THE CONSEQUENCES OF STATE ECONOMIC DEVELOPMENT STRATEGIES ON INCOME DISTRIBUTION IN THE AMERICAN STATES, 1976 TO 1994

LAURA LANGER
University of Arizona

I ask whether the economic development strategies pursued by state governments to stimulate growth have unintended consequences for the well-being of the citizenry, particularly income distribution. Pooled cross-sectional time-series analysis was employed to empirically evaluate the effects of state economic development strategy on the distribution of income in the American states for the 1976 to 1994 period. Results demonstrate that the economic development strategy state governments take has differential effects on the distribution of income. States that adopt demand-side policies (promoting research and development, technology, and exportation) more than traditional supply-side policies (offering tax abatements and capital subsidies) are associated with more equitable distributions of income. Although the results indicate that states have the power to reduce income inequalities by employing more demand-oriented economic development strategies, the substantive impact is quite small, and the frequency with which states do this is rare when compared to the use of supply-side tactics.

States have spent billions of dollars trying to get industry to locate to their state, and these efforts to stimulate growth are becoming more expensive (Mooney, 1995). Although there is some recent evidence that state government can influence firm location (Fox, 1996), state government intervention in the economy has not produced the significant returns anticipated in the economic sector (e.g., Ambrosius, 1989; Brace, 1993, 1997, in press; Hanson & Berkman, 1991; Plaut & Pluta, 1983; Steinnes, 1984).[1] As a result, state government approaches to stimulate economic growth have created a political quandary for many American states (Brace, 1993; Donahue, 1997).

The economic gains to be secured by government intervention are neither guaranteed nor clear, and the unintended effects of these endeavors are unknown. Scholars will continue to debate whether governmental strategies to stimulate economic growth really work, but regardless of the answer, an important question remains. What are the unintentional effects of government manipulation of the economy?

INTENDED AND UNINTENDED EFFECTS
OF ECONOMIC DEVELOPMENT POLICIES

Central to the debate over economic development policies in the American states is whether the strategies work. Thus, an important question confronting state policy makers is, If these economic development policies stimulate growth, is increased income inequality to secure economic prosperity a necessary trade-off or an unintended consequence, or do these economic development policies fail at both growth and equity objectives? Fox (1996) found evidence that states may be able to directly influence foreign firm location decisions by providing incentive policies and attractive business climates (p. 70). This suggests that these policies, particularly those that offer tax abatements and capital subsidies, produce at least one of the intended outcomes: luring business to the state. As noted, much of the literature on the economic consequences of tax incentive policy adoption, however, finds that these policies have little or no impact on state economic health.[2] The effectiveness of these policies on economic growth remains somewhat skeptical, and the implications for income distribution are unknown. Thus, examination of the consequences of state economic development policies and strategy on income inequality becomes increasingly important.

States use a variety of policies, ranging from tax incentives and abatements to joint ventures with business, in an effort to jump-start the economy. Some, if not all, of these policies actually may increase income inequality because they deplete state resources that could be used to invest directly in human capital and state infrastructure (e.g., education, transportation). Although all economic development policies deplete resources, some of them fail to emphasize feedback mechanisms expected to replenish or advance state infrastructure and

human capital. Instead, some state government intervention promotes certain private sector interests over the interests of the entire state. In this way, income inequality may increase when state government intervenes in the economy, especially when governments employ strategies that overlook being good in order to be cheap and focus on mobile capital instead of the entire state.

In this article, I consider the impact of individual economic development policies on income distribution along with two common strategies state governments employ to stimulate growth. One economic development strategy (i.e., supply side) encourages state politicians to engage in what is known as "smokestack chasing." Following this approach, states offer a variety of tax abatements and other incentives to lure business or keep mobile capital from relocating. A second approach is the adoption of economic development policies specifically designed to promote research and development, foster technological advancements, or encourage exportation (i.e., demand side). The crux of my argument is that although each individual policy may have an unintended consequence of increasing income inequality, certain types of policies—and, more important, the propensity of state government to use a certain type of policy (i.e., its overall economic development strategy)—have differential consequences on the distribution of income in the American states.

Regardless of the approach policy makers use, there is ample evidence that state governments continue to take an active role in developing their economies (Chi, 1994; Eisinger, 1988, 1995). Eisinger (1988, 1995), Ambrosius (1989), Gray and Lowery (1990), Lowery (1990), and Brace (in press) showed an increase in states' economic development efforts since the 1970s. Although most states adopt a combination of the two approaches, there was a notable increase in demand-oriented policies in the 1980s that seems to have slowed in the 1990s. In the 1980s, more than half of the states began offering demand-side incentives to business and industry (Brace, in press; Eisinger, 1988; Weiner & Siler, 1989). Most states, however, continue to employ supply-side tactics, engaging in bidding wars with other states. Moreover, surveys have shown that business and industry look for both types of packages.[3] Although elected officials often use a variety of incentive policies to stimulate growth, the predominant strategy often includes numerous tax breaks (Chi, 1994).

