are not equally efficient at garnering votes in all circumstances. The efficacy of subsidies as a vote-winning policy tool depends on a country's electoral institutions and economic geography. In PR systems, parties maximize their effective votes by assisting geographically diffuse groups. Subsidies to diffuse groups enable parties to compete for votes in large areas of the country. In PR systems with multiple electoral districts, winning votes across the entire country helps parties maximize the number of seats they hold in parliament. Although focusing exclusively on geographically concentrated groups may increase a party's vote share in a given district, it limits the national appeal of a party and consequently the number of legislative seats a party could win. In Norway, for example, a party called People's Action Future for Finnmark (*Folkeaksjonen Framtid for Finnmark*) focused entirely on improving economic conditions for the fishing industry in Finnmark and subsequently won 21.5 percent of the vote in the district in 1989 (Aardal 2011). However, the party won just 0.3 percent of the national vote.

Seeking assistance for geographically concentrated groups, like Finnmark's fishing industry, can limit the national appeal of parties and consequently their share of the national vote. As a result, parties that pursue geographically targeted programs may fail to cross national vote-share thresholds, which are required in many PR countries. These thresholds stipulate that political parties must win a minimum share of the national vote in order to hold any seats in parliament. In Slovenia, for example, the threshold is 4 percent, as required by the National Assembly Elections Act of 2000. Legislative seats are apportioned only to political parties that reach the 4 percent threshold. Similar thresholds exist in other PR countries; in Poland, Germany and New Zealand, for example, the threshold is 5 percent and in Sweden, there is a nationwide threshold of 4 percent. Because of the national vote-share thresholds that exist in many PR countries, parties cannot afford to focus their attention on geographically concentrated groups because doing so may effectively exclude them from parliament.

By focusing on geographically concentrated groups, parties fail to maximize the number of legislative seats they could win in a PR system. For example, the Norwegian party People's Action Future for Finnmark (*Folkeaksjonen Framtid for Finnmark*) demanded increased government assistance for the fishing industry, which was concentrated largely in the northeastern region of Finnmark (Aardal 2011). The party won 21.5 percent of the vote in the district of Finnmark in 1989 and as a result, the party won one of the district's legislative seats (Aardal 2011). However, the party was not eligible for any of the seats allocated

at the national level (i.e. compensatory seats) because it failed to clear the national threshold of 4 percent. As this example illustrates, parties competing in PR systems have powerful incentives to pursue votes across the country. To maximize their effective votes and consequently the number of legislative seats they hold, parties in PR systems work to assist geographically diffuse groups.

Given these incentives, I hypothesize that government-funded programs will be relatively more generous in PR countries when the potential beneficiaries are geographically diffuse. The geographically diffuse forestry sector in Sweden, for example, receives generous subsidies. In Sweden, where elections are held via proportional representation, the forestry industry won 10 percent of all government subsidies in the late 1970s. In fact, the government spent nearly twice as much on subsidies to the geographically diffuse forest sector as it did on subsidies to the geographically concentrated textile industry (Carlsson, 1983: 11). This pattern suggests that geographic concentration may be something of a political liability in PR countries. The Swedish government has, in fact, refused to provide financial assistance to geographically concentrated groups. For example, the government refused to assist the geographically concentrated automotive manufacturer Saab. Ninety-percent of Saab's employees worked in the southwestern town of Trollhättan. It was virtually impossible to find anyone in Trollhättan who was not somehow connected to Saab. Saab was the largest employer – providing work for even more people than the municipal government – and Saab's economic difficulties spelled potential disaster for the city. Yet, the Swedish Prime Minister, Fredrik Reinfeldt, refused to bail out Saab, saying he would not put “taxpayer money intended for healthcare or education into owning car companies” (Ward 2009). The Swedish Enterprise and Energy Minister Maud Olofsson told Swedish public radio that “voters picked me because they wanted nursery schools, police and nurses, and not to buy loss-making car factories.”³ This anecdotal evidence suggests that leaders in proportional systems, like Sweden, are less responsive to geographically concentrated groups, as compared to more geographically diffuse groups.

In the following section, I discuss two mechanisms through which economic geography and electoral institutions shape leaders' incentives and subsequently policy: (1) effective vote maximization and (2) the nature of electoral competition. I then discuss other possible mechanisms that might link institutions and geography to economic policy.

³ <http://news.bbc.co.uk/1/hi/business/7899244.stm>.

MAXIMIZING EFFECTIVE VOTES

Votes can be split into three categories: “wasted votes” that play no part in winning a legislative seat; “effective votes” – those votes needed to win; and “surplus votes” – those votes that are not needed for victory (Johnston, Rossiter, and Pattie 2006). In plurality systems, defining the number of effective votes is simple – it equals one more vote than the second-place candidate’s total. However, the definition of effective votes varies between electoral systems. Votes that are “surplus” in a plurality system can be “effective” votes in a proportional system. Imagine, for example, a candidate wins 60 percent of a district’s votes. In a plurality system with single-member districts, the candidate could have won the seat with many fewer votes. By winning 60 percent of the district’s vote, the candidate earned many “surplus” votes. Surplus votes are wasted in a plurality system – that is they play no part in winning office and do nothing to help other candidates from the same party. In contrast, surplus votes go to help candidates from the same party in a PR system with multimember districts. In other words, surplus votes in plurality systems are effective votes in proportional systems. Given a country’s institutional framework, parties and politicians seek to maximize their effective votes.

