

Tax Incentives and Business Climate: Executive Perceptions From Incented and Nonincented Firms

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G. Jason Jolley¹, Mande Foushee Lancaster², and Jiang Gao³

Abstract

Executive surveys ranking business climate factors have become commonplace in site selection publications. However, these rankings rarely examine if the surveyed firms are receiving economic development incentives and whether or not these incentives influence business climate perceptions. This research note examines the differences in business climate perceptions in North Carolina between executives in companies receiving tax credits for business investment and job creation activities and executives in companies not receiving tax credits. Both groups rank the availability of skilled labor as the primary factor influencing business climate. In addition, executives in both groups prefer overall tax reductions rather than select tax incentives to improve the state's economy. Contrary to the belief among many economic development practitioners that tax credits are a motivating factor for firms to engage in economic development, only 30% of executives in incented companies were aware that their company had received a state economic development tax credit.

Keywords

business climate, tax incentives, economic development, Lee Act, North Carolina

Introduction

The practice of economic development, especially site selection studies, relies heavily on the perceptions of executives in ranking state business climates and determining motivations for firms to engage in relocation, expansion, investment, and job creation activities. Most of these surveys are undertaken with little distinction among the firms being surveyed with respect to whether or not that firm has been incented by the state government through tax credits or other economic development programs. Using a survey of firms in North Carolina, this research note contributes to the existing literature by examining the perceptions of executives in incented firms versus executives in nonincented firms on the factors important to a state's business climate, support for state economic development incentives, and support for select tax incentives versus overall tax reduction for all firms. For firms previously receiving a tax credit, the survey also inquires about the executive's knowledge of his/her firm's participation in the state's tax credit programs.

This research note begins with a brief literature review on tax incentives, business climate, and economic growth. A review of the academic studies of and historical background on the William S. Lee Act (hereafter the Lee Act) tax credit program in North Carolina is then presented. The survey methods used in this study follow. The research note concludes with a review of the findings and with a discussion of the implications of executive perceptions for economic development incentive policy.

Literature Review

In keeping with the structure of a research note, this section is not intended to be a comprehensive literature review, but rather to set the context for this study in light of the existing academic literature. The challenge of empirically assessing the effects of tax incentives on economic growth, job creation, and investment is well documented in academic literature (see, e.g., Bartik, 2001; Bartik & Eberts, 2012; Peters & Fisher, 2004; Wasylenko, 1997). As Peters and Fisher (2004) also note, the general consensus until the late 1980s was that incentives “had at best a marginal impact on firm location decisions” (p. 29) thereby generating little induced job creation. Later studies, notably Newman and Sullivan (1988), Bartik (1991), and Wasylenko (1997), found that taxes did affect economic growth at varying levels, leading to what Peters and Fisher (2004) dubbed a “new ‘consensus’ position” (p. 29) relating lower taxes or incentives to economic growth generation.

However, even the studies demonstrating positive economic growth through economic incentives or tax changes

¹Ohio University, Athens, OH, USA

²East Carolina University, Greenville, NC, USA

³University of North Carolina at Chapel Hill, NC, USA

Corresponding Author:

G. Jason Jolley, The Voinovich School of Leadership and Public Affairs, Ohio University, Building 21, The Ridges, Athens, OH 45701, USA.
Email: jolleyg1@ohio.edu

yielded relatively small elasticities and a high cost per induced job. Elasticity refers to the change in the quantity demanded of a good, for example, labor, in response to a change in price. Economic theory suggests that tax incentives would reduce the cost of labor and in response firms would hire more workers. A large elasticity indicates that firms are very responsive to a change in tax rates and would therefore hire more workers or engage in more business activity. A small elasticity indicates firms are less responsive in hiring additional workers or engaging in more business activity.

For example, Wasylenko (1997) found that a 10% reduction in overall state and local taxes would yield a 2% increase in business activity. Bartik and Eberts's (2012) review of incentives literature noted that the cost per induced job is highly variable and sensitive to slight changes in elasticity. For example, Bartik and Eberts noted Bartik's (2006) prior research finding that it costs \$206,000 in foregone business taxes to create one job at an elasticity of -0.2 . Bartik and Eberts (2012) also found that a slight change to an elasticity of -0.05 would increase the cost per job to greater than \$800,000, whereas an elasticity of -0.6 (based on the research of Hines, 1996) would reduce the costs per job to \$70,000. Despite the variation in elasticity estimates or businesses' response to changes in tax policy, each modeling approach assumes that business tax incentives do not lead to a corresponding drop in the quality of public services (Bartik & Eberts, 2012).