DEMAND-SIDE VERSUS SUPPLY-SIDE POLICIES AND THE CONSEQUENCES ON INCOME DISTRIBUTION

Regardless of the reasons why states might use one strategy more frequently than the other, it remains to be seen whether these divergent approaches to stimulating economic growth have variable consequences on income distribution. Drawing from Eisinger (1988), the underlying premise of the traditional supply-side strategy is that growth will be secured by lowering production costs through government subsidies of capital, land, and labor and through various tax abatements (p. 12). Conversely, proponents of a demand-oriented approach believe that economic growth is promoted by discovering, expanding, developing, or creating new markets for local goods and services (p. 12). The main goal of the demand-side strategy is the formation of new capital, whereas the traditional supply-side approach to economic development focuses primarily on capital location. Because a demand-side strategy encourages a developmental process that generates new capital and advances technology, for example, state resources devoted to demand-side economic development policies are often reintroduced or replenished into society. Thus, state governments employing a demand-side strategy are expected to be associated with more equitable distributions of income, whereas a supply-side strategy might exacerbate existing inequalities or create income gaps.

Demand-side strategies are judged to be likely to produce significant benefits in the public's economic interest (Eisinger, 1988, p. 228). This approach is also expected to reduce the intensity of the interjurisdictional competition and the ensuing bidding wars that have been associated with supply-side strategies. According to Eisinger (1988), the competition associated with demand-side policies is a competition for consumers, not producers. The main objective of demand-oriented policies is not so much to attract mobile capital but to encourage indigenous firms to pursue opportunities in research and development, technological advancements, and exportation (p. 229). Theoretically, these policies encourage a process that is more likely to stimulate real growth at lower costs and greater public benefits, such as advancement of technology and education. This approach focuses

on growth processes that are likely to lift all boats and that prioritize the public's interest over that of the private sector. For these reasons, demand-side policies are expected to reduce income inequality.

It is important to note, however, that demand-oriented policies also have limitations and thus should not be construed as a panacea for economic development. For example, Brace (1993) suggested that the inability of states to keep technological advancements and developments within state boundaries can be a strong deterrent to demand-side strategies. This spillover of information can undermine a state's efforts to stimulate growth because State A may profit from State B's technological advancement. As a result, State B invests time and money in capital formation, but State A also enjoys the benefits.

On the other hand, traditional supply-side policies are intended to attract or secure mobile capital. Eisinger (1988) noted that the justification for traditional supply-side policies stems from classical location theory, which posits that firms will locate where the costs of production are lowest (p. 200). In this way, the main objective of these traditional supply-side policy tactics is to lower operating costs for business and industry. Politicians attempting to bring or keep industry in their state find this approach attractive. However, because states tend to engage in how-low-can-you-go bidding wars to lure mobile industry, the location price can quickly become very expensive for state government (see Brace, in press; Eisinger, 1995). For example, Mooney (1995) documented that the average cost per job was $10,000 about 10 years ago, but the increased bidding wars have pushed the going rate to as high as $45,000 per job (p. 58).

With the price of state government economic intervention increasing, a growing concern is that each new bid for business will deplete resources that could be spent on state infrastructure, education, and technology, for example. Adverse unintended consequences might result from these supply-side strategies for promoting growth. Eisinger (1988) commented that

> The traditional supply-side strategy to induce investment and influence location choices is burdened with certain liabilities. The positive effects of such incentives have not been established incontrovertibly, and there are even potential perverse effects. In addition, incentives and tax profiles are relatively easy to match, thereby canceling out any advantage in the long run. (p. 224)

Moreover, Brace (1993) suggested that this process ultimately could emphasize being cheap over being good, and technology and the quality of employment in the states could suffer (p. 13). Ambrosius (1989) categorized these supply-side policies as upwardly redistributive policies, taking state funding and targeting it toward private businesses. Other scholars have argued that these lavish incentive packages are costly, unnecessary gifts to the private sector that give away needed state funds (Harrison & Kanter, 1978; Walton, 1982). Combined, these scholars suggest that the process associated with a supply-side strategy not only significantly drains state finances and human capital but also seemingly fails to produce quality growth in jobs and investment in citizens, for example, that would compensate the state and its citizenry for the loss of resources. Thus, there are reasons to expect that a supply-side strategy may have the unintended consequence of increasing income inequality.

Overall, a single supply-side and a single demand-side policy may increase inequality, but states with a greater propensity to pursue demand-side strategies over supply-side strategies are expected to have more equitable distributions of income. The former strategy depends on a growth process that invests in the state citizenry and indigenous firms, whereas a supply-side approach is not concerned primarily with replenishing revenues given to secure mobile capital and cheap labor. Stated differently, unlike a demand-side strategy, a supply-side approach to economic development neither relies on nor encourages a feedback mechanism, which invests in state infrastructure and human capital. Thus, states that use the demand-side approach, despite its shortcomings, are expected to have lower levels of income inequality than states employing supply-side approaches to economic development.

A SIMPLE MODEL OF ECONOMIC DEVELOPMENT POLICY ACTIVISM AND INCOME DISTRIBUTION

This article seeks to test the implicit hypotheses articulated above about the distributional consequences of state economic development strategies on income distribution in the American states during the 1976 to 1994 period. The models offered below are not intended to be

comprehensive specifications of income distribution. Rather, the models attempt to disentangle the distributional consequences of state economic intervention via economic development strategy, controlling for some other factors expected to shape this important characteristic in the American states.