Parties and politicians can use economic policies, like subsidies, to maximize their effective votes. Subsidies win votes. Incumbents who spend more on subsidies win more votes in subsequent elections (Buts et al. 2012).⁴ However, the efficacy of subsidies as a vote-winning policy tool depends on a country’s electoral institutions and the geographic concentration of the subsidy’s beneficiaries. To illustrate this point, consider the following example. Imagine a sector of the economy that employs 10 percent of the voting-age population. (The tourism industry in the United Kingdom is roughly this size; it accounted for 9.6 percent of total employment in 2013.)⁵ An incumbent party could potentially secure (or increase their chances of securing) 10 percent of the national vote by subsidizing this sector.⁶ Yet depending on the geographic pattern of employment in the sector, subsidies might buy an additional 3 percent of the vote in one district and 30 percent more of the vote in

⁴ Levitt and Snyder (1997) estimate that it takes about \$14,000 US dollars in federal funding to win an additional vote. In Australia, Leigh (2008) finds a strong relationship between government spending on the Roads to Recovery Program and increased voter support for incumbents.

⁵ www.tourismalliance.com/downloads/TA_369_395.pdf.

⁶ Opposition parties could potentially secure 10 percent of the national vote by credibly promising to increase subsidies to the sector once in office.

another. In other words, the potential electoral gains from subsidies depend on the geographic distribution of the subsidy's beneficiaries.

Sectors with geographically diffuse employees can, in exchange for subsidies, yield votes across the country. In contrast, sectors with geographically concentrated employees can supply votes in only select areas. The potential value of these two options for incumbents seeking re-election depends on a country's electoral institutions.

In Proportional Systems

In a PR system with one nationwide electoral district, the geographic distribution of a sector's employees is politically irrelevant. All votes contribute equally to the number of legislative seats won by the party, regardless of their geographic location. In a fully proportional single-district system, a 10 percent gain in a party's share of the national vote will translate into 10 percent more legislative seats for that party. Parties competing in PR systems with a single, nationwide electoral district therefore work to maximize their share of the national vote.

The story is more complicated in PR systems with multiple, subnational electoral districts. In PR systems with multiple districts, geography matters. Most legislative seats are awarded to parties based on their district-level vote shares – rather than their national vote share. In Norway, for example, 150 of the 169 legislative seats are distributed at the district level to parties in proportion to their share of the district-level votes. Given this, the geographic location of potential voters is important to parties competing in PR systems with multiple subnational electoral districts.

Electoral gains can be uneven across a country's electoral districts. Imagine a party gains an average of 10 percent of the vote from one election to the next. There are two different ways in which this gain could be distributed across electoral districts. First, the party could gain exactly 10 percent of the vote in all districts. This outcome represents a "uniform" vote swing (i.e. a gain of 10 percent in all districts). Alternatively, the party could gain more than 10 percent in some districts and less than 10 percent in others, and this "uneven" vote swing yields an average swing of 10 percent over all districts (Tufte 1973).

A uniform swing generates different election results than an uneven swing. In PR countries with multiple electoral districts, legislative seats are awarded to parties based on their district-level vote shares – rather than their national vote share. In a PR system with multiple electoral districts, a uniform vote swing typically yields more seats for parties than an unevenly distributed swing (Tufte 1973). Given this, parties work to

achieve a relatively uniform vote swing and to this end subsidize geographically diffuse groups. Assisting sectors whose employees are spread across the country produces a more uniform swing in the party's vote share than subsidizing geographically concentrated sectors. Given this, I hypothesize that parties competing in PR systems with multiple electoral districts will spend relatively more on subsidies for geographically diffuse groups.

Geographically diffuse industries tend to win generous subsidies in PR systems. Even in mixed-member proportional systems, where some legislators are elected from single-member districts and others are elected from a party list, geographic diffusion appears to confer an advantage on interest groups. In Germany, for example, where legislators are elected via a mixed-member system and each party's share of seats in parliament is proportional to the number of "second votes" it received,⁷ the government subsidizes geographically diffuse sectors. The German forest sector is geographically diffuse; employment in the sector is roughly similar to the overall distribution of the German population (Kies, Mrosek, and Schulte 2009). People work in the forest sector in every region of Germany (Kies et al. 2009). The sector accounts for 5 percent of total employment in 19 percent of the counties in Germany and in 30 countries it accounts for 7.5 percent of total employment (Kies et al. 2009: 44). This geographically diffuse sector receives generous subsidies from the government. Thirty percent of government-funded subsidies go to the forestry sector (Thöne and Dobroschke 2008). The total volume of these subsidies amounted to €10.8 billion in 2006 (Thöne and Dobroschke 2008). The geographic diffusion of the German forestry sector helps to explain why it wins generous government subsidies – even though it employs only a small share of Germany's total population. Although the sector employed just nine hundred thousand people in 2004 (Kies et al., 2009: 39), its employees were spread across the country and consequently the sector was electorally valuable to parties competing for office in a mixed-member proportional system. Because legislative seats are awarded to parties in proportion to their share of second votes, government parties have incentives to provide subsidies to geographically diffuse groups and, in fact, many Germany governments have routinely subsidized diffuse groups, such as the forestry industry (Schatz and Wolter 1987, Thöne and Dobroschke 2008).

⁷ In German elections, every voter gets two votes. The first allows voters to choose an individual candidate to represent their district. The "second vote" is for the party they support.

In Plurality Systems

Although district-specific gains are politically relevant in all countries with multiple electoral districts (Tufte 1973), district-specific gains are more electorally salient in plurality systems than PR systems (Tufte 1973). Winning more than a plurality of votes in any given district is futile because the surplus votes are wasted in a plurality system – that is they do not help the candidate or the candidate's party. Winning 60 percent of the vote, for example, is overkill. The candidate would have won the election with many fewer votes and the surplus votes are wasted. Given this, political parties competing in plurality systems seek to avoid “over buying” support in a given district. In plurality systems, parties aim to minimize surplus vote while maximizing effective votes.