Peters and Fisher (2004) acknowledge that even if the "new consensus" position is correct, the effects of business incentives on economic growth and job creation are still much lower than projected by elected officials and economic development advocates. Peters and Fisher further estimate that incentives work 10% of the time. Despite the limited findings on the effectiveness of incentives, this has not deterred local and state governments from using these tools. Bartik and Eberts (2012) estimate that \$40 billion is spent annually by state and local governments on business incentives (based on an updated present value conversion of the projection in Bartik, 2001).

The impact of business climate factors on economic growth has also been addressed in the literature. Earlier studies have found higher wages, utility rates, personal income taxes, and levels of taxation to be negatively associated with economic growth, whereas education spending is associated with positive growth (Wasylenko & McGuire, 1985). Plaut and Pluta (1983) found state employment and growth in capital stock to be positively influenced by a state's business climate, tax, and expenditure activities but that these factors did not influence industrial growth. More recent studies focused on the role of business climate indexes in predicting economic growth have found that business climate indexes are politically motivated and are often predictors of productivity rather than growth (Kolko, Neumark, & Mejia, 2013).

William S. Lee Act

In 1996, North Carolina passed the Lee Act, offering tax credits to firms engaging in qualified job creation, machinery and equipment investment, research and development investment, and other activities in the state. The Lee Act marked North Carolina's foray into the arena of state incentives and was spurred in part by the state's failure to land several large industrial projects, notably BMW's opening in South Carolina and Mercedes' opening in Alabama (Morgan, 2009). The Lee Act tax credit program requires that companies first engage in the eligible activity: job creation, machinery and equipment investment, or research and development investment. Companies document these investments on end-of-year tax returns to receive a tax credit of up to 50% of the company's tax liability. Unused credits can be carried forward for a period of 5 years, and under certain conditions, research and development credits can be carried forward 10 years (North Carolina Department of Revenue, 2005).

The amount of qualifying tax credit is dependent on the location of the business where the investment or job creation occurs. More than 95% of the Lee Act credits are focused on job creation, machinery and equipment investment, and research and development investment activities (Lane & Jolley, 2009); this research note focuses on companies taking those credits. The Lee Act divided the state into five tiers based on "an index of economic performance indicators" (Morgan, 2009, p. 17). Tax credits were available on a sliding scale with the most generous credits available to companies located in the poorest counties. Initially, the Lee Act focused on manufacturing, warehousing, and data processing industries. A series of revisions expanded the eligible industries to include central administrative offices, air courier services, call centers, wholesalers, software publishing, and motorsports, among others (Doran, n.d.). The Lee Act does not require industries to be located in the state for a certain period of time prior to taking the credit and, therefore, incentives both newly relocated and existing industries making the qualifying investment or new hires. Additionally, the Lee Act does not limit eligibility based on firm employment or revenues.

The Lee Act has been subject to multiple academic studies (Jolley & Lane, 2010; Jolley, Lane, & Paynter, 2013; Luger & Bae, 2005; Rondinelli & Burpitt, 2000). Rondinelli and Burpitt (2000) conducted a survey of 118 foreign-owned firms in North Carolina to determine the importance of business climate factors; they found that incentives, including the Lee Act, were low on the list of factors attracting and retaining firms to the state. Jolley and Lane (2010) conducted interviews with 36 company executives in North Carolina whose firms received Lee Act tax credits to determine the impact of the credit on the firm's site location decisions. Their study found that the tax credits were viewed by executives as being *ex post facto* to the company's decision to

engage in qualifying hiring or investment activities eligible for tax credits under the Lee Act. Jolley et al. (2013) examined employment histories of individuals hired under the Lee Act in 2006. They found that most employees hired under the job creation tax credit portion of the Lee Act were likely existing North Carolina residents, demonstrating that the majority of direct beneficiaries were existing residents and not in-migrants. Yet the study also found high levels of unemployment among Lee Act hires, with nearly 19% being unemployed for some duration in 2008, just 2 years posthire.

