

Dynamics in the Diffusion and Institutionalization of Site-Based Management Reform in the United States of America

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Abstract

This study is examined 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?" Data comes from various secondary data sources. Study generates several conclusions. First, institutional theory helps explain the diffusion of SBM. The analysis provides support for institutional theory that pressures to adopt a "fashionable" practice builds gradually over time. It's also revealed that when isomorphic pressures are absent in a region, diffusion may be explained by nationwide institutional dynamics. Study points to possible learning effects in the regional diffusion process when mimetic pressures are absent. Finally, surprisingly more liberal states can be less likely to move quickly to adopt some policies.

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

Amerika Birleşik Devletleri'nde Eğitim Sisteminde Yerelleştirme Reformunun Yayılım ve Kurumsallaşma Dinamikleri

Özet

Bu araştırma, "eğitim sisteminde yerelleştirme reformunun zaman ve mekan içindeki yayılımı, özelde eğitim politikalarında, genelde kamu politikalarındaki yenilikler ile ilişkili daha geniş sosyal dinamiklerle nasıl etkileşmektedir?" sorusuna cevap aramaktadır. Araştırmanın verileri, çeşitli ikincil kaynaklardan derlenmiştir. Araştırma, birkaç farklı sonuç üretmiştir. Bunlardan ilki, kurumsal kuramın, eğitimde yerelleştirme reformunun yayılımını açıklamak konusunda geçerli olduğudur. Analiz sonuçları, "moda" haline gelmiş bir uygulamanın benimsenmesi konusunda oluşan baskıların zaman içinde, yavaş yavaş inşa edildiği yönündeki kurumsal tezi destekler niteliktedir. Araştırmanın şaşırtıcı bir sonucu, liberal eyaletlerin bazı politikaları benimsemek konusunda daha yavaş hareket edebildikleridir. Özetle bu araştırma, politikaların yayılım sürecini anlamamız açısından belirgin katkılar sağlamaktadır.

Anahtar Kelimeler: Eğitimde Yerelleştirme, Kurumsal Kuram, Kamu Politikalarının Yayılımı, Tarihsel Olay İncelemesi, Eğitim Reformu

1. Introduction

The educational system has presented problems for policymakers in almost every American state due to concerns over low academic performance as well as organizational and operational inefficiencies. The declines in test scores at the national level and the inability of American students to rank in the upper percentile in international science and mathematics competition have alerted key stakeholders to the problem. As a result, stakeholders at the federal and state go-

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vernment levels, policy advocacy groups such as the Carnegie Forum on education, and teacher professional associations have all offered ways and means to restructure the organizational foundation of the American public education system (Cibulka, 1995; Goldring, 1995; Hess, 1999; Mintrom & Vergari, 1998; Murphy, 1990; Ogawa, 1993; Paris, 1994).

According to “A Nation at Risk Report” released in 1983 by the joint education task force appointed by President Ronald Reagan, the problems of the American public education system called for more decentralization and reform. This report sparked a discussion in the late 1980s and throughout the 1990s on how best to restructure the organizational and academic aspects of the American public education system. As a result, policymakers considered Site- Based Management (SBM) an appropriate educational reform to address the problems (Cibulka, 1995) and the declining confidence in the public school system due to poor academic performance, lack of parental involvement, low teacher morale, and lack of teacher participation in the decision-making process.

Although social scientists extensively examined the factors correlated to implementation success of SBM, someone has yet to address the question about its adoption and diffusion among states: “How does the diffusion of SBM over time and space resemble the broader social dynamics associated with the diffusion of educational policy innovations in particular, and other public policy innovations in general?” Though Ogawa (1993) examined the process by which SBM gained support and legitimacy in the social environment of schools (Goldring, 1995; Rowan, 1995), his study did not investigate the correlates in the diffusion of SBM among states.

The diffusion of both education and other public policy innovations is explained by a theoretical framework that considers a state’s policy adoption as a function of factors attributable to the state’s internal characteristics, and to regional interaction among states (Berry 1994, Berry & Berry, 1990, 1992, Berry 1994; Doyle, 2006; Mclendon, Heller, & Young, 2005; Mclendon, Hearn, & Deaton, 2006; Renzulli, & Ruscigno, 2005; Wong & Shen, 2002). Jensen (2003) said that, “a problem with internal determinants model relates to time”. Jensen (2003) claimed that a state’s 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. Jensen (2003) suggested the inclusion of a theoretical model that gives explicit attention to the gradual increase of legitimating effects over time. To understand how institutional change dynamics are driven over time by the normative pressures that stem from the social organization of an organizational field, this study gives consideration to the institutional theory of organizations in addition to public policy diffusion models (DiMaggio & Powel, 1983; Strang & Meyer, 1993; Tolbert & Zucker, 1983, 1996).

Thus the present study addresses the call for empirical examinations of the relationship between the social organization of an organizational field and innovation adoption and diffusion. The social organization of an organizational field encompasses the relational, cultural, and professional mechanisms by which information flows and is shared across time and space (Bloodgood & Morrow, 2000; Strang & Meyer, 1993; Strang & Soule, 1998), calls for scrutiny of the role of pro-

fessional networks (Greenwood, Suddaby, & Hinings, 2002) as a source of normative pressure in the adoption and spread of innovations, and recognizes the influence of academic and professional media in spreading the knowledge of the new organizational forms to policy-makers (Lounsbury, 2001; Wholey & Burns, 1993).