Assisting groups spread across a country will likely “over buy” support in some districts. In contrast, targeting benefits to key districts is more efficient for political parties competing in plurality systems. When beneficiaries are geographically concentrated, politicians and parties can use subsidies to target benefits to vital districts to ensure the maximum number of effective votes. Given this, I hypothesize that geographically concentrated groups will receive more generously funded subsidies in plurality systems than PR systems and concentrated groups will win relatively more subsidies than diffuse groups in plurality systems, all else equal.

France's two-ballot majority-plurality system, for example, incentivizes the provision of subsidies to geographically concentrated producers. As a result, the concentrated audiovisual services industry in France receives generous state support (Creative Screen Associates 2013). The industry is highly concentrated – located entirely in and around the Île-de-France region (Dale 2015). The industry's geographic concentration contributes to its political clout. For example, the industry's geography helped it win protectionist amendments to the 1946 Franco-American trade agreement, also known as the Blum–Byrnes agreements (Frey 2014). The industry took to the streets of Paris to protest the Franco-American trade agreement. Tens of thousands of people marched through central Paris shouting “*Cinéma français*.” The demonstrations were organized by a committee, which met at the national film school IDHEC in Paris, established to defend cinema from US imports. The film industry ultimately prevailed when the National Assembly revised the agreement to grant protection and financial assistance to the industry (Frey 2014).

The film industry's geographic concentration in Paris helped it win protectionist amendments to the 1946 Franco-American trade

agreement. Politicians from the region were beholden to the industry for electoral support and consequently worked to assist the industry. French politicians continue to do so today; France's film industry is subsidized to the tune of about €1 billion a year (Carnegy 2013).

In contrast, the geographically diffuse film-related technical industry receives little government assistance.⁸ French camera equipment manufacturers, for example, receive far less state support than other segments of France's audiovisual industry (Dale 2015). Camera equipment producers lack the political influence needed to win generous subsidies in France's majority-plurality system because of their geographical dispersion. The two largest manufacturers of motion picture equipment are located at nearly opposite ends of France – Aaton is based in Grenoble and Transvideo is based in Normandy. Industry leaders bemoan this geographic dispersion. "In France we don't have a geographical concentration of equipment manufacturers, as you find in places such as L.A., London or Munich," explains a leading figure in the French film-equipment industry.⁹

The industry's geographic dispersion limits politicians' incentives to subsidize film-equipment manufacturers. The electoral rewards from supplying subsidies to camera equipment manufacturers cannot be captured by any single legislator because of the industry's geographic diffusion. Efforts by a legislator from Grenoble to assist the industry will benefit legislators from Normandy who may not be from the same political party or ideological persuasion. Geography thus helps to explain why the diffuse technical industry receives so little government assistance, especially when compared to the far more concentrated film production industry.

In an attempt to increase their political power, France's leading film equipment manufacturers launched a new trade organization in March 2014. The association's main goal is to lobby the French government for subsidies and other benefits. "We need to make the French government realize that it's a real industry, with hundreds of employees and a high level of creative and technological innovation," states Delacoux, the president of the new organization (Dale 2015). This trade organization demonstrates that geographically diffuse industries

⁸ The variation in state support within the audiovisual industry is particularly interesting given France's claim that the industry is "culturally sensitive." France often seeks exceptions to international economic agreements for the film industry, arguing that it requires special treatment because of its cultural importance. Yet, the entire industry does not receive equal levels of state support. French camera equipment manufacturers receive far less aid than other segments of France's audio-visual chain.

⁹ Delacoux quoted in Dale (2015).

can and do come together to form interest groups. Conventional wisdom posits that geographically diffuse industries face higher collective action costs than concentrated industries. While this may be true, the relatively higher collective action costs are not prohibitive – that is, they do not prevent collective action in all cases, as illustrated by the French film equipment manufacturers.

THE NATURE OF ELECTORAL COMPETITION

In addition to the vote-swing mechanism, a second mechanism links electoral institutions and economic geography to policy, namely the nature of electoral competition. Electoral competition can be characterized as being either candidate-centered or party-centered. Party-centered competition encourages voters to emphasize their party preference over that for specific candidates (Carey and Shugart 1995). Voters decide which party to support based on the parties' platforms and election promises – rather than any individual candidate's personal characteristics. In contrast, candidate-centered competition encourages voters to see the basic unit of representation as the candidate rather than the party (Shugart, 1999: 70).

Candidate-centered electoral competition often emerges in countries with plurality electoral rules and single-member districts (Carey and Shugart 1995). In such systems, voters decide which candidate they want to represent them in the legislature. Their decision depends primarily on a candidate's individual characteristics and/or record rather than the party to which the candidate belongs (Carey and Shugart 1995). To maximize their chances of (re)election in such systems, politicians work to develop a personal vote. A personal vote is that part of a legislator's electoral support that is based their personal reputation. Generating a personal vote maximizes candidates' chances of winning office when elections are candidate-centered (Fenno 1978, Weingast, Shepsle, and Johnson 1981, Lancaster 1986, Lancaster and Patterson 1990, Cox and Rosenbluth 1993, Carey and Shugart 1995).

France's majority-plurality system generates incentives for politicians to cultivate a personal vote. A survey of sitting French Members of Parliament (MPs) revealed that 41.2 percent agreed that it was their duty to "represent above all his/her constituency and his/her region" (Brouard et al. 2013).¹⁰ As one French MP put it, "[a]n MP is a gardener. He has a big garden, his constituency, and he has to go to

¹⁰ Brouard et al. (2013) find that legislators work harder for their constituents when they feel that they alone are responsible for their reelection chances.

Paris in order to get fertiliser.”¹¹ Subsidies are one example of such “fertilizer.” When producers are geographically concentrated in a MP’s district, legislators have powerful electoral incentives to secure subsidies for producers in their districts because doing so helps politicians develop a personal vote.

