

# Dynamics In The Diffusion And Institutionalization Of Site-Based Management Reform In The United States Of America

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## Abstract

**Purpose:** This research addresses the question: How does the diffusion of SBM over time and space resemble the broader social dynamics associated with diffusion of educational policy innovations in particular, and other public policy innovations in general? This study claims that state internal determinants and regional diffusion models may not fully explain the policy innovation adoption at some point in time because the policy innovation may become legitimized, and that may be what drives further diffusion. That is why this study includes a theoretical model that gives explicit attention to the gradual increase of legitimating effects over time.

**Research Design:** Data for this study come from different sources. The dependent variable of this study is whether a state adopted an SBM in a given year. I gleaned the data on the timing of the passage/enactment of a law mandating school based management from the Lexus-Nexus database whether the event of interest happened for any of the 48 contiguous states for a time period that spanned the years from 1971 to 2000. Hypotheses were tested using Piecewise Exponential Event History regression.

### Results:

The result of this study is reported in Table 1.

**TABLE 1**  
**Coefficients from Piecewise Exponential Event History Regression of State Adoption of School Based Management Law on Independent Variables: U.S. States, 1971 to 2000**

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>1985-1987</b>	-14.1524 (2562.58)	_____	-13.26 (2530.474)	_____	-.1374 (2089)	-.14479 (4630)
<b>1988-1990</b>	3.34** (1.08)	_____	5.046** (1.376)	_____	3.3447** (1.080)	5.0220** (1.376)
<b>1991-1995</b>	4.452** (1.024)	_____	4.775** (1.385)	_____	4.515** (1.025)	4.724** (1.379)

<b>1996-2000</b>	4.095** (1.06)	_____	5.283** (1.973)	_____	4.208** (1.063)	5.201** (1.960)
<b>Cumulative Regional Adoption</b>	_____	-.2974** (.1282)	-.2757** (.1302)	_____	_____	-.3054** (.1401)
<b>Cumulative Adoption</b>	_____	.1728 (.1219)	.4059** (.1752)	_____	_____	.41273** (.1761)
<b>Cumulative Dissemination</b>	_____	-.00119 (.00232)	-.0077** (.00373)	_____	_____	-.0077** (.00374)
<b>Policy Innovativeness</b>	_____	_____	_____	.24944 (.7187)	.6149 (.7608)	.50166 (.7697)
<b>Education Centralization</b>	_____	_____	_____	.20199 (.3246)	.2707 (.3298)	.1350 (.3309)
<b>Percent Liberal</b>	_____	_____	_____	-.01684 (.04066)	-.05061 (.0438)	-.076* (.0461)
<b>Percent Democrat</b>	_____	_____	_____	-.00286 (.0228)	-.0105 (.02157)	-.0108 (.04616)
<b>Intercept</b>	-6.493** (1.00)	-4.551** (.303046)	-6.7078** (1.006)	-4.06** (1.775)	-6.76** (1.9823)	-5.875** (2.11)
<b>Log-likelihood</b>	-12.5738	-24.8557	-7.7007	-49.991	-11.101	-6.0353
<b>Likelihood Ratio (<math>\chi^2</math>)</b>	75.69	51.13	85.44	0.85	78.64	88.77
Deviance: -2*(Log-likelihood)	25.1476	49.7114	15.4014	99.9832	22.2026	12.0706
<i>df</i>	4	3	7	4	8	11
<b>#of State Years</b>	1167	1167	1167	1167	1167	1167

The standard errors are in parenthesis. The \*\* $p < .05$ , and \* $p < .10$  are used to test the hypothesis.

Model 1 in Table 1 tests Hypothesis 4. The primary motivation of Hypothesis 4 is to understand how triggering events affect the variation in the rate of adoption of SBM. The primary assertion is that environmental shocks heighten the attention paid to the diffusing innovation or public policy issue, resulting possibly in a steep increase in the rate of adoption, which may primarily reflect the effect specific to that period. Therefore, it is hypothesized that the occurrence of major developments in the institutional environment of American public schools is positively related to the adoption of SBM in the time periods which are primarily characterized by triggering events. This hypothesis is based on the claims that innovativeness is not a pervasive factor; rather, it is issue and time specific at best. Therefore, characteristics specific to certain time periods may affect the historical trend in the adoption of a certain policy innovation.

The thrust of Hypothesis 4 also involves the main effect of time in Model 1. When all time varying and time invariant covariates are held constant, Model 1 estimates the main effect of specific periods on the adoption of SBM. The statistical significance testing of Hypothesis 4 indicated that SBM adoption was significantly related to the time periods of 1988-1990 with a coefficient of 3.34 ( $p < .05$ ), 1991-1995 with a coefficient of 4.452 ( $p < .05$ ), and 1996-2000 with

a coefficient of ( $p < .05$ ), all in comparison with the period from 1971 through 1984. These results support the expected relationship stated in Hypothesis 4.