Luger and Bae (2005) conducted one of the most extensive studies of the Lee Act. They used simulations to model the Lee Act's induced effect on job creation. Although Lee Act tax credit recipients reported 7,888 jobs created from the job creation tax credit, Luger and Bae found that only 262 induced jobs were created from the Lee Act credits. This represents a mere 3.3% of the new jobs and considerably less than the 10% new jobs estimate from Peters and Fisher (2004). Luger and Bae also (2005) found an average cost of \$147,463 per job under the Lee Act, which compares somewhat favorably to the cost projections provided by Bartik and Eberts (2012). Despite Luger and Bae's (2005) study, the Lee Act continued in existence until 2007 when it was replaced with a comparable tax credit program, Article 3(J). Over the 11-year course of the Lee Act, Lane and Jolley (2009) found that companies receiving Lee Act tax credits had generated over \$2 billion in eligible credits and had claimed nearly \$700 million over the life of the program to date. Given the prior studies on the relatively low ranking of the importance of tax incentives (Jolley & Lane, 2010; Rondinelli & Burpitt, 2000), the high cost per job and limited inducement effect (Luger & Bae, 2005), the questionable duration of jobs created under the act (Jolley et al., 2013), and the large fiscal outlays associated with the Lee Act program (Lane & Jolley, 2009), it is worth revisiting executive perceptions of these tax credits.

Survey Methodology

For this study, a survey was developed for administration to the incented companies (those receiving a Lee Act tax credit in 1 or more years between 2003 and 2006) and nonincented companies (those having never received a Lee Act tax credit).¹ This division allows for differences between these two groups to be examined and to explore the differing perceptions of firms receiving and not receiving state tax credits. Furthermore, this design allows the researchers to check the selection bias often present in surveys targeted only toward incented firms where respondents may inflate the effectiveness of incentives on their behavior (see, e.g., Buss, 2001; Fisher & Peters, 1998; Goss & Phillips, 1999). The incented survey contained additional questions for the executive respondent to determine if the executive was aware of his/her company having received a Lee Act tax credit in the past 4 years. East Carolina University's

Center for Survey Research was contracted to administer the survey, and trained survey administrators from the center administered telephone and web surveys, as discussed later in the study. Five external reviewers to the study, former or current professors drawn from the University of North Carolina at Chapel Hill, North Carolina State University, and East Carolina University, respectively, provided comments and recommendations on the survey instrument. The pilot survey was tested with a subset of incented and nonincented companies. Several minor language modifications were made to the pilot survey instrument to clarify and improve response rates before administration.

The list of incented companies to be targeted was narrowed to the 979 companies that had received a Lee Act tax credit in 1 or more years between 2003 and 2006. Additionally, a list of approximately 33,355 nonincented companies located in North Carolina was obtained from Dun and Bradstreet's Million Dollar Database of companies with \$1 million or more in annual sales.

In 2008, the final survey was administered by telephone with an option of having respondents complete the survey online. The targeted survey respondents included the population of 979 companies receiving a Lee Act tax credit in North Carolina and a random sample of 5,000 companies in North Carolina drawn from the 33,335 companies in the Dun and Bradstreet database. Stratification was conducted to ensure the sample of nonincented companies had the same percentage of companies per county as the incented survey population. The random sample of 5,000 was drawn with an expected 10% response rate; 500 responses would yield a 4.35 confidence interval at a 95% confidence level.

A total of 150 incented companies and 465 nonincented companies responded to the survey. Each of the incented companies responded to the survey by telephone. Of the nonincented respondents, 348 completed the survey by phone and 117 requested a copy of the survey and replied electronically. Nonincented company surveys yielded a 9% response rate with a 4.51 confidence interval at a 95% confidence level. Incented company surveys yielded a 12% response rate. Again, sampling techniques were not used, as the entire population of incented firms was included in the survey. Because of budgetary constraints, the Dillman method and other techniques with repeated interactions such as mailing were not used.