The usefulness of subsidies for building a personal vote depends on economic geography. Economic geography refers to the geographic pattern of employment for a given sector or industry in a given country. Imagine, for example, that an industry’s employees are located entirely within a single electoral district. A legislator can increase their chances of reelection by providing a subsidy to that industry in a candidate-centered system. The benefits of such a subsidy will be concentrated in the politician’s electoral district and the beneficiaries have the opportunity to vote for the legislator. In this way, subsidies to geographically concentrated industries are an efficient means for incumbents to maximize their chances of reelection in candidate-centered systems.

Politicians whose electoral success depends on support only from their geographically defined constituents have few incentives to cater to geographically dispersed interests. Doing so neither sufficiently rewards their efforts nor maximizes incumbents’ chances of reelection because the electoral rewards for catering to diffuse interests are spread over many districts. In an industry where employment spans an entire country, the benefits of industry-specific subsidies accrue to voters in all electoral districts. In this case, promoting subsidies would be an inefficient way for a politician to “buy” the votes she needs to win in a candidate-centered system.

The geographic concentration of citizens with shared economic interests is relatively less important in party-centered systems. Parties, not individual legislators, are the primary actors in party-based systems. Political parties define both electoral strategies and public policy (Tavits 2009). Parties seek to win as many effective votes as possible to maximize their parliamentary representation. Thus, parties have an incentive to appeal to a diffuse constituency that “displaces the district as the primary electoral constituency” (Lancaster and Patterson, 1990: 470).¹² Appealing to a diffuse constituency may engender “a shift in the national mood towards the ruling party” (Reed et al. 2012) and such a shift may increase the party’s vote share across the country.

¹¹ Quoted in Brouard et al. (2013: 146). This quote came from a member of the centre-right political party Union for a Popular Movement (*Union pour un mouvement populaire/UMP*).

¹² “Thereby decreasing the importance of pork-barrel politics” (Lancaster and Patterson, 1990: 470).

In proportional systems, legislative seats are awarded in accordance with parties' vote shares. Because every vote contributes to the allocation of legislative seats among parties, politicians and parties competing in proportional systems have incentives to cater to citizens' economic interests, even when they are geographically diffuse. Winning the support of voters in an industry that employs only 1 percent of the population could, for example, translate into several additional legislative seats. Furthermore, winning an additional 1 percent of the national vote may mean the difference between being in or out of parliament, because many proportional systems have minimum threshold requirements that require a party receive a minimum percentage of votes to obtain any seats in the parliament.

This logic helps to explain why geographically diffuse groups win economic benefits in party-centered, PR systems. But why would governments elected in party-centered PR systems provide relatively fewer subsidies to concentrated groups than diffuse groups? The answer is simple: subsidies entail costs. These costs include both real monetary costs and opportunity costs. Every dollar spent on subsidies for concentrated groups is one less dollar available for subsidies to diffuse groups. Subsidies for diffuse groups bring relatively greater electoral benefits to parties competing for office in party-centered PR systems, so parties prioritize spending on diffuse groups.

Subsidizing a geographically diffuse sector helps people across the country. Subsidizing the geographically diffuse construction industry, for example, helps citizens across virtually all regions. Employees in the construction industry benefit directly from subsidies via increased wages and more secure employment. Owners of capital invested in the industry also benefit from above-market rates of return and greater demand. Subsidies to the construction industry also benefit related sectors, such as real estate and retail. In this way, subsidies to one industry can indirectly help other related industries (Barber 2014).

Because of the positive spillover effect subsidies have on related industries, subsidies to a geographically diffuse industry benefit more people than subsidies to a concentrated industry. For example, subsidies to the diffuse construction industry help real estate agents around the country rather than those in just a single city or region, as would be the case if the construction industry was geographically concentrated. In effect, there is a "dispersion bonus" from subsidizing geographically diffuse industries.¹³ Parties competing in PR systems profit more from this dispersion bonus than parties in plurality systems. As a result,

¹³ I am grateful to John Carey for articulating the term "dispersion bonus."

governments in PR systems will spend more on geographically diffuse groups than governments in plurality systems, all else equal.

Even subsidizing a relatively small, yet diffuse, industry could be electorally beneficial in a PR system. If, for example, an industry employs just 2 percent of the population, a party could potentially increase its vote share by 2 percent by subsidizing that industry. Depending on the magnitude of the “dispersion bonus” the electoral gains may be even larger. But even an increase of just 2 percent could be electorally valuable for parties competing in PR systems. In Sweden, for example, a 2 percent increase in a party’s vote share could translate into as many as seven additional legislative seats. Given this, I hypothesize that government spending on subsidies will be higher in PR systems than plurality systems when voters with economic interests in subsidies are geographically diffuse. In contrast, when the beneficiaries from subsidies are geographically concentrated, subsidy spending will be higher in plurality systems, as compared to proportional systems.

EMPIRICAL EXPECTATIONS

To help generate empirically falsifiable hypotheses, I reduce my argument to a simple two-by-two diagram, illustrated in Table 3.1. I expect to see the most generous subsidies in the cells marked with asterisks. In other words, I hypothesize that governments elected via PR will spend more money on geographically diffuse groups, as compared to governments elected via plurality. This hypothesis is relatively straightforward and follows directly on the logic developed above. Leaders in PR systems have incentives to aid geographically diffuse groups while few politicians do in plurality systems.

Expectations about the political fortunes of concentrated groups are somewhat less clear. On one hand, parties in some PR systems may be indifferent between supporting concentrated and diffuse groups. In PR countries with a single-national electoral district, all votes are equally valuable regardless of their geographic location because they all contribute to a party’s share of the national vote. As a result, governments elected via PR from single-national districts may be

Table 3.1 *Illustration of empirical expectations*

	Plurality	Proportional
Concentrated groups	**	
Diffuse groups		**

indifferent between subsidizing concentrated groups and diffuse groups. If so, spending on concentrated groups in single-district PR countries may be similar to that in plurality countries.

