

## ANNEXATION ACTIVITY AND STATE LAW IN THE UNITED STATES

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This article explores the impact of 15 separate provisions of state annexation laws on seven different measures of annexation activity. This analysis uses annexation data from 42 states between 1990 and 1998. The analysis finds that there are different patterns of annexation activity for laws designed to constrain annexation, as compared with laws designed to facilitate annexation. Laws designed to facilitate annexation are likely to be associated with high levels of annexation activity. On the other hand, laws designed to constrain annexation are not very likely to have lower levels of activity.

*Keywords:* municipal annexation; legal requirements; growth

**Annexation is the primary mechanism** for expanding municipal boundaries. This is often done as cities seek to capture economic development outside their existing boundaries. Accordingly, municipal boundary change is an important but little-explored research area. There is a long-standing belief that more liberal annexation laws—those that put few constraints on annexation—will result in more annexations (e.g., Bollens 1949). Municipal advocates frequently assert that annexation statutes should give municipalities strong powers to annex while imposing some restrictions such as contiguity and character of the land annexed (e.g., Reynolds 1992). However, few scholars have empirically examined the impact of annexation laws. Additionally, the few scholars examining the impact of state laws on annexation activity have generally based their research on annexation data from the 1960s, 1970s, and 1980s. The reliance on historical data has created a need to

examine more recent annexation data to see if the same patterns discovered in the historical data hold true in more recent data.

Scholars have frequently classified state annexation laws according to the Sengstock typology. Sengstock (1960) used a five-type classification to distinguish between state approaches to annexation. These types include popular determination, municipal determination, legislative determination, quasi-legislative determination, and judicial determination. States with *popular determination* allow the affected electorate or property owners to determine if a boundary change will take place. *Municipal determination* states allow the municipality to unilaterally extend its boundaries. *Legislative determination* states permit annexations through special acts of the legislature. *Quasi-legislative determination* states grant an independent, nonjudicial agency or board the authority to determine whether or not annexations take place. Finally, in *judicial determination* states, the courts determine whether or not annexations take place, generally using guidelines established by the legislature. Unfortunately, these categories are not truly mutually exclusive. This approach does not account for multiple annexation methods within a state, just the predominant method. This research note uses recently available annexation data together with a broad review of individual annexation provisions to assess the relationship between individual aspects of annexation laws and procedures on annexation activity.

## DATA

This note examines state-level annexation data to assess whether or not separate provisions of state annexation laws make a difference in several measures of annexation activity. This analysis broadens the typical approach by using several measures of annexation activity and expanding the set of annexation provisions. Most previous researchers have focused primarily on a sole indicator of annexation activity such as the number of annexations (e.g., Galloway and Landis 1986; Feiock and Carr 1996), population annexed, or land area annexed (Dye 1964; R. Wheeler 1965; Liner 1990; Liner 1993; Liner and McGregor 1996). This analysis includes annexation activity from all cities that reported annexations between 1990 and 1998. Additionally, this analysis employs a broader set of annexation laws based on a comprehensive review of annexation statutes across the United States.<sup>1</sup> Fifteen different provisions of state annexation laws are examined through independent-sample *t*-tests of each provision for several measures of annexation activity.<sup>2</sup>

For 15 different aspects of state annexation laws and practices, the following measures of annexation activity are compared: total annexations, total acres annexed, total estimated population annexed, total estimated housing units annexed, average acres per annexation, average population per annexation, and density (estimated population annexed divided by the acres annexed). It is important to remember that the data used in each table is a compilation of all annexations and not a targeted subset of annexations accomplished through a specific annexation requirement.

I use annexation data from the U.S. Bureau of the Census's Boundary and Annexation Survey (1999), covering municipal annexations between 1990 and 1998.<sup>3</sup> These data files include all municipal annexations reported to the Census Bureau. It is possible that other annexations occurred but were not reported. However, response rates to the Boundary and Annexation Survey are very good, in part because they are linked to the Census Bureau's electronic map, TIGER, which is used for the decennial census (Miller 1997). Accordingly, it is possible that some municipal annexations were not reported; nevertheless, I do not believe this is a significant portion of annexations.