The survey targeted company executives with the goal of speaking with a decision maker or manager knowledgeable about the company's activities. Surveying executives is the common approach in both the academic studies on business climate (e.g., Kimelberg & Nicoll, 2012; Rondinelli & Burpitt, 2000) and the professional literature (e.g., Arend, 2011; Gambale, 2011). If a factor was important to a company's decision to engage in a business activity, such as expansion or relocation, in the past 4 years, then it is likely that the executive would be aware of these factors.

Table 1. Management Level of Respondents.

Management level	Incented, n (%)	Nonincented, n (%)
Chief executive officer	8 (5.0)	38 (8.6)
President	41 (25.8)	149 (33.7)
Owner	35 (22.0)	102 (23.1)
Other executive management role (e.g., vice president, general manager)	75 (47.2)	153 (34.6)

Table 2. Number of Employees.

Employment	Incented	Nonincented
<i>M</i>	153	30
<i>Mdn</i>	29	18

Findings

The survey was successful in reaching executives responsible for company management, including those presumed to be knowledgeable about their company's relocation and expansion decisions. In the incented survey, 52.8% of the respondents identified themselves as company chief executive officer, president, or owner, whereas the remaining respondents (47.2%) identified themselves using other executive titles, most commonly vice president, general manager, or manager (see Table 1). A slightly higher percentage of nonincented company executives identified themselves as chief executive officer, president, or owner (65.4%), and a slightly lower percentage as another executive role (34.6%). Vice president, general manager, and manager were also common responses.

Incented firms had more employees with a mean employment of 153 employees versus a mean employment of 30 for nonincented firms. Several outliers increased the employment size difference as median employment levels for both groups were closer in size: 30 for incented and 18 for nonincented (see Table 2).

Importance of Factors on North Carolina's Business Climate

Company executives at incented and nonincented companies were provided a list of 19 factors listed in Table 3 and were asked to rate the importance of these factors for North Carolina's business climate using a 5-point Likert-type scale, with 5 being *very important* and 1 being *unimportant*. Mean values were reported for each factor for incented and nonincented firms to gauge relative importance among the factors. State economic development tax incentives ranked rather low on factors affecting the state's business climate, 16th for

incented companies and 15th for nonincented companies. Availability of skilled labor, tax rates, regulatory climate, and availability of higher educational institutions were the top factors.

A *t* test was conducted to determine whether statistically significant differences existed between the two groups' views on the importance of these business climate factors. Table 3 demonstrates the statistical significance of these differences using two *t* tests. Only one statistically significant difference emerged, as incented firm executives view state regulatory climate as being more important than nonincented firms.

Support for Economic Development Incentives and Tax Reduction

The survey asked executives which strategy they preferred to help North Carolina's economy (see Table 4). The first strategy would offer preferred select tax incentives to certain businesses, whereas the second strategy would offer overall reductions on taxes affecting business taxpayers and their owners. Approximately 14.5% of nonincented companies and 21.7% of incented companies stated it was better to offer select incentives to certain businesses, whereas 85.5% of nonincented companies and 78.3% of incented companies stated it was better to reduce taxes affecting business taxpayers and their owners. Although a majority of executives in both groups favored reduced taxes over incentives, a statistically significant difference did exist with respect to favoring reducing taxes affecting business taxpayers and their owners.

Tax Credit Awareness

As previously discussed, companies are incented through tax credits on end-of-year tax returns after the qualifying investment or job creation has occurred, and these tax credits can be carried forward into future tax years. Given that companies are incented through tax credits after the job creation or investment occurs, the extent to which these credits influence company behavior is likely limited. Unlike many negotiated incentive agreements, there is no "but for" requirement where companies sign documentation legally attesting that "but for" the economic incentive, the company would not have engaged in the economic development activity. Company executives whose firms had received a Lee Act tax credit were asked, "Has your company ever received an economic development incentive or tax credit from the state of North Carolina?" The survey results confirmed findings from Jolley and Lane's (2010) study that many executives were unaware that their companies had received a tax credit. Of the executives surveyed from companies previously receiving a Lee Act tax credit, 29.3% were aware the company had received an incentive, 61.8% did not believe the

Table 3. Business Climate Factor Ranking.