Yet, only a handful of PR countries have a single electoral district. Most have multiple electoral districts and legislative seats are often awarded to parties based on their district-level vote shares. This suggests that geography will matter in most PR countries. The question is: how does it matter?

I hypothesize that governments elected via plurality rules spend relatively more on geographically concentrated groups than governments elected via proportionality. Politicians competing in plurality systems have greater incentives to target benefits to groups concentrated in their own districts. Parties in PR systems have few incentives to geographically target benefits in this way. Instead, subsidies for diffuse groups bring greater electoral benefits to parties competing in PR systems, and government parties therefore prioritize funding for diffuse groups over concentrated groups.

Yet, the incentives to target benefits geographically are not entirely absent in PR systems. In some PR systems, namely those with open party lists, individual politicians have incentives to selectively target benefits to groups concentrated their own districts or bailiwicks. Legislators in open-list PR systems seek to divert resources to their own district in order to cultivate their own personal support base. Cultivating a personal vote helps legislators win more individual votes (or preferences) and thereby increases their reelection chances in open-list PR systems. In Chapter 6, I investigate the variation in subsidy spending among PR countries with different types of party lists. I find that although geographic concentration is a political liability in all PR systems, it is relatively less detrimental to interest groups in open-list PR systems. This evidence supports the electoral competition mechanism described above.

Parties competing in PR systems with multiple districts may also seek to target benefits to certain districts. I examine this possibility in Chapter 7 and find evidence that in closed-list PR, governments spend relatively more money on geographically diffuse sectors and simultaneously target subsidies to safe districts. The two strategies are not mutually exclusive. In PR systems, government parties' first-best strategy is to fund subsidies for sectors whose distribution of employees closely matches the geographic distribution of the party's supporters. This strategy is optimal because it is relatively easier to buy the support of voters already predisposed towards the party. Parties therefore seek to fund subsidies whose beneficiaries overlap geographically with the party's supporters or potential supporters (i.e. those people not ideologically opposed to the party). Parties that

manage to become the largest party in government in a PR system will tend to have geographically dispersed support. The distribution of employees in geographically diffuse sectors is therefore more likely to match the distribution of the party's supporters. As a result, the party's first best strategy is to target sectors with geographically diffuse employment. Diffuse sectors also provide parties with the widest range of options for geographic targeting. A sector that employs people across the entire country allows parties to selectively target benefits to a particular district via subsidies, as described in Chapter 7.

POSSIBLE ALTERNATIVE MECHANISMS

I argue that two key mechanisms link electoral institutions and economic geography to policy outcomes: the nature of electoral competition and effective vote maximization. However, several other mechanisms may link electoral institutions to policy outcomes. I discuss these possibilities below.

Government Partisanship

Government partisanship may link electoral institutions to policy outcomes. Different electoral institutions may produce different types of governments. Proportional systems, for example, are believed to produce more left-leaning governments than plurality systems (Iversen and Soskice 2006, Rodden 2010). If different electoral systems produce systematically different governments, the mechanism linking electoral institutions to policy outcomes may be government partisanship. Although I take this possibility seriously by controlling for government partisanship in my large-N empirical tests, several factors raise doubts about the plausibility of government partisanship as a key mechanism linking electoral institutions to particularistic economic policies.

First, although partisanship undoubtedly plays a role in economic policy-making, it is unclear how it would affect *particularistic* economic policies, such as subsidies. Previous empirical work finds little evidence of any partisan effects on subsidy spending (Verdier 1995, Rickard 2012c). In fact, no robust correlation exists between government partisanship and subsidy spending in either developed or developing countries (Verdier 1995, Rickard 2012c). Left-leaning governments spend no more (or less) or their total budget on subsidies than right-leaning governments, all else equal.

Second, it is unclear why government partisanship would produce the conditional effects reported in subsequent chapters. The effects of

electoral institutions on policy outcomes are conditional on economic geography. This pattern is difficult to credit to government partisanship. Although right-leaning governments may prefer less government spending overall, why they would prefer more (or less) spending on geographically targeted programs, assuming equal costs? The same holds for left-leaning governments.

Third, all governments face demands for subsidies – regardless of their partisan makeup. Many industry groups “hedge their bets” by lobbying governments of all ideological persuasions. In fact, industry groups often pursue friendly relationships with politicians of all parties (Palmer-Rubin 2016). The pursuit of subsidies sometimes engenders unusual alliances that bridge the left/right divide (Thomas 2007). Leaders of industry-based organizations in Mexico, for example, attest to prioritizing a friendly and vigilant relationship with all sitting politicians over declaring firm partisan allegiances (Palmer-Rubin 2016).

These observations suggest that electoral politics may trump partisan considerations.¹⁴ Both left and right parties seek to win office and consequently may provide subsidies under certain conditions. Parties ideologically opposed to subsidies may not have the luxury of taking an ideological stance against them. Parties competing in plurality systems with geographically concentrated industries, for example, would handicap themselves if they refused to provide subsidies. As a result, even right-leaning parties who typically eschew market interventions may find themselves providing subsidies when institutions and geography align. In the United States, for example, one of the most fabled right-wing leaders, President Ronald Reagan, employed industrial policy as a response to what he saw as a loss of US competitiveness in an increasingly globalized world (Foroohar 2017). Reagan agreed to a project, known as “Project Socrates,” to study how subsidies helped other nations gain market share in strategic industries with an eye to implementing some of the same strategies in the United States (Foroohar 2017). Similarly, in the United Kingdom, the Conservative Prime Minister Theresa May created a new government ministry responsible for industrial policy. Industrial policy occurs when a government consciously favors some economic activities over others (Rodrik, 2004: 29).