The analysis compares the annexation activity of states with specific annexation provisions with that of states without these provisions. It is important to remember that although each category in this analysis is treated as an independent statutory provision, some of the provisions may require the use of other provisions. Additionally, the Census Bureau annexation data does not specify either the method used to initiate annexation or what other procedural requirements were necessary for any given annexation. Therefore, this study evaluates the general absence or presence of a statutory characteristic to assess the relative impact of that characteristic on several measures of annexation activity as a first step in better understanding these expanded annexation provisions. Further study should examine the multivariate relationships between annexation provisions and annexation activity. Table 1 presents the number of states with and without specific annexation provisions in their state law. For each statutory provision analyzed, I discuss why the provision is important, describe the provision, and present the findings.

The provisions are grouped together for the purpose of presentation as constraints or facilitators of annexation. Annexation provisions are often designed to either facilitate boundary expansion or to ensure that boundary expansion is done carefully, thus restraining uncontrolled municipal growth. Although grouping provisions may seem straightforward, some provisions may be designed to both facilitate and constrain at the same time. This is discussed throughout the analysis.

**TABLE 1: Summary of State Annexation Laws**

<i>Legal Provisions Addressing</i>	<i>States With</i>	<i>States Without</i>
Constraints		
Judicial oversight and review	35	7
Election	28	14
Public hearings	24	18
Service plan	20	22
County governing authority approval	19	23
Boundary agency	12	30
Impact reports	7	35
Facilitators		
Local resolution	39	3
Property owner initiation	39	3
Unincorporated islands	23	19
Municipally owned land	22	30
Cross-county annexation	17	25
Noncontiguous	14	28
Health and safety concerns	7	35
Legislatively initiated	6	36

SOURCE: Steinbauer et al. (2002)

## ANALYSIS

### CONSTRAINTS

Provisions classified as constraints are designed to create substantial procedural hurdles, thereby increasing the difficulty of accomplishing the annexation (Carr and Feiock 2001). These constraints are often created to protect stakeholders from unfettered annexation. This section describes seven different constraints on annexation activity and analyzes the data gathered for this study.

*Judicial oversight and review.* Involving the judiciary is an alternative to using an independent board, such as a boundary commission, for resolving annexation concerns. In some states (e.g., Mississippi), the judiciary serves as the primary agent in the annexation process. Although judicial review and oversight may include statutorily designated judicial appeal, it does not follow that states listed as not having judicial oversight and review have no recourse through the courts. Thirty-five states have statutorily addressed judicial oversight and review. None of the annexation activity measures examined in this category achieved statistical significance, and the pattern of

activity was mixed. Four measures were lower (total acres annexed, population annexed, housing units annexed, and average population per annexation), and three measures had higher levels of activity (total annexations, average acres per annexation, and population density); only total annexations approached statistical significance ( $p = .053$ ).

*Election.* One way states limit the ability of municipalities to annex property is by requiring a referendum. The referendum could be held in the area to be annexed or it could be held in the municipality seeking annexation. The vote could be of either the residents or property owners. This provision is important because it is designed to ensure that the interests of property owners and residents are protected. Twenty-eight states have some type of election provision.

States that require referendum of either property owners or residents have almost twice as many annexations than states that do not require a referendum ( $p = .047$ ). It is interesting that only two of the activity measures (average population per annexation and annexation density) had lower levels of activity, as anticipated for constraints. The other five activity measures had higher levels of activity for states with election requirements, but only the number of annexations was statistically significant.

*Public hearing.* Many states require public hearings as part of their annexation procedures, which may be viewed as a way to limit annexations by opening up the process to greater scrutiny and input. Public hearings allow property owners, residents, and other concerned citizens to have input into the annexation process. Although many states may require public hearings, public hearings are not a process for making annexation decisions; they are simply a mechanism for hearing different perspectives. Twenty-four states have provisions for public hearings. States that require public hearings had higher levels of activity for all seven measures, the opposite of what would be expected for a constraint. Even though the differences between the states with public hearing provisions was large for several measures, only the population annexed approached statistical significance ( $p = .051$ ).

*Service plan.* Service plans are generally detailed outlines of goals for extending and providing services to areas proposed for annexation. In some states, annexations may not occur until services are extended. In other states, the extension of services may occur gradually. A formal plan, therefore, provides residents and property owners with a time frame for receiving municipal services. A service plan protects residents by committing the municipality to provide the agreed-upon urban services. This type of annexation constraint may inhibit municipalities from annexing areas where they would be either unable or unwilling to provide services. Twenty states require service plans for some annexation procedures.