Model 2 in Table 1 tests the hypothesized effects of cumulative adoption, cumulative regional adoption, and cumulative dissemination on SBM adoption by each state. In other words, Model 2 in Table 1 tests the significance of Hypotheses 1, 2, and 3. Hypothesis 1 claimed that cumulative increase in the prior adoption of SBM is positively related to the rate of adoption of SBM among states. This hypothesis is not supported by the evidence from Model 2 in Table 1. Hypothesis 2 tests the significance of cumulative regional diffusion. Hypothesis 2 expected to find a positive relationship between the cumulative increase in the prior adoption of SBM in a given region and new adoptions in that region. The outcome of this hypothesis is significant but with a negative coefficient of  $-.29736$  ( $p < .05$ ). This outcome is contradictory to the expected relationship stated in Hypothesis 2. Model 2 also tests the hypothesized effect of cumulative dissemination. This hypothesis is not supported by the evidence gleaned from Model 2 in Table 1.

On the other hand, Model 3 in Table 1 tests the significance of time period, cumulative regional adoption, cumulative adoption, and cumulative dissemination together. For hypothesis 3 I expected to find a positive relationship between prior dissemination of information on SBM through academic and professional associations and academic and professional news media and subsequent adoption of SBM by a state. The results in Model 3 in Table 1 indicated that cumulative adoption, cumulative regional adoption, and cumulative dissemination variables are all significant at a significance level of ( $p < .05$ ). As indicated in Model 2 in Table 1, once the periodic effects are controlled for, neither cumulative adoption nor the cumulative dissemination arguments are warranted by the empirical results of the piecewise exponential regression analysis. The coefficient for cumulative adoption is now positive and statistically significant. This provides evidence in support of Hypothesis 1. The regional and dissemination effects are consistent with Model 2, having a significant negative impact on adoption.

Model 4 and Model 5 in Table 1 test the hypothesized effects of state policy innovativeness, educational centralization, ideological liberalism, and the percentage of Democratic voters. In other words, Model 4 and Model 5 test Hypotheses 5, 6, and 7, and 8. For Hypothesis 5 I expected to find a positive relationship between a state's policy innovativeness and subsequent adoption of SBM by a state. For Hypothesis 6 I expected to find a positive relationship between centralized educational decision-making and the adoption of SBM by a state. For Hypothesis 7 I expected to glean a positive relationship between a state having a higher percentage of voters who identify themselves as Democrats and the adoption of SBM in that state. Finally, Hypothesis 8 claims that there is a positive relationship between a state having a higher percentage of voters who identify themselves as liberals and the adoption of SBM in that state. These hypothesized relationships to SBM adoption are tested in Model 4 and Model 5. The hypothesis testing procedure is done by entering the variables pertinent to the internal characteristics of each state in Model 4 while controlling for the time period variable. In Model 5, the same variables are tested in the presence of time periodic effects. The statistical evidence gleaned from Model 4 and Model 5 did not support the hypothesized relationships under Hypotheses 5, 6, 7, and 8; therefore, proven to be contradictory to what was stated under each specific hypothesis.

Model 6 in Table 1 tests the significance of all independent variables in this study. Model 6 confirms the findings in regard to the hypothesis testing of Hypotheses 1, 2, 3, and 4. Those hypotheses were examined in Model 3 with consistent results in Model 6. Hypothesis 2 was

found significant in Model 2 with robust effects in Model 6. Statistical evidence from Model 6 in Table 3 indicates that having a higher percentage of liberal voters is marginally significantly related to SBM adoption by state but not in the expected direction, with a coefficient of  $-.07638$  ( $p < .10$ ). The sign of the percent liberal variable is counter to what I expected to find.

### **Discussion**

This research has started with an inquiry to answer the following research question: How does the diffusion of SBM over time and space resemble the broader social dynamics associated with diffusion of educational policy innovations in particular, and other public policy innovations in general? Accordingly, the objective of my research was to determine the correlates of SBM adoption by a state. I addressed this objective with a conceptual framework that incorporates institutional and public policy diffusion theories to examine the diffusion of SBM.