For the purposes of this article, I examine 16 state economic development policies in place in each given year. The visibility, importance, and frequency of adoption of these policies warranted their inclusion in this study.[4] To test the relationships between supply-side economic development policies and income distribution, I build from Eisinger (1988) and other scholars to categorize these 16 economic policies into four groups according to traditional supply-side policies or demand-side policies, or somewhere in the middle of these two economic development strategies.

The first group consists of traditional supply-side policies that primarily target the private sector as the recipient of the benefits offered by these policies. Policies in this group include a corporate tax incentive (S1), income tax incentive (S2), excise tax incentive (S3), and sales tax incentive (S4). These tax exemptions or reductions are prime examples of supply-side strategies, targeting the overall tax climate for businesses. Consequently, I expect these four economic development policies to be associated with increased income inequality.

The second and third groups of policies are considered mixed supply- and demand-side policies. In other words, the target of these economic development policies is neither primarily the private sector nor primarily the public sector. Specifically, the second group consists of tax exemptions on land and capital improvements (SDT1), tax exemptions on equipment and machinery (SDT2), tax exemptions on research and development (SDT3), and tax credits on use of specified state products (SDT4). These are four typical examples of mixed supply-side and demand-side tax policies because the public's economic interest might be the targeted beneficiary more than the private sector. Additionally, the intent of these four tax inducements might be viewed as the promotion of technology, expansion, and research and development, for example. As a result, these specialized tax policies might have differential effects on income distribution.

The third group of policies is also considered in this article as mixed supply-side and demand-side economic development strategies. This group includes state training of industrial employees (SDL1), state retraining of industrial employees (SDL2), state-supported training of the hard-core unemployed (SDL3), and state incentives to train the hard-core unemployed (SDL4). These programs and incentives to train or retrain the workforce might be viewed as supply-side tactics because of their particularistic nature and intent to reduce operating costs. For example, policies of this type require the state to cover the costs of training the labor force for a specific industry or job. Yet, these policies might also be considered demand-oriented policies because they directly target the public, and they are often viewed as assistance to the unemployed. For example, Ambrosius (1989) categorized these policies as downwardly redistributive, which suggests that they might be associated with lower levels of income inequality. Thus, given the middle-of-the-road nature of these policies, I expect positive effects on income distribution compared to more traditional supply-side or demand-side policies.

The last group of policies examined is composed of more conventional demand-side policies. The four policies examined in this category include state programs to increase export of products (D1), state programs to promote research and development (D2), state assistance in bidding for contracts (D3), and state university research and development facilities available for industry (D4). These demand-side policy strategies bring the state into the economic arena as a primary player and emphasize the public's economic interest. Thus, I expect these pure demand-side policies to reduce income inequality.

To assess the relationship between state economic development approaches and income distribution, I examine various dimensions of these 16 economic development policies. Four models are estimated to take into consideration (a) the overall level of state economic development policy activism, ignoring potential differences between supply-side and demand-side policies; (b) the impact of each individual policy on income distribution; (c) the impact of demand-side policy activism and supply-side policy activism; and (d) the propensity of states to engage in one approach more than the other approach. The following measures of economic development policy are employed:

1. Single variable measuring the proportion of policies in place in a given year (number of policies/16);
2. 16 dummy variables measuring the absence or presence of each individual policy;
3. 4 variables measuring the proportions of supply-side policies, supply/demand tax policies, supply/demand labor policies, and demand-side policies in place in a given year; and
4. single variable measuring the ratio of the proportion of demand-side policies in place in a given year to the proportion of supply-side policies. For example, the dependent variable is equal to 1.5 in a state that has three of the four demand-side policies and two of the four supply-side policies. Conversely, the dependent variable is equal to .66 in a state that has two of the four demand-side policies and three of the four supply-side policies.

Because Model 1 aggregates both supply-side and demand-side policies, thereby ignoring any potential differences between these economic development strategies, I do not make a directional hypothesis. For Models 2 and 3, given that higher values of the Gini index reflect higher inequality, a positive relationship is expected between supply-side economic development policies and income inequality. Alternatively, an inverse relationship is expected between demand-side economic development policies and the measure of income distribution. However, it is important to note that a single policy in isolation may not be related to income distribution. In Model 4, an increase in the ratio reflects a preference for a demand-side strategy by state government. Thus, I expect the ratio to be inversely related to income inequality.

DEPENDENT VARIABLE

The dependent variable in the analyses that follow is income distribution measured using annual estimates of Gini coefficients for each American state during the 1976 to 1995 period (Langer, 1999). The Gini coefficient is a well-known and widely used statistical indicator of income inequality, and it employs a common way to conceptualize income inequality by considering how unevenly income is spread across households. Langer (1999) demonstrated the validity and reliability of these estimates of state Gini coefficients across states, across sample size, and over time.[5] Unlike top-to-bottom ratios or poverty

rates, the Gini index captures the overall degree of income concentration in a state by ranking all surveyed households in the state by income (low to high) and plotting a curve to calculate the cumulative proportion of aggregate income received by the proportion of households with the lowest income (i.e., the Lorenz curve). The estimated distribution of households across each income category was generated using the trapezoid rule (see, e.g., Huber, Spuhler, & Vogt, 1994). The measure of income distribution ranges from 0 to 1, with greater inequality indicated by the size of the coefficient. For example, the distribution is perfectly equal when the Gini coefficient is 0. Conversely, a Gini coefficient equal to 1 indicates a single household has all the income.