Only one measure of annexation activity was significantly different between states that require service plans and states that do not: states with service plan requirements annexed nearly twice as many total acres than did states without such requirements ( $p = .047$ ). Only one measure—average acres per annexation—was lower as expected. All of the other measures, though not statistically significant, were higher for states with service plan requirements.

*County governing authority approval.* County governing authority approval provides county officials with a formal input mechanism in the annexation process. This provision grants the county governing authority approval or veto power over the annexation. This type of county intervention is seen as a mechanism to curb municipal annexations. Nineteen states have provisions covering county governing authority.

Both proponents and opponents of provisions requiring county governing authority approval assume that the number of annexations and the total acres annexed would be significantly less if counties had the ability to intervene in the process. And in fact, on all measures of annexation activity, states requiring county governing authority approval did have lower levels of annexation activity than other states, though only total acres annexed approaches statistical significance ( $p = .059$ ).

*Boundary agency.* A boundary agency is an independent review body that either oversees the entire annexation process or serves as an appeals or oversight body to ensure that annexation procedures are followed. These commissions exist in 12 states. Those who argue against boundary commissions (e.g., Reynolds 1992) suggest that they are overly expensive and inefficient and that they are often dependent on the consent and support of a majority of property owners to prescribe an annexation. There is no statistical difference for any of the measures of annexation activity between states that have some type of boundary commission or agency and states that do not.

*Impact reports.* Annexation impact reports generally require an assessment of the financial implications of the annexation, including the estimated revenue that would be generated, as well as the estimated expenditures, including any necessary capital expenditures. These impact assessments may be required for some or all annexations. This type of analysis is often assumed to bring rationality into the annexation process (ASPO 1958; Herzik 1984). For many years, planners (e.g., ASPO 1958) have argued that annexation impact reports would make annexation decisions easier. However, very few states have blanket impact report requirements. Usually, these requirements are imposed when some type of “trigger” requires them, such as the size of the annexation (acreage), land-use designation (existing or proposed), or the number of people affected. Seven states have some type of

impact report requirement. The only statistically significant difference was the average size of the annexation: states with impact report provisions averaged 45.5 acres per annexation, and states without averaged 278.8 acres ( $p = .029$ ).

### FACILITATORS

Provisions classified as facilitators are designed to ease annexation for one or more stakeholders, increasing the likelihood of accomplishing the annexation (Carr and Feiock 2001). These facilitators exist for a variety of reasons. For example, the facilitators may promote efficient service delivery, protect public health and welfare, or facilitate municipal control over municipally owned land. This section covers eight aspects of state law designated as facilitators of annexation activity. Each facilitator is described, and the data from this study are analyzed in each case.

*Local resolution.* Most states allow municipalities to initiate annexations through a local resolution or ordinance. Municipal advocates argue for this type of annexation process to facilitate the provision of services (e.g., Reynolds 1992). Opponents of this type of annexation raise concerns about land grabs and selective annexations that take the most desirable land but leave those areas that are hard to serve (Reynolds 1992, 268-71). Although this type of annexation is often referred to as “involuntary” annexation, provisions still provide due process protections for property owners (Reynolds 1992, 258). The majority of the states included in this study (39 of 42) have some type of municipally initiated annexation process. Five of the seven measures had higher levels of activity in states with local resolution provisions, but none of the measures achieved a statistical difference.

*Property owner initiation.* Most states allow a property owner to initiate an annexation; this approach is essentially the property owner’s alternative to annexation by resolution. This is most often done through petition requirements. Again, 39 of the 42 states had these types of provisions. This method is seen as a key provision of self-determination, allowing those most affected by annexation to have a significant say in the annexation process.

Given that most states have some type of provision for property owner initiation, achieving statistical significance required a large difference between the means. Even with that high hurdle, total acres annexed achieved statistical significance ( $p = .010$ ). States that allow for either property owner- or resident-initiated annexations through petitions annexed on average more than three times the total number of acres than did states without this provision. The remaining six measures of activity are split between higher levels of activity (total annexations, population annexed, and housing units annexed)

and lower levels of activity (average acres per annexation, average population per annexation, and annexation density), though none achieved statistical significance.