¹⁴ Another possible explanation for the null partisanship result may be that changes in government partisanship do not engender changes in economic policies because such policies are sticky. A tariff or subsidy once established becomes “a permanent obligation of government” (Schattschneider, 1935: 92). The longer they have been established the more difficult it becomes to dislodge them (Schattschneider, 1935: 131). Given this, changes in government partisanship may be unlikely to result in changes in subsidies (Thomas 2007).

The minister appointed to head the new Department for Business, Energy & Industrial Strategy said he had been “charged with delivering a comprehensive industrial strategy” (Ruddick 2016). These examples show that even right-leaning political leaders are, in some cases, willing to support market interventions using particularistic economic policies.

Parties across the ideological spectrum respond to the incentives generated by countries’ electoral institutions and economic geography. In countries with plurality systems and concentrated economic interests, both left- and right-wing parties have incentives to enact narrowly beneficial economic policies. In PR systems, parties of all stripes have incentives to provide benefits to geographically diffuse interests. This pattern holds even if certain parties have strong historical links to select industries or economic sectors.¹⁵ While parties may support different sectors and industries, all parties in a given country share a willingness to provide subsidies to more (or less) geographically concentrated groups. The incentives for parties to target benefits geographically are generated by the country’s electoral institutions. These incentives are constant for all parties in a given country, regardless of their ideology.

Although there are few theoretical reasons to suspect that government partisanship effects subsidy spending, I introduce a measure of government partisanship as a control variable in the cross-national regression models. The inclusion of the partisanship variable does not change the key results regarding electoral institutions and economic geography, which suggests partisanship is not the mechanism linking electoral systems to policy outcomes. As expected, the partisanship variable itself is not consistently robust. In general, left governments do not spend any more (or less) of their budgets on subsidies than right governments. It is possible that left- and right-wing governments assist different industries while spending the same aggregate amount on subsidies. Right-leaning parties may subsidize capital-intensive industries while left-leaning parties may assist labor-intensive industries (Verdier 1995). If different parties subsidize different industries, it is important to account for government partisanship when comparing subsidies between different industries within countries.¹⁶

¹⁵ Agriculture parties, for example, exist in many European democracies. In Norway, the Farmer’s Party was established in 1920 to fight for economic policies that favored farmers. In 1959, the party renamed itself the Center Party (*Senterpartiet*) but the party continues to represent agrarian interests (Elder and Gooderham 1978).

¹⁶ However, single-industry studies hold constant industry-specific characteristics such as labor-intensiveness, and as a result, government ideology is not required as a control variable.

Factor Mobility

Another potential mechanism linking economic geography and economic policy is factor mobility. Factor mobility refers to the costs of moving factors of production (i.e. land, labor, and capital) to a new use in the domestic economy. These costs may be, in part, a function of a country's economic geography. Adjustment costs will be higher, for example, when there are fewer alternative employment options in an area. In regions with multiple employers, adjustment costs will be lower.

Adjustment costs have been shown to influence economic policy and more specifically trade policy (e.g. Hiscox 2002, Rickard 2009). However, it is possible that the explanatory power previously attributed to adjustment costs may be due to economic geography. Imagine an electoral district in which the entire working age population is employed in a single sector. Rural districts, for example, are often dominated by agriculture. Nearly the entire working age population may be employed in the agriculture sector or related sectors in a rural district. In such a district, the costs of moving to a new sector are considerable because there are no alternative employers. Moving to a new industry would require a long commute or relocation to a different district. In contrast, workers in a district with many potential employers face lower adjustment costs. In this way, the costs of adjustment are influenced, at least in part, by economic geography. Given this, it is possible that earlier studies that focused exclusively on factor mobility mistakenly attributed causality to mobility rather than geography. I examine this possibility by including a measure of factor mobility in the large-N statistical tests reported in subsequent chapters.

Legislative Dynamics

In my argument, I focus on election dynamics rather than legislative dynamics. I do so for several reasons. First, election dynamics shape legislative dynamics. Evidence in Chapter 5 shows how election dynamics influence a key form of legislative behavior: parliamentary questions. The nature, content, and frequency of questions asked of the government by legislators are shaped by legislators' reelection incentives (Martin 2011a). As the example of parliamentary questions makes clear, to understand legislative behavior, one must understand election dynamics.

Second, legislatures do not always set economic policy. In many countries, cabinet ministers determine key economic policies. In Norway, for example, each ministry prepares its own subsidy budget proposal. The Ministry of Agriculture and Food puts together the budget

for subsidies to the agriculture sector. The Ministry for Industry and Trade formulates the budget for subsidies to the manufacturing sector. The proposed budgets are based on input from the various subunits of the ministry and responses from relevant organizations, such as the farmers' lobby groups (*Norges Bondelag* and *Norsk Bonde- og småbrukarlag*) and Innovation Norway (*Innovasjon Norge*), the main bureaucracy responsible for allocating subsidies. The individual ministries' proposals are then put forward to the Ministry of Finance, who prepares the final budget. The government's subsidy budget is presented to the Parliament for approval.

Although Parliament must approve the final budget, individual legislators and opposition parties have little influence over subsidy spending. Parliament "typically does not change the amount of money that has been agreed by the government and interest groups".¹⁷ The government's allocation decisions are normally approved with no amendments or modifications. As a result, ministers enjoy considerable autonomy over the allocation of money to economic sectors that fall within their portfolio. Given this, ministers are uniquely placed to shape particularistic economic policies.

Ministers' policy incentives are largely immune to legislative dynamics. Instead, their decisions are often influenced by electoral dynamics. Many ministers hold office only as long as they or their party win reelection. Even if ministers do not face reelection themselves, they typically work to enact those policies that maximize their party's electoral fortunes in order to keep their party in government. For this reason, I focus on electoral dynamics rather than legislative dynamics.