Importance of factors on North Carolina's business climate	Rank incented companies	Rank nonincented companies	<i>p</i>	Mean incented	Mean nonincented
Availability of skilled labor	1	1	.3267 (.2916)	4.41	4.33
State regulatory environment (Incented > Nonincented)	2	6	.0365* (.0278)	4.05	3.83
State corporate tax rate	3	4	.3618 (.3459)	4	3.88
Local property tax rates	4	2	.8664 (.8672)	3.95	3.96
Availability of community colleges	5	5	.8574 (.8525)	3.89	3.87
State individual income tax rates	6	3	.2780 (.2930)	3.83	3.95
Highway infrastructure	7	7	.8994 (.8988)	3.82	3.8
Information technology infrastructure	8	10	.6664 (.6555)	3.74	3.69
Availability of 4-year colleges/university	9	8 (tie)	.7585 (.7665)	3.7	3.73
Housing costs	10	8 (tie)	.2393 (.2307)	3.63	3.73
Environmental regulations	11	12	.4376 (.4280)	3.51	3.6
Land prices (nonincented > incented)	12	11	.0599 (.0641)	3.45	3.65
Workforce training programs	13 (tie)	13	.5141 (.5241)	3.42	3.49
Accessibility to major airport	13 (tie)	14	.8770 (.8778)	3.42	3.4
Local economic development tax incentives	15	16	.5530 (.5272)	3.4	3.32
State economic development tax incentives	16	15	.8956 (.8898)	3.33	3.34
Availability of low-cost labor	17	17	.5445 (.5363)	3.24	3.31
Mass transit infrastructure	18	18	.1528 (.1551)	2.62	2.79
Availability of unskilled labor	19	19	.6625 (.6477)	2.59	2.64

Note. The *p* value is the *t*-test *p* value assuming equal variance; *p* value in the parenthesis is the *t*-test *p* value assuming unequal variance. Incented *n* ranges from 146 to 148, nonincented *n* ranges from 459 to 465.

**p* < .05.

Table 4. Which Strategy Is Better for North Carolina's Economy? Select Tax Incentives or Reducing Overall Taxes.

Which strategy is better for North Carolina's economy?	<i>p</i>	<i>M</i>	
		Nonincented	Incented
Offer select tax incentives to certain business (incented > nonincented)	.0887 (.1136)	0.141	0.2
Reduce taxes affecting business taxpayers and their owners (nonincented > incented)	.0403* (.0263)	0.834	0.753

Note. The *p* value is the *t*-test *p* value assuming equal variance; *p* value in the parenthesis is the *t*-test *p* value assuming unequal variance.

**p* < .05.

company had received an incentive, and 8.9% were unsure. The high level of unawareness of the tax credit usage among executives points to the use of tax credits as an accounting function to minimize tax liabilities. Ambiguity around the use of the credit suggests that it is not influencing job creation and investment behavior.

A second test was conducted to determine whether an executive's awareness or unawareness that his or her firm

had received a tax credit influenced that executive's preference for the state offering select tax incentives or overall tax reduction. A Fisher's exact test was used given the low expected frequency in the table. The test revealed that an awareness effect does exist, as executives aware of having received a tax credit are more likely to support select tax incentives. Yet, even among this aware group, the preference is roughly evenly split (see Table 5).

Finally, although state tax credits are designed to encourage economic development, the survey found that 33.5% of executives in nonincented companies expected the company to expand existing facilities in North Carolina, whereas only 24% of incented firms expected an expansion in the state. This represented a statistically significant difference; however, caution must be taken in drawing too much inference from this difference as incented firms may have previously expanded, which explains the firm's eligibility for the tax credit.

Policy Implications and Conclusions

Although this study is limited to North Carolina, there are several policy implications likely generalizable to other states using state tax credits. First, confirming prior surveys, the study demonstrates that tax credits play, at best, a limited role in executive decisions to engage in job creation and

Table 5. Incented Company Perception of Which Strategy Is Better for North Carolina's Economy.