CONTROL VARIABLES

The models also control for various internal and external forces expected to influence state income distribution. States with greater demand for food stamps and unemployment compensation are expected to have higher degrees of income concentration (see, e.g., Peterson & Rom, 1990). A state's economic performance is also expected to influence the level of income distribution (see, e.g., Plotnick & Winters, 1985). According to this literature, developing economies are expected to have lower levels of concentrated income, and laggard economies should have greater degrees of inequality. Last, I consider overall state welfare efforts as a policy tool to address income distribution. Here, scholars have found a positive relationship between welfare spending and state inequality (Peterson & Rom, 1990). However, research has also revealed an inverse relationship between national transfer spending and poverty (Danziger & Gottschalk, 1995) and income distribution (Hibbs & Dennis, 1988), suggesting that redistributive efforts can reduce income inequality, at least at the national level.

External forces such as the national level of income inequality, federal monies spent on state welfare, and neighboring states' level of income distribution are also included in the models. These variables allow me to examine whether the level of income inequality in a state is due to exogenous factors beyond the control of state government.

For example, Brace (1991) found that the performance of many state economies is largely a function of the national economy. For these reasons, I expect that state income distribution might be a function of national and regional levels of inequality and federal redistributive efforts.

Finally, because the southern states have higher levels of income inequality, a dummy variable controlling for the southern states is included. To control for past levels of income distribution and address time-series problems (Beck & Katz, 1995), a lagged dependent variable is included in the models.

METHOD AND RESULTS

Given the variation in economic development strategy and income inequality across states and over time, pooled cross-sectional time-series analysis is employed because it combines data structured in both space and time. With a pooled design, the assumptions of constant variance and uncorrelated error terms are often violated (Stimson, 1985). The assumption of a homoscedastic, nonautocorrelated regression model was tested with Breusch and Pagan's Lagrange Multiplier (LM) statistic that follows a chi-square distribution. On the basis of these tests, I employ ordinary least squares (OLS), with panel-corrected standard errors.[6]

Table 1 presents the results across the four models. Recall that Model 1 examines the relationship between economic development policy activism and income distribution, ignoring potential differences between supply-side and demand-side tactics. The model explains 68% of the variation in state income distribution. The results also show that the overall level of economic development policy activism in a state is significantly and positively related to income distribution. Higher levels of income inequality are found, on average, in states where state government intervention in the economy is high through the use of these policies.

The impact of aggregated state economic development policy activism on income distribution is illustrated in Figure 1. As the figure shows, an increase in the number of policies used by states, regardless

TABLE 1

Pooled Cross-Sectional Time-Series Analysis: State Economic Development Policy Activism, Demand-Side, Supply-Side, and Supply/Demand-Side Strategies on State Income Distribution, 1976 to 1994

Independent Variable	Model 1	Model 2	Model 3	Model 4
State economic development policy activism $_{t-1}$	.0061* (2.46)	—	—	—
Predominant economic development strategy $_{t-1}$	—	—	—	−.0014* (−1.87)
Proportion of economic development demand-side policies $_{t-1}$1	—	—	−.0063** (−3.25)	—
Proportion of economic development supply-side policies $_{t-1}$	—	—	.0040* (1.69)	—
Proportion of economic development supply/demand tax policies $_{t-1}$	—	—	.0024 (1.29)	—
Proportion of economic development supply/demand labor policies $_{t-1}$	—	—	.0069* (1.99)	—
D1. State program to increase export of products $_{t-1}$	—	−.0063* (−1.82)	—	—
D2. University research and development facilities available to industry $_{t-1}$	—	−.0150* (−1.95)	—	—
D3. State program to promote research and development $_{t-1}$	—	−.0036** (−2.48)	—	—
D4. State help in bidding on federal procurement contract $_{t-1}$	—	−.0020 (−1.34)	—	—
S1. Corporate income tax incentive $_{t-1}$	—	.0014 (1.29)	—	—

TABLE 1   Continued

Independent Variable	Model 1	Model 2	Model 3	Model 4
S2. Personal income tax incentive $_{t-1}$	—	.0002	—	—
		(0.252)		
S3. Excise tax incentive $_{t-1}$	—	.0019	—	—
		(1.13)		
S4. Sales tax incentive $_{t-1}$	—	.0039**	—	—
		(3.86)		
SDT1. Tax exemption on land, capital improvements $_{t-1}$	—	−.0003	—	—
		(−0.596)		
SDT2. Tax exemption on equipment, machinery $_{t-1}$	—	.0041**	—	—
		(3.45)		
SDT3. Tax credits for use of specified state products $_{t-1}$	—	.0004	—	—
		(0.315)		
SDT4. Tax exemption to encourage research and development $_{t-1}$	—	−.0005	—	—
		(−0.965)		
SDL1. State training of industrial employees $_{t-1}$	—	.0027	—	—
		(.610)		
SDL2. State retraining of industrial employees $_{t-1}$	—	−0.0001	—	—
		(−0.517)		
SDL3. State-supported training of hard-core unemployed $_{t-1}$	—	.0011	—	—
		(0.512)		
SDL4. State incentive to train hard-core unemployed $_{t-1}$	—	.0022	—	—
		(1.31)		
Change in per capita personal income $_{t-1}$	−.0012	−.0001	−.0024	−.0001
	(−0.011)	(−0.020)	(−0.025)	(−0.019)
Welfare demand $_{t-1}$	.0034**	.0034**	.0035**	.0034**
	(7.28)	(6.02)	(8.29)	(7.08)