Legislative dynamics include party discipline, which refers to the ability of a political party to get its legislators to support the policies of the party's leadership. Party discipline is sometimes conflated with the nature of electoral competition.¹⁸ However, the two concepts are distinct. The nature of electoral competition (i.e. candidate versus party centric) is an electoral arena phenomenon while party discipline is a legislative dynamic. Although Cox (1987) proposes the coevolution of these two concepts, party discipline and electoral competition need not be closely related to one another in practice. In fact, only a weak empirical relationship exists between the two (Martin 2011b, 2014). For example, candidate-centered electoral competition occurs in systems with high

¹⁷ Siri Lothe, Senior Advisor, Department of Agriculture, Ministry of Agriculture and Food, email communication, July 2, 2015.

¹⁸ For example, party discipline is often estimated using variables that capture the distinction between candidate-centered and party-centered competition (e.g. Ehrlich 2007).

party-discipline, as is the case in Ireland (Martin 2011b, 2014). In short, party discipline and party-centered electoral competition are two distinct concepts that do not always go together.

Just as party discipline does not perfectly correlate with the nature of electoral competition, neither does it vary systematically with electoral institutions. Within plurality systems, there are both high and low discipline systems (McGillivray 1997, 2004). National parties in Canada, for example, are stronger than parties in the United States – even though both countries use plurality electoral rules. In systems like the US, where party discipline is low, legislators can represent the interests of their constituents even if they go against the interests of their party (Schattschneider 1935). Variation in party discipline also exists among PR systems (Martin 2011b, 2014). Some PR systems have relatively low levels of party discipline while others have much higher levels of party discipline. The variation suggests that electoral rules by themselves fail to fully explain party discipline.

In short, the origins of party discipline are unclear. While electoral systems may have some effect on party discipline, many other factors matter as well, including a party's organizational structure and the allocation of power inside legislatures. These factors explain why party discipline is largely uncorrelated with electoral rules. Given this, party discipline cannot be the mechanism linking electoral systems to policy outcomes. In fact, previous studies show that party discipline has no robust effect on trade policy after controlling for electoral rules (Hatfield and Hauk 2014). This evidence points to the relative importance of electoral dynamics.

Electoral competitiveness

Given my focus on electoral dynamics, the competitiveness of elections is potentially important. Electoral competitiveness typically refers to the closeness of an election in a given district. The competitiveness of elections often varies between districts in countries. In some districts, incumbents face tough electoral competition while in others incumbents face no serious challenger.

While undoubtedly important, district-level electoral competitiveness is an unlikely explanation for the variation in economic policies across countries. First, district-level competitiveness cannot be meaningfully aggregated to the country level because the competitiveness of elections varies between districts within countries. In practice, of course, one could calculate the “average” level of district-level competitiveness in a country; however, it is unclear what, if anything, this aggregate value

would mean – particularly in a cross-national context. Second, proportional systems do not have marginal districts in the same sense as plurality systems; in PR systems, districts are multimember and seats are distributed based on the proportion of votes within each district (McGillivray, 2004: 19). Because competitiveness means different things in different electoral systems, it is hard to imagine how competitiveness could explain the varied policy outcomes between countries with different electoral institutions. Third, average competitiveness levels vary within electoral systems (Kayser and Lindstädt 2015). Elections are no more (or less) competitive, on average, in plurality systems than in proportional systems (Kayser and Lindstädt 2015). Given this, competitiveness is unlikely to be the causal mechanism linking electoral institutions to national policy outcomes.

Although district-level electoral competitiveness is an unlikely explanation for the variation in subsidies between countries, it may help to explain the variation in subsidies within countries. District-level electoral competitiveness may explain why some electoral districts receive more generous subsidies than others, controlling for economic geography.

A large literature examines the role of district-level electoral competitiveness for policy targeting in plurality countries (e.g. Cox and McCubbins 1986, Dixit and Londregan 1996). Although scholars disagree about precisely which districts (i.e. safe or swing districts) receive the most generous fiscal benefits or “pork,” scholars agree that politicians have electoral incentives to target benefits geographically in plurality systems. These arguments coincide with my own; I argue that plurality electoral rules incentivize the targeting of economic benefits to geographically concentrated groups. Whether parties target safe or swing districts is immaterial for my theoretical argument. What matters is that politicians and parties target benefits to geographically defined electoral districts because of the incentives generated by plurality rules. I remain agnostic as to whether leaders in plurality systems target safe or swing districts. I do not empirically examine the variation in economic rents between districts within plurality countries because many previous studies have already carried out this task.¹⁹

In Chapter 7, I examine how electoral competitiveness influences the variation in subsidies between electoral districts in a PR country with de facto closed party lists, controlling for economic geography. I find evidence that the largest party in government targets subsidies disproportionality to districts where it received a greater share of the

¹⁹ For a comprehensive review of this literature see Golden and Min (2013).

vote in the previous election. In other words, incumbent parties in closed-list PR systems appear to target economic benefits to “safe” districts. This result suggests that electoral competitiveness can help to explain the variation in economic rents between districts within PR countries.

Of course, electoral competitiveness itself may be a function of economic geography (Kayser and Lindstädt 2015, Rodden unpublished manuscript).²⁰ Certain electoral districts are “safe” for some parties precisely because of their economic characteristics. In Britain, for example, the Labour Party historically dominated elections in districts where coal mining was the main economic activity (Johnston et al. 2006). Labour won these seats with large majorities, thanks to the high voter turnout stimulated by miners’ trade unions (Johnston et al. 2006). As the number of people employed in the mining industry declined, turnout fell in a number of districts that the Labour Party had previously considered “safe” (Johnston et al. 2006). As a result, the magnitude of Labour’s margins declined and the party began to face more competitive races in these districts. The experience of Britain’s Labour Party shows how economic geography matters for electoral competitiveness. My argument focuses on the primary causal factor: economic geography.