Which strategy is better for North Carolina's economy?	Number of incented companies; aware the company had received incentive from North Carolina?	
	Yes	No
Offer select tax incentives to certain business	14 (9.2)	15 (19.8)
Reduce taxes affecting business taxpayers and their owners	30 (34.8)	79 (74.2)

Note. Fisher's exact test odds ratio = 2.44 and $p = .044$. The numbers in the parentheses are the expected frequency.

investment activities. This research demonstrated that executives were generally unaware of their company's participation in state tax credit programs and that even aware executives were split, with half preferring overall tax reduction to select incentives. Given that the state of North Carolina had foregone revenues of nearly \$700 million associated with the Lee Act tax credit program at the conclusion of Lane and Jolley's (2009) study, this is a substantial loss of state revenue for a program with, at best, limited influence on corporate behavior.

Second, in accordance with other site selection surveys, economic development incentive influence on state business climate rank low for both incented and nonincented company executives. This suggests these foregone revenues may be better targeted to workforce development, infrastructure, or other factors that consistently rank as major factors in determining a state's business climate. Given concerns in prior studies about selection bias among incented firms, the general lack of significant differences in the perception of incented and nonincented firms on business climate factors, including the importance of incentives, indicates little divergence in how states should pursue broader economic development priorities.

Finally, the survey demonstrated broad support for an overall lower tax environment rather than select tax incentives. Even executives aware that their firms had received a business tax incentive were evenly split on a preference for select tax incentives and overall business tax reduction. Some scholars, notably Bartik (2005), have indicated that broad-based tax reductions are conservative strategies that significantly reduce government revenues. Yet, in the case of the Lee Act and similarly structured business tax incentives written into statute, states are already foregoing this revenue. In North Carolina's case, it is reasonable to assume that swapping statutory tax incentives for broader tax reduction would not lead to significant, if any, job reductions based on Luger and Bae's (2005) prior analysis of the limited induced

employment effect of the Lee Act and Jolley et al.'s (2013) finding that 19% of Lee Act hires were unemployed at some point 2 years posthire. Broad-based tax reduction would target a larger number of companies and individuals (if the individual income tax were lowered) as opposed to benefitting a smaller number of firms. Kolko et al. (2013) identified simplifying state corporate tax structures to be one of the policy tools within control of state governments that was positively associated with economic growth. Alternatively, and perhaps preferably, these tax savings could be targeted in a more discretionary manner to firms through direct economic development assistance grants and programs, or invested in improving more important business climate factors such as infrastructure or education.

This survey raises important questions about the limitations of state tax credits in influencing company behavior. It suggests that states may benefit from taking a more deliberate approach to awarding economic development incentives rather than using statutory tax credits to promote economic development activities. Furthermore, states focusing spending on more traditional business climate factors, including general tax reduction, may garner stronger improvements in business climate perceptions among executives of both incented and nonincented firms.

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Note

1. The Lee Act is a statutory tax credit; therefore, firms do not apply for Lee Act tax credits. Qualifying firms indicate the tax credit and provide documentation on state tax returns. As a result, it is highly unlikely that any firm qualifying for a tax credit would choose to return the credit to the state. The survey did not include a global question about all possible state tax credits. However, incented and nonincented respondents were cross-checked against a public database of firms receiving discretionary economic development grants from North Carolina through the Job Development Investment Grant or One North Carolina Fund. None of the survey respondents received grants from these other economic development grant programs.

References

- Arend, M. (2011, November). A better mousetrap. *Site Selection*. Retrieved from <http://www.siteselection.com/issues/2011/Nov/Cover.cfm>