Unemployment demand $_{t-1}$	.0015	.0019	.0019	.0020
	(1.15)	(1.29)	(1.30)	(1.45)
State redistributive efforts $_{t-1}$	.0003	.0006	.0005	.0004
	(0.394)	(1.05)	(0.451)	(1.08)
Federal redistributive efforts $_{t-1}$	.0028	.0025	.0035	.0023
	(1.18)	(1.09)	(1.15)	(1.16)
National income distribution $_{t-1}$	−.0523	−.0503	−.0651	−.0438
	(1.21)	(0.98)	(1.07)	(1.11)
Neighboring states' income distribution $_{t-1}$	.1280**	.1354**	.1470**	.1302**
	(3.90)	(3.49)	(3.73)	(3.89)
State income distribution $_{t-1}$	.6024**	.5858**	.5980**	.6013**
	(22.3)	(22.4)	(22.9)	(21.8)
Southern states	.0065**	.0057**	.0057**	.0067**
	(4.72)	(3.06)	(3.84)	(3.75)
Intercept	.1120**	.1270**	.1096**	.1145**
	(5.41)	(5.89)	(4.69)	(5.12)
N	900	900	900	900
Adjusted R^2	.68	.68	.72	.65

NOTE: Coefficients are unstandardized ordinary least squares (OLS) with panel correct standard errors (PCSE) regression values; t-scores are in parentheses: To simplify interpretation, I multiplied the coefficient and standard error for personal income by 1,000.
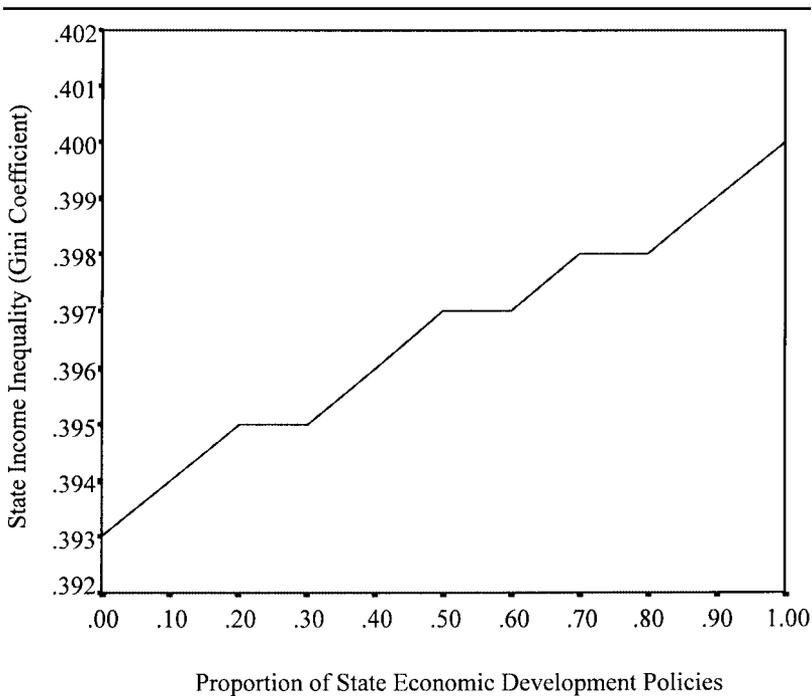*$p < .05$, one-tailed test. **$p < .01$, one-tailed test.

Figure 1: The Impact of State Economic Development Policy Activism on State Income Distribution

NOTE: Larger Gini coefficient scores indicate higher levels of income inequality. The predicted values of the Gini coefficient were calculated by setting all of the variables in the model at their mean or modal category and varying economic development policy activism.

of the strategy pursued, is associated with increased income inequalities. In fact, there seems to be a significant jump in the degree of concentrated income when a state actively pursues economic growth by employing all 16 policies compared to a state that has not used any policies, ceteris paribus.