In most of the book, I focus on the variation in economic policies between democracies with different electoral systems. I argue that spending on subsidies for geographically concentrated groups will be higher, on average, in plurality systems than proportional systems. District-level electoral competitiveness may influence which districts receive more economic rents but it will not alter the fact that politicians in plurality systems have greater incentives to target benefits geographically, as compared to politicians in PR systems. In Mexico, for example, where most legislators are elected via plurality in single-member districts, the identity of subsidy recipients changes depending on the competitiveness of state elections (Palmer-Rubin 2016). But regardless of the competitiveness of state-level elections, political parties target selective benefits to geographically concentrated groups (Palmer-Rubin 2016). In other words, electoral competitiveness does not influence aggregate policy targeting or the overall generosity of government subsidies. Instead, it affects the identity of subsidy recipients within a country. Given this, electoral competitiveness may more usefully explain policy

²⁰ Kayser and Lindstädt (2015) report that the effect of electoral rules on real prices is mediated by a variable they label “loss probability.” The construction of their “loss probability” variable depends critically on geography (and highly restrictive assumptions for PR countries). Their results can therefore be interpreted as evidence that geography mediates the effect of electoral rules on economic outcomes. In other words, the results of Kayser and Lindstädt (2015) are consistent with my argument.

variation *within* countries rather than across countries, as I explore in Chapter 7.

CAUSAL COMPLEXITY

In this book, I take political institutions and economic geography as given (i.e. exogenous). In other words, I do not speculate as to where electoral institutions come from or what causes certain patterns of economic geography. Because I focus on policy-making in the short to medium term, this choice makes sense. In the long run, however, both institutions and economic geography may evolve over time and these changes might be systematically related to one another.

Economic geography may influence the design of electoral institutions. Institutions are, after all, “humanly devised constraints” that may be intentionally constructed to obtain certain purposes (North 1990). But once chosen, electoral institutions are “sticky” and tend to change only rarely over time. In the short to medium term, the geographic distribution of sector-specific employment is unlikely to influence these decidedly durable institutions. However, in the long run, the spatial distribution of economic activity may influence a country’s choice of electoral system (Cusack, Iversen, and Soskice 2007). If the geographic distribution of economic activity is influenced by subsidies and the geography of economic activity influences electoral system design, then subsidies may shape countries’ electoral systems in the very long run. If true, this would raise questions about the logic of my argument and the validity of my empirical tests. However, I find no evidence that subsidies or economic geography influence countries’ decisions about electoral systems.

No significant difference exists between the geographic concentration of manufacturing employment in PR systems and plurality systems.²¹ Furthermore, changes in the geographic concentration of economic interests have not been accompanied by corresponding changes in electoral institutions. In fact, the handful of recent changes in electoral institutions have had little, if anything, to do with economic geography. In Italy, for example, the move from PR to plurality that occurred in 1993 was driven by a desire to “clean up” Italian politics and increase the durability of governments (Katz 1996). Similarly, New Zealand’s electoral system reforms were motivated by myriad issues – none of which related to economic geography. These observations minimize

²¹ The sample mean value of *Concentration* is equal to 0.035 in PR countries and 0.031 in plurality countries. The difference (−0.004) is not statistically significant, as demonstrated by a two-sample t-test with equal variances.

concerns about the influence of economic geography on electoral institutions.

Economic actors might strategically locate in response to electoral institutions and if so economic geography could be a function of a country's electoral system. If actors anticipate the benefits of geographic concentration in plurality systems, for example, they may choose to locate in districts with other similar actors to maximize their chances of winning economic support from the government. But the observed geographic concentration of manufacturing is no higher in plurality systems than in PR systems, on average, which suggests that location decisions are not driven by electoral institutions. In fact, no evidence exists to suggest that firms strategically locate in response to a country's electoral rules.

Subsidies generally do little to influence firms' location decisions (Midelfart-Knarvik, Helene, and Overman 2002). Patterns of geographic concentration are relatively immune to government spending programs. Large-N statistical tests show that subsidies have negligible effects on firms' location decisions (Devereux et al. 2007). Furthermore, civil servants report that they have never seen a firm reallocate to try to win more subsidies from the government. Bureaucrats in Norway, for example, acknowledged that it was more difficult for a firm in the capital city of Oslo to win subsidies because of the higher concentration of firms in that district. Norway uses proportional electoral rules so this statement is fully consistent with my argument: geographic concentration confers a political handicap on groups in PR systems. Yet, no firms moved out of Oslo to increase their chances of winning a government subsidy.²² Taken together, these observations minimize concerns about causal complexity. In the short to medium term, electoral institutions and economic geography appear to be exogenous to each other and to government-funded subsidies. However, to address any lingering concerns about causal complexity, I employ instrumental variables in my quantitative empirical tests and carefully evaluate the qualitative evidence for evidence of reverse causality.

CONCLUSION

Economic geography mediates the effects of electoral institutions on economic policy. While electoral institutions define the optimal (re)election strategy for politicians and parties, economic geography

²² In person interview with Innovation Norway staff members Pål Aslak Hungnes and Per Melchior Koch in Oslo, Norway on June 19, 2014.

determines how best to achieve this strategy. Plurality electoral rules incentivize policies that target benefits narrowly to precise geographic locations. Subsidies can be used to achieve this goal – but only when the beneficiaries are geographically concentrated. When they are geographically diffuse, subsidies are an inefficient electoral tool in plurality systems. Therefore, I hypothesize that geographically concentrated groups will win more generous subsidies in plurality systems as compared to proportional systems, holding all else equal.

In PR systems, parties seek to maximize the number of seats they control in the legislature. Subsidies for geographically diffuse groups are an effective means to achieve this goal. As a result, I hypothesize that geographically diffuse groups will win more generous subsidies in proportional systems as compared to plurality systems, holding all else constant. In the following chapter, I test these hypotheses empirically using cross-nationally comparable data on government spending on industrial subsidies.