*Unincorporated islands.* Unincorporated islands are areas wholly surrounded by one or more municipalities. To serve these areas, the service provider often must pass through other jurisdictions to deliver services. This can make the delivery of time-sensitive services, such as law enforcement, fire protection, and emergency medical care, more difficult for both municipalities and counties (e.g., Diefenbacher and Sumner 1992, 53-62). To improve service delivery, several states (e.g., Florida and Georgia) have developed special annexation procedures for annexing unincorporated islands with the explicit goal of reducing the number of unincorporated islands. Twenty-three states have specific unincorporated island provisions in their annexation laws.

States with unincorporated island procedures annexed more than twice as many acres as did other states ( $p = .030$ ). For states with unincorporated island procedures, the remaining six measures of annexation activity were evenly split between those with higher levels of activity (number of annexations, total acres annexed, and population annexed) and those with lower levels of activity (housing units annexed, average acres per annexation, and average population per annexation). The difference in the number of annexations approached statistical significance ( $p = .055$ ).

*Municipally owned land.* Municipalities often purchase land outside their corporate boundaries for infrastructure development (e.g., water- and sewage-treatment plants) or for recreation facilities. Some states specifically address annexations of municipally owned land. Supporters argue that this provision is important because municipalities frequently want total control of their municipally owned land. This is reasonable because the county does not receive any tax benefit from municipally owned land in unincorporated areas. However, counties are often concerned because they see the annexation of municipally owned land as a strategy to expand municipal boundaries and skirt the normal annexation requirements. Twenty-two states have provisions addressing municipally owned land.

The only measure of activity that showed a statistically significant difference between those states that have specific annexation procedures for municipally owned land and those states that do not have such provisions was the measure for the estimated population annexed ( $p = .042$ ). All other measures, except average population per annexation, were higher, though not statistically significant.

*Cross-county annexation.* Cross-county annexation occurs when a municipality in one county annexes land in an adjoining county. When

municipalities cross county lines, it alters the structure of local government by increasing the number of local governments affected by a municipality's decisions. It also further complicates service delivery. Seventeen states have provisions allowing cross-county annexations. States with statutory provisions addressing cross-county annexations do not demonstrate any statistical differences for any of the measures of annexation activity from states without such provisions.

*Noncontiguous annexation.* All states that have annexation procedures also have some type of contiguity requirement, meaning that the land annexed must be adjacent to or adjoining the municipality in some defined way. Some states also allow noncontiguous land to be annexed if certain criteria are met. Fourteen states have provisions allowing noncontiguous annexations under some circumstances. Annexation opponents frequently express concern that these types of procedures will result in spoke annexations that capture only prime properties while creating challenges for service delivery.

Noncontiguity provisions produce the most robust differences of all annexation provisions explored. Three measures of activity—total annexations ( $p = .032$ ), population annexed ( $p = .015$ ), and housing units annexed ( $p = .014$ )—all had significantly higher levels of activity for states with noncontiguity provisions. It is interesting that two measures of activity—average acres per annexation and average population per annexation—were lower, though not statistically significant, for states with noncontiguity provisions.

*Health and safety concerns.* Several states have special annexation provisions for health and safety hazards; they are provided for extraordinary circumstances where the normal annexation procedures make it difficult to respond to critical situations. These provisions allow a municipality, under special circumstances, to annex property where there is a known health and or safety hazard, so that the municipality can regulate and oversee the remediation of the hazard. Only seven states have these provisions. Because these situations are the exception, it is not surprising that there are no significant differences for any of the measures.

*Legislatively initiated.* If the state legislature is specifically authorized to make changes to municipal boundaries through annexations, then the state is classified as having state legislature annexations. These annexations may also require one or more additional annexation requirements. Because state legislative action removes the process from the local arena, annexations may take place that would not take place under any other annexation method. Nevertheless, in states where legislatively initiated annexation is the only approved method (e.g., Maine), there are very few annexations. Only six states specifically address legislative initiation as part of their state

annexation laws. There is no statistical difference for this provision for any of the measures of annexation activity and no clear patterns between states that have legislatively initiated annexations and states that do not have such provisions.

### IMPLICATIONS AND FUTURE RESEARCH

Overall, this note has explored the impact of separate provisions of state law on annexation activity. Annexation provisions were classified as either constraining annexation activity or facilitating such activity. Using *t*-tests to examine the differences between annexation activities of states with and without such provisions provides a first step to understanding the complex factors affecting annexation activity.