Although economic development policy activism seems to increase inequality, at least marginally, the aggregate measure employed in this model does not allow me to assess any differences in the individual policies and distinct strategies. Thus, Model 2 examines the impact of each individual policy on state income distribution. Table 1 shows that the explanatory power of this model is also .68. The results for the individual policies show that 9 of the 16 policies reach statistical significance at the .10 level or better. Five of these nine vari-
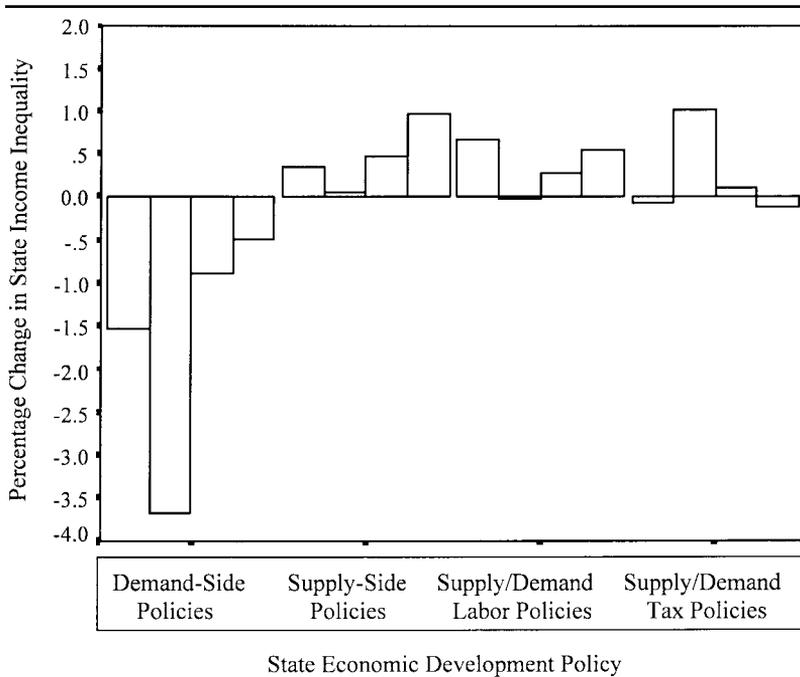
Figure 2: **The Impact of Individual State Economic Development Policies on State Income Inequality**

ables are statistically significant at the .05 level or better. Perhaps even more interesting is that the demand-side policies receive directional and statistical support, indicating that individual demand-side policies are associated with lower levels of income inequality on average. The results also suggest that supply-side policies are associated with higher levels of income inequality. Each of the 4 policies in this category is positively related to income inequality, and 3 of these are statistically significant at the .10 level or better. The supply/demand tax policies and supply/demand labor policies, as expected, produce mixed results, with 3 inversely related to income inequality and 5 positively related. Only 2 of these 8 policies are statistically distinguishable from zero.

To facilitate the substantive interpretation of this model, Figure 2 graphs the impact of each policy on the predicted level of income inequality (i.e., the Gini coefficient). As the figure illustrates, demand-side policies are associated with a reduction in income

inequality, with an impact ranging between a .5% and 4.0% reduction in the level of inequality. The range of impact for supply-side policies is between 0% and 1%, with the corporate tax exemption exerting the greatest increase in inequality. Overall, this figure displays important differences across these 16 policies, warranting the need to distinguish between demand-side and supply-side tactics.

A single policy, however, may not exert much influence on income distribution, and states often use more than one policy in a given year. Thus, the next model examines the proportion of policies adopted by a state in each of the four groups discussed earlier. In this way, I can assess the impact of economic development policy activism across various supply-side and demand-side strategies. Overall, this model performs quite well, explaining 72% of the variation in income distribution. The results for Model 3 suggest that each of the four groups of policies is significantly related to income distribution. As expected, demand-side policy activism is associated with lower levels of income inequality. Conversely, the supply-side strategies pursued by states to stimulate growth are associated with higher levels of income inequality. The mixed supply-demand policies, when aggregated, reduce income inequality.

Figure 3 best portrays the important contrasts between supply-side and demand-side policies. The differences are quite striking across each of the four variants of economic development strategies. For example, supply-side policies and supply/demand labor policies exhibit similar linear patterns as the proportion of policies adopted in these categories increases. The relationship depicted in the figure between demand-side policies and income distribution is also interesting. Consider a state that had not used any demand-side policies and then engaged in a demand-side strategy, offering all four policies in this category. As Figure 3 illustrates, this state would move from a relatively high level of income inequality (i.e., .413) to a lower level (i.e., .407), when all other variables are at their mean. It is important to note that although none of these groups exerts an enormous impact on inequality, a 2% or 3% increase or decrease may have notable effects on the citizenry, especially if these are unintended consequences.

Finally, we turn to Model 4, which examines the ratio of demand-side to supply-side policies. The model explains about 65% of the variation in state income distribution. The results indicate that
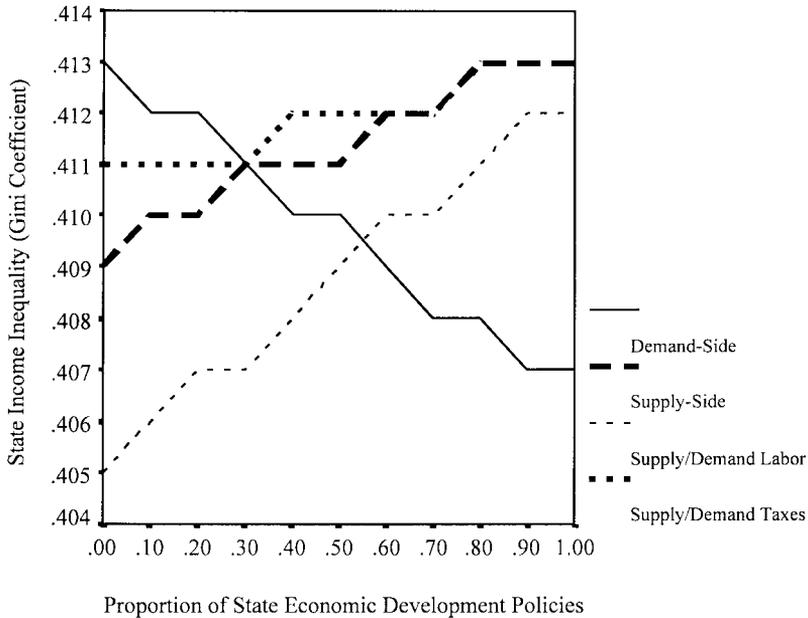
Figure 3: State Economic Development Policy Activism: The Impact of Demand-Side, Supply-Side, and Supply/Demand Policy Strategies on State Income Inequality
NOTE: Larger Gini coefficient scores indicate higher levels of income inequality. The predicted values of the Gini coefficient for each group were calculated by setting all of the variables in the model at their mean or modal category and then varying the independent variable of interest.