The findings of this study have implications for the research examining the correlates of state adoption of educational policy innovations, public policy innovation research, and institutional theory of organizations. The first hypothesis regarding the overall effect of the number of prior adoptions argued that cumulative increase in the prior adoption of SBM among states is positively related to later adoption of SBM by other states. The result of my study provides empirical evidence in support of the prevalence hypothesis. The finding that the prevalence of SBM among states results in more states adopting SBM is consistent with the previous research employing institutional theory of organizations. I defined and measured the construct of cumulative adoption the same way institutional theorists defined and measured the construct while they examined the factors that predicted the diffusion of organizational practices and public policy innovations (Filigstein, 1985; Grattet & Jenness, 1998; Palmer, Jennings & Zhou, 1993; Zhou, 1993). The finding of the prevalence hypothesis also suggests that the diffusion of school based management reflects an institutionalization process, which is affected by the temporal context where the SBM policy was enacted. Beyond the support for the institutional perspective, the other finding of this study is that temporal context subsumes the effect of cumulative adoption covariate. Since the cumulative adoption influences gain momentum in a time span, this nested effect supports my main argument that institutional effects were at work during the diffusion of SBM reform.

Likewise, previous theory and research findings suggested that a cumulative increase in the prior adoption of SBM in a given region would have a positive effect on SBM adoption by states in that given region. In the context of research examining the diffusion of K-12 policy innovations, my results concerning the regional diffusion hypothesis are fairly consistent. This body of research has often found little if any relation between regional diffusion and its effect on state policy adoption. For instance, following studies showed that there was no relation between the prior number of adoptions within a region and new adoptions in that given region (Mintrom 1997; Mintrom & Vergari, 1998; Renzulli & Roscigno, 2005; Wong & Langevin, 2007; Wong & Shen, 2002). These studies show that the number of states with charter school legislation within a region does not appear to affect the likelihood of a state adopting any type of charter school law.

Although I did not find evidence as stated in regional diffusion hypothesis, my results add to the growing body of evidence supporting the claim that "regional diffusion effect may not be consistently positive, contrary to received wisdom" (Boehmke & Witmer, 2004; Doyle, 2006; Hays & Glick, 1997; Mooney, 2001; Soule & Earl, 2001). For instance, Doyle (2006) also failed to find evidence in support of the regional diffusion hypothesis when he examined the correlates

of adoption of merit aid programs. Doyle (2006) found out that the sign of the coefficient for the regional diffusion covariate was negative, an outcome that he called counterintuitive.

How can we understand the growing body of lack of evidence concerning the positive regional diffusion effect? My results may be explained in at least three ways. First, the inability of this study to find a positive regional effect points to the lack of momentum to materialize the mimetic pressures among states to adopt SBM. The presence of mimetic pressures during the diffusion of a policy innovation can be inferred several ways.

The adoption of new policies may be triggered by a motivation to keep up with the neighbors. This refers to economic or other forms of competition between states. One expects to find a positive effect between factors that necessitate competition and adoption in a region. Since the regional diffusion covariate has a significant negative coefficient in my study, the diffusion triggered by a motivation to keep up with neighbors does not provide a clear explanation for not finding a positive regional effect in my study. Second, mimetic pressures can also be traced to emulation and modeling the behavior of other, similar, states when faced with uncertainty (DiMaggio & Powell, 1983). The perceived success of early adopters may serve as a strong impetus for the mimetic process by "prompting legitimacy concerns among remaining non-adopters" (Roy & Seguin, 2000). The lack of a positive regional effect points to other possible processes than mimicry.

Second, lack of positive regional effect in this study points to possible learning dynamics in the diffusion of SBM. Learning involves lesson drawing, which may slow down the rate of adoption over time and space; leading to a lack of variation in dependent variable. If the policy is seen to be beneficial to state's interests, there may be a positive regional effect. On other hand, it is possible that adoption pattern of SBM is driven more by issue specific policy and political concerns, not by what happened in neighboring states. For instance, states may face varied costs in adopting SBM, which could account for the pattern of diffusion that I observed in this study. States also may vary in terms of their local educational needs to adopt SBM over time. Thus, internal issues or policy features may be more important than regional ones.

Another way learning may negatively affect the diffusion process occurs when public officials learn about the prospects of a given policy implementation in a neighboring state from news disseminated through news media and other social networks. The news of political opposition through news media may dissuade policy makers from adopting SBM. Research evidence suggests that educational reforms with a high degree of visibility may attract more attention, which then may raise controversy among stakeholders (Hess, 1999). Once the level of uncertainty surrounding SBM is reduced, it is likely that it will diffuse to other states. But further research is needed to examine this interpretation.

Third, the lack of a positive regional effect points to other social dynamics. The existence of a positive regional effect implies emulation with a motivation to stay at least competitive with other states in the same region. But it may be that SBM is affected more by the nationwide rather than local institutional environment surrounding the educational sector (Zhou, 1993; Ogawa, 1993; Hess, 1999). This is more likely to take place "when information available on certain policy issues is nationalized, making learning from states in the same region no more common than learning from states elsewhere in the country" (Berry & Berry, 1999; Mooney, 2001). For instance, emerging policy networks, active national professional associations, and federal government incentives may have helped SBM to gain a nationwide salience, thus prompting a transition from a regional diffusion pattern to national diffusion pattern over time (Bacharach, Masters & Mundell, 1995; Ogawa, 1993).