- Bartik, T. (1991). *Who benefits from state and local economic development policy?* Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Bartik, T. J. (2001). *Jobs for the poor: Can labor demand policies help?* Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Bartik, T. J. (2005). Solving the problems of economic development incentives. *Growth and Change*, 36, 139-166.
- Bartik, T. (2006). *Taking preschool education seriously as an economic development program: Effects on jobs and earnings of state residents compared to traditional economic development programs* (Report prepared for the Committee for Economic Development). Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Bartik, T., & Eberts, R. (2012). The roles of tax incentives and other business incentives in local economic development. In N. Brooks, K. Donaghy, & G. Knapp (Eds.), *The Oxford handbook of urban economics and planning* (pp. 634-654). New York, NY: Oxford University Press
- Buss, T. F. (2001). The effect of state tax incentives on economic growth and firm location decisions: An overview of the literature. *Economic Development Quarterly*, 15(1), 90-105.
- Doran, J. K. (n.d.). *Overview of the William S. Lee Act*. Raleigh: North Carolina Institute for Constitutional Law. Retrieved from <http://www.ncicl.org/article/595>
- Fisher, P. S., & Peters, A. H. (1998). *Industrial incentives: Competition among American states and cities*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Gambale, G. (2011, Winter). 25th Annual Corporate Survey. Area Development Magazine. Retrieved from <http://www.area-development.com/AnnualReports/jan2011/25th-annual-corporate-executive-survey48843.shtml>
- Goss, E. P., & Phillips, J. M. (1999). Do business tax incentives contribute to a divergence in economic growth? *Economic Development Quarterly*, 13, 217-228.
- Hines, J. R. Jr. (1996). Altered states: Taxes and the location of foreign direct investment in America. *American Economic Review*, 86, 1076-1094.
- Jolley, G. J., & Lane, E. B. (2010). The limitations of state economic development tax credits. *International Journal of Business Research*, 10, 181-186.
- Jolley, G. J., Lane, E. B., & Paynter, S. R. (2013). Who benefits from job creation tax credits? *Coastal Business Journal*, 12, 135-145.
- Kimelberg, S. M., & Nicoll, L. A. (2012). Business location decisions in the medical device industry: Evidence from Massachusetts. *Economic Development Quarterly*, 26, 34-49.
- Kolko, J., Neumark, D., & Mejia, M. C. (2013). What do business climate indexes teach us about state policy and economic growth? *Journal of Regional Science*, 53, 220-255.
- Lane, E. B., & Jolley, G. J. (2009). *An evaluation of North Carolina's economic development incentive programs: Final report*. Chapel Hill: University of North Carolina at Chapel Hill.
- Luger, M. I., & Bae, S. (2005). The effectiveness of state business tax incentive programs: The case of North Carolina. *Economic Development Quarterly*, 19, 327-345.
- Morgan, J. Q. (2009). Using economic development incentives: For better or for worse? *Popular Government*, Winter, 16-29.
- Newman, R., & Sullivan, D. (1988). Economic analysis of business tax impacts on industrial location: What do we know, and how do we know it? *Journal of Urban Economics*, 23, 215-234.
- North Carolina Department of Revenue. (2005). *Guidelines for Article 3A Tax Credits: Tax Year 2005*. Retrieved from http://www.dornrc.com/taxes/corporate/Article3A_Guidelines05.pdf
- Peters, A., & Fisher, P. (2004). The failures of economic development incentives. *Journal of the American Planning Association*, 70(1), 27-37.
- Plaut, T., & Pluta, J. E. (1983). Business climate, taxes and expenditures, and state industrial growth in the United States. *Southern Economic Journal*, 50(1), 99-119.
- Rondinelli, D. A., & Burpitt, W. J. (2000). Do government incentives attract and retain international investment? A study of foreign-owned firms in North Carolina. *Policy Sciences*, 33, 181-205.
- Wasylenko, M. (1997, March/April). Taxation and economic development: The state of the economic literature. *New England Economic Review*, 37-52.
- Wasylenko, M., & McGuire, T. (1985). Jobs and taxes: The effect of business climate on states' employment growth rates. *National Tax Journal*, 38, 497-511.

Author Biographies

G. Jason Jolley is an assistant professor and Master of Public Administration Program director at the Voinovich School of Leadership and Public Affairs, Ohio University. His research has been published in *Business Strategy and the Environment*, *State and Local Government Review*, and *Journal of Public Budgeting, Accounting, & Financial Management*.

Mandee Foushee Lancaster is the director of the Center for Survey Research in the Office of Innovation and Economic Development at East Carolina University. She holds an MA in industrial/organizational psychology and a graduate certificate in economic development.

Jiang Gao is a data analyst at Proforma Twin Group in Toronto, Ontario, Canada. He contributed to this research while completing his master's degree in economics from the University of North Carolina at Chapel Hill. His research interests include econometrics and predictive modeling.