on average, each demand-side economic development policy adopted by states relative to supply-side policy adoptions is associated with a 2% reduction in income inequality. Stated differently, when states opt for incentive packages with more traditional tax abatements than programs that promote research and development, technology, and exportation, they tend to have higher levels of income concentration, all else being equal. Clearly, Models 3 and 4 demonstrate that the economic development strategy pursued is associated with the well-being of the citizenry differentially.

The average impact of the ratio of supply-side to demand-side policies is relatively low, but it is important to note that states with a substantial bias toward adoption of supply-side policies are more likely to be associated with severe levels of income inequality. For example, as Figure 4 illustrates, a 10:1 ratio of supply-side to demand-side economic development policies would yield a 20% increase in income
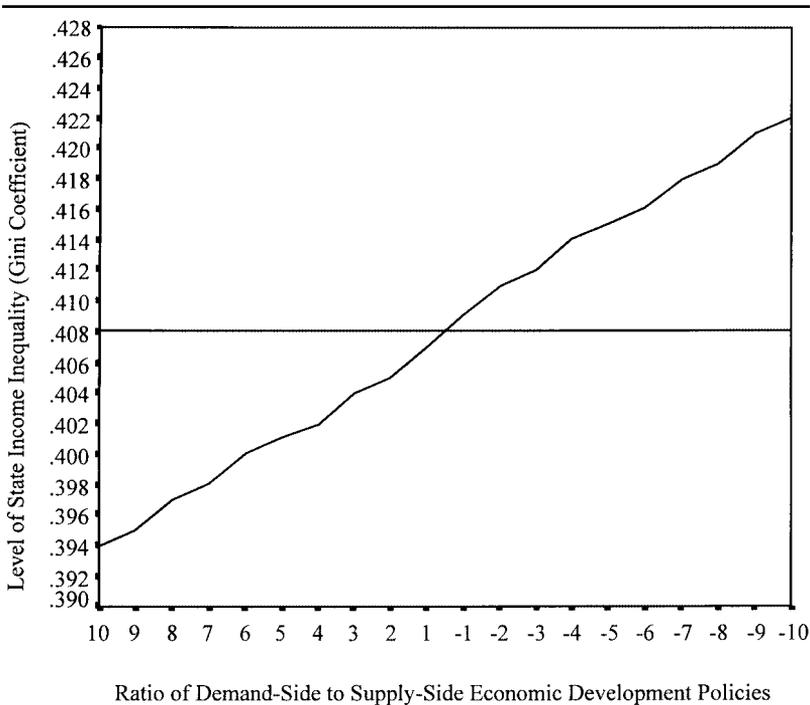
Figure 4: State Economic Development Policy Strategy: The Impact of the Ratio of Demand-Side Policies to Supply-Side Policies on State Income Inequality
NOTE: Positive ratios indicate a greater number of demand-side policies compared to supply-side policies. Negative scores indicate a greater number of supply-side policies compared to demand-side policies. The predicted values of the Gini coefficient were calculated by setting all of the variables in the model at their mean or modal category and varying the ratio of demand-side to supply-side policies.

concentration, all else being equal. Perhaps a more striking example, but one that is quite rare (in fact, nonexistent in these data), is that a state with a 20:1 ratio of demand-side to supply-side policies would experience a 50% reduction in income inequality.

OTHER FACTORS INFLUENCING INCOME DISTRIBUTION IN THE AMERICAN STATES

The results for the control variables in Table 1 are also consistent across the four models. State demands for income assistance are posi-

tively and significantly related to income distribution in each of the four models. As expected, states with more indigent citizens display greater inequality. Similarly, unemployment assistance receives directional support in all four models and reaches statistical significance at the .10 level in three of the four models. State economic performance is also in the expected direction, with growing economies experiencing decreases in income concentration. This relationship, however, is not statistically significant in any of the models.

Contrary to expectation, state income distribution is not tied to either national forces or state redistributive efforts. None of these variables (i.e., national level of income distribution, federal redistributive efforts, state welfare demand) exert a statistically significant impact on income distribution in any of the models. The table also shows that the variable for state welfare efforts is positively related to income distribution, but this variable did not attain statistical significance at a conventional level of confidence in any of the models.