The analysis highlights some interesting patterns. Laws that are designed to facilitate annexation are typically associated with high levels of annexation activity. Four facilitator provisions were associated with statistically significant higher levels of activity. States with provisions addressing property owner initiation or unincorporated islands annexed more acres than did states without those provisions. States with provisions for municipally owned land annexed more total population than did states without those provisions. Finally, states with provisions addressing noncontiguous annexation, the facilitator with the greatest impact, had more total annexations, more total population annexed, and more housing units annexed than did states without provisions for noncontiguous annexation. Overall, facilitators appear to do exactly what they are intended to do: facilitate higher levels of annexation activity.

On the other hand, laws that are designed to constrain annexation are not very likely to result in lower levels of activity. Specifically, only one constraint, impact report requirements, had a statistically lower measure of activity in the expected direction. States requiring annexation impact reports had smaller annexations as measured by average acres annexed, as compared with states without these requirements. This may be due to the increased scrutiny involved in conducting impact reports. Two other constraints had statistically significant findings, but not in the expected direction: states with election provisions had 84% more annexations than did states without such provisions, and states requiring service plans annexed 92% more total acres than did states without service plan provisions.

Although these findings are instructive, it is clear that more research needs to be conducted. For example, what is the impact of a single annexation procedure when other procedures are controlled? Do different schemas for

**TABLE 2: Comparing Significant Difference in Annexation Activity by Annexation Statutory Provisions**

<i>Legal Provision: Annexation Activity</i>	<i>Mean for States</i>		<i>One-Tailed Significance<sup>a</sup></i>
	<i>With</i>	<i>Without</i>	
<b>Constraints</b>			
Election: Total annexations	1,869.43	1,015.50	.047
Service plan: Total acres	174,426.10	90,748.21	.047
Impact reports: Average acres	45.55	278.82	.029
<b>Facilitators</b>			
Property owner initiation: Total acres	137,195.36	44,787.88	.010
Unincorporated islands: Total acres	169,929.86	82,978.73	.030
<b>Municipally owned land:</b>			
Population annexed	66,683.32	27,527.10	.042
Noncontiguous: Total annexations	2,499.36	1,127.50	.032
Noncontiguous: Population annexed	96,929.36	23,591.57	.015
Noncontiguous: Housing units annexed	33,436.64	9,141.04	.014

a. To test for differences in the means of the two groups, I used the *t*-test for independent samples. This procedure does not require that the sample sizes be equal (Blalock 1979; G. Wheeler 1994). The critical issue is to determine whether or not the groups have equal variance and to then use the appropriate *t*-test statistic. For Levene scores with a *p* value of .25 or greater, I used the equal variance test. For *p* values less than .25, I used the unequal variance test (G. Wheeler 1994). The significance data presented are one-tailed tests because constraints are assumed to restrain activity, whereas facilitators are assumed to increase activity. Complete *t*-test results for all 15 provisions and the seven measures of annexation activity are available from the author.

classifying state annexation laws provide insight into levels of annexation across the United States? What influence do factors such as the number of governments, growth rates, and the economy have on annexation activity? Finally, what are the most important factors that influence local annexation decisions? This analysis is the first step in exploring a broader range of annexation requirements. This first step examined annexation provisions independently, in part because annexation laws are often adopted or modified piecemeal. Additionally, this larger set of annexation provisions provides new information that may further elucidate annexation activity. The next critical step is to explore how the legal provisions impact annexation activity in a multivariate model.

### Notes

1. Steinbauer et al. (2002), available for download at <http://www.cviog.uga.edu/pprs/index.html>, provides the definitions and a complete list of annexation statutes by state. Previous

research has generally relied on data from ACIR (1993) for information on six annexation provisions.

2. Independent *t*-tests are used to explore the bivariate relationship between the presence of an annexation provision and annexation activity. Clearly, fully understanding annexation activity will require multivariate modeling. However, for this exploratory research using an expanded set of state statutory provisions, the bivariate analysis is an important first step.

3. These "data . . . represent local government estimates in response to the Census Bureau's Boundary and Annexation Surveys. As such, they do not constitute official Bureau of the Census data" (U.S. Bureau of the Census 1999).

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