This research also found a significant negative relationship between the likelihood that a state adopts SBM and prior dissemination of information about SBM via professional and academic media, and research reports presented at AERA. I expected to find positive relationship between prior dissemination of information on SBM and the likelihood a state adopts SBM. In this hypothesis, I argued that media help institutionalization process by means of spreading the information about SBM. This finding is somewhat different from some previous research which found a relationship between information transmission via professional and academic media and adoption of certain organizational forms and practices (Barron, Jennings & Barron, 1986; Wholey & Burns, 1993). It does add to body of evidence that prior transmission of information via professional and academic media does not always co-evolve with the adoption of new policies (Lounsbury, 2001).

This lack of co-evolution suggests that legislators may not be direct consumers of the information transmitted via professional and academic media. On the contrary, research evidence suggests that legislators rely on more mass communication sources to learn about the issues that matter most to their re-election attempts for public office (Bybee & Comadena, 1984; Riffe, 1990). Research suggests that there is a correlation between successful district wide educational policy changes and public perception of state policy leaders (Hess, 1999). State policy leaders are more attentive to public perception of how they handle the problems that directly affect the public interest. This suggests that state policy leaders' assessment of how supporting SBM affect their re-election attempts is more likely based on local news media coverage of SBM than any other source, suggesting a lack of timely linkage between knowledge produced by scientific communities and knowledge use by state policy makers. Hence, this explanation provides another possibility for the lack of a relationship between the prior transmission of information by means of professional and academic media and adoption of SBM by a state.

This study also examined the relationship between effects of public opinion characteristics on state policy outputs. I expected to find a positive relationship between a state having a higher percentage of voters who identify themselves as liberals and adoption of SBM in that state. The findings of Erikson et al. (1993) suggest that the ideology of state residents is likely to influence state policy. However, the finding of my study suggests otherwise. The coefficient of "percentage of liberal voters" covariate is significant but negative, suggesting that this covariate slows down adoption of SBM by states over time and space in my study. It may be that more liberal states are less likely to move quickly to adopt "fashionable" policies. This would slow their rate of adoption.

This study does not claim to be conclusive in capturing the variation in the adoption and diffusion of SBM over time and space and future research is needed to fully identify factors related to diffusion of this policy. It is noteworthy to mention several future research avenues to take on. The limitations of this study, given in the methodology chapter, are related to nature of data used in the analysis. For example, my data does not include data on such internal state factors as student dropout rates, teacher-student ratios, amount of federal aid to each state, percentage of minority student, policy environment variables, etc. To augment our knowledge about how these variables affect adoption of SBM over time and space, more internal state variables should be included in future analyses. In addition, replication studies employing different sets of variables could be useful to protect against problems associated with small degrees of freedom. Finally, another fruitful direction of future research would be to conduct a content analysis of the differences between the rhetoric used in local news media and

professional media and how it could be related to the support and/or political opposition during political decisions to adopt SBM.

For policymakers and practitioners, it is important to note the general observation that mobilization of political support is a key component to educational reform, such as SBM. In general, successful reform campaigns should specify linkages between reform and improvement in educational outcomes. This specific research also suggests that institutionalization of a practice involves development of a field level consensus. Total nationwide adoption helps influence future adoption. The finding that research media seem unrelated to reform diffusion seems to imply that educational leaders should target local news media to mobilize stakeholders. Finally, as a general principle, study results suggest a relatively long time period for adoption to unfold. This pattern underscores there may be controversy, and tensions during the adoption process. If so, this may imply that reform leaders should consider promoting the centrality of a reform to student learning, to reduce such tensions.

The analysis provides support for institutional theory that pressures to adopt a “fashionable” practice builds gradually over time. This study also reveals that when isomorphic pressures are absent in a region, diffusion may be explained by nationwide institutional dynamics. This study points to possible learning effects in the regional diffusion process when mimetic pressures are absent. Additionally, this study suggests that transmission of information via professional and academic media does not always co-evolve with the adoption of new policies. Finally, surprisingly more liberal states can be less likely to move quickly to adopt some quality policies.

**Conclusions:** For policymakers and practitioners, it is important to note the general observation that successful reform campaigns should specify linkages between reform and improvement in educational outcomes. Total nationwide adoption helps influence future adoption. Finally, as a general principle, study results suggest a relatively long time period for adoption to unfold.

**Key Words:** Site-Based Management, Institutional Theory, Public Policy Diffusion, Event History Analysis, Educational Reform