In each of the four models, a state's past level of income inequality and neighboring states' level of income inequality in the previous year account for much of the variation in income distribution. As expected, states with high levels of income concentration in the preceding year have greater degrees of income inequality in the following year. This result comports with the earlier discussion that state government, via policy efforts, only influences marginally the well-being of its citizenry. That state income distribution is associated with neighboring state levels of inequality also suggests that states have only minimal control over the distribution of income. Another indicator of exogenous regional effects is the dummy for southern states. As expected, these states, on average, have higher degrees of income concentration than other states.

CONCLUSION

Surprisingly, scholars have not examined the potential unintended consequences of economic development policies on income distribution in the American states. This study addressed that question, and its findings have several implications for state government intervention in the economy. First, I provide evidence that states have it in their

power to produce positive, though marginal, impacts on income distribution. By using more demand-side policies than supply-side policies, state government can reduce income inequalities.

The findings also indicate that state economic intervention can have unintended consequences, adversely affecting the well-being of state citizens. Stated differently, the cost of smokestack chasing via supply-side tactics can be relatively high for income distribution in the American states. Economic development policies have variable consequences on income distribution, and, as a result, the strategy states employ can make a difference. Another important finding is that highly aggregated measures of economic development policy activism or strategy obscure the complexities of these policies with respect to income distribution. Accounts of economic development policy that do not consider differences between supply-side and demand-side policies may hide or exaggerate the consequences of these approaches. Finally, I find evidence that the well-being of the citizenry is largely shaped by past state behavior and external forces beyond the control of state government.

Clearly, the results in this study indicate that the economic development strategies state governments pursue are significantly related to the degree of income concentration. A supply-side approach to economic development seems to emphasize being cheap over being good, and this process is associated with higher levels of income inequality. Conversely, state government intervention in the economy that favors a demand-side strategy seemingly encourages a process that places a high premium on infrastructure. Unlike a supply-side approach, demand-side strategies invest in state infrastructure, thereby lifting all boats, rather than those in a particular sector. Thus, a characteristic of a demand-side strategy of government intervention in the economy tends to be more equitable distributions of income.

APPENDIX
Measurement of Variables and Data Sources

State income distribution: Gini index of income concentration ranging from 0 (indicating perfect
   equality) to 1 (indicating perfect inequality).
   Source: Langer (1999).
Economic development policies

Source: *Site Selection Handbook* (Conway Publications, 1969-1994).

Change in per capita personal income: Per capita state personal income in constant 1982 dollars, lagged 1 year.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, which publishes data on the Internet in a database called Regional Economic Information System (REIS) located at http://fisher.lib.virginia.edu/reis/.

Welfare demand: Amount of state income spent on food stamps per adult population in constant 1982 dollars, lagged 1 year.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, which publishes data in REIS located at http://fisher.lib.virginia.edu/reis/.

Unemployment demand: Amount of state income spent on unemployment compensation per adult population in constant 1982 dollars, lagged 1 year.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, which publishes data in REIS located at http://fisher.lib.virginia.edu/reis/.

State redistributive efforts: Total amount of state money spent on Aid to Families With Dependent Children (AFDC), food stamps, unemployment compensation, workers' compensation, blind and disabled, and other income maintenance programs for children, caretakers, and disabled persons, per capita in constant 1982 dollars, lagged 1 year.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, which publishes data in REIS located at http://fisher.lib.virginia.edu/reis/.

Federal redistributive efforts: Amount of federal transfer money received by state per capita in constant 1982 dollars, lagged 1 year.

Source: U.S. Census of Bureau, *Statistical Abstracts* (Various years).

National income distribution: State income distribution average by year.

Source: Langer (1999).

Neighboring states' income distribution: Measured as the average level of income distribution within a state's contiguous states, lagged 1 year.

Source: Langer.

NOTES

1. Scholars have used a variety of indicators of economic growth in the American states, such as personal income, gross state product, and manufacturing growth.

2. Some scholars have found support for the hypothesis that economic development policies benefit the economy (Bartik, 1991; Feiock & Clingermayer, 1991).

3. Job training and tax incentive packages were identified as the most commonly used incentives, according to a survey conducted by The National Council for Urban Economic Development (cited in Mooney, 1995).

4. These 16 policies are not a comprehensive list of the numerous incentive policies states have used to promote growth.

5. The Gini coefficients were calculated based on data from the current population survey (CPS) reports. A common criticism of this measure is that they rely on the census definition of income, which excludes capital gains, poorly measures capital income, and subjects the data to top-coded maximum values. The reported CPS data also understate the actual amount of cash going to the poor.

6. I used the procedure by Beck and Katz (1995) available in LIMDEP Version 7. The models were also estimated using least squares dummy variables (LSDV). The results were robust across estimation with only one exception: Change in personal income in the LSDV Models 3 and 4 was negative statistically significant at the .10 level.

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Laura Langer, assistant professor at the University of Arizona, is the recipient of the 1998 CQ Press Award and the 2000 American Judicature Society Award for the best paper on law and courts that was presented at any of the previous years' professional conferences. She has published in Social Science Quarterly, Journal of Politics, Albany Law Review, *and* Law and Courts *newsletter. Most recently, Professor Langer has received a 5-year career development grant from the National Science Foundation. Her book,* Judicial Review in State Supreme Courts: A Comparative Study, *is currently in press with the State University of New York Press.*