2. Site-Based Management

The notion of SBM is the result of practices accumulated since the 1960s. In the 1960s and 1970s, certain forms of SBM, generally defined as school site budgeting and the decentralization of authority to local school communities, were some of the major educational policy issues (David, 1989; Guthrie, 1986; Briggs & Wohlstetter, 2003). The supporters of the movements focused their efforts on offsetting the extensive state power in financial and academic affairs in such as textbook selection, class size, and personnel selection. The underlying focus of those efforts was the delegation of authority to local schools (Guthrie, 1986; Tyack, 1990). In the following years, school based management became a theme of state and local school district policy agendas. For instance, the Fleishmann Commission on SBM for the State of the New York in 1971, and the Florida Governor's Citizen Commission in 1973, proposed SBM (Guthrie, 1986).

Advocates of SBM support teacher participation in school governance on three important grounds (Chrispeels, Castillo, & Brown, 2000). The first argument is called the democratic work place argument. This is concerned with the lack of employee voice in private as well as public organizations. The advocates of this argument point to the importance of employee participation and empowerment for organizational renewal. SBM advocates in academia and policy networks argue that teachers lack the power to make important educational decisions in regard to their technical core functions. The second argument is based on the claim that employee participation contributes to quality of work life (Chrispeels, Castillo, & Brown, 2000). The proponents of SBM argue that the lack of decision-making power fosters feelings of perceived powerlessness and alienation among teachers. Kanter (1979) reported several factors that lead to employee feelings of powerlessness and alienation in organizations, arguing that employees are more vulnerable to alienation when they do not have a task focus, lack variety and interdependence on the job, and lack the opportunities to raise their voices in organizational affairs.

The third argument is based on the assumption that teacher participation is a variable that enhances organizational performance in terms of school functioning and student achievement (Chrispeels, Castillo, & Brown, 2000). David (1989) claims that the empowerment of school personnel could facilitate improvement in the teaching and learning process, teacher creativity and innovation, and teacher professional growth.

3. Theoretical Bases and Development of Hypotheses

The conceptual framework of this study's hypotheses is grounded on the assumption that diffusion is a process by which innovation is communicated via certain channels over time among the members of a social system (Rogers, 2003). Moreover, diffusion involves contagion, mimicry,

social learning, and organized dissemination in the adoption and spread of certain practices in a social system (Strang & Meyer, 1993; Rogers, 2003; Strang & Soule, 1998).

The diffusing practice refers to a behavior, a strategy, an organizational routine, or technology (Strang and Soule, 1998). The channels of communication lead to influence, which then affects an actor's likelihood of innovation adoption. The definition of actor encompasses a broad range of societal entities such as individuals, groups, organizations, or state governments (Wejnert, 2002). Katz (1999) claimed that a good diffusion study is expected to (1) address the spread of an organizational practice or idea, (2) over time, and (3) to adopt units (individuals, groups, organizations or nation states), (4) embedded in channels of communication, (5) social structures (networks, community, class), and (6) social values or culture.

3.1. The Diffusion of SBM as an Institutionalization and Legitimizing Process

This hypothesis focuses on the processes by which SBM got diffused, legitimated, and institutionalized among American states. Institutionalization refers to a process by which structures, policies, programs, and the ideas surrounding them acquire "rule-like or taken for granted status" as legitimate elements of the organization and its field (Dacin, 1997; Love & Cebon, 2008; Meyer & Rowan, 1977; Powell, 2007; Tuttle & Dillard, 2007; Tolbert & Zucker, 1983; Westphal, Gulati, & Shortell, 1997; Zhou, 1993). Institutionalization also is defined as a standard course of action whose sequences can often be normatively prescribed (DiMaggio & Powell, 1983). Institutional theorists list several reasons as to why innovations diffuse and get institutionalized in organizational fields.

First, institutional theorists argue that organizational choices are the result of competition for legitimacy among competitors and resource providing constituents, and that socially constructed belief systems are incorporated into organizational structures (Meyer & Rowan, 1977; DiMaggio & Powell, 1983; Scott, 1987). The conformity to environmentally embedded (Granovetter, 1981; Westphal, Gulati, & Shortell, 1997) elements of social reality, and institutionalized myths and rules (Meyer & Rowan, 1977) helps organizations retain and maintain legitimacy and stability, and survive (Zucker, 1987). Organizational legitimacy refers to the degree of external support an organization is able to attain. That is why organizations adopt environmentally prescribed norms to secure legitimacy in their organizational fields (Scott, 2008). The basic assertion of institutional theorists is that legitimacy is defined and given by the institutional environment. Institutionalized environments are characterized by an elaboration of rules and requirements (Meyer & Rowan, 1977).

That is why the changes in organizational structures are guided by a "logic of appropriateness" (Thornton & Ocasio, 2008) rather than concerns for "efficiency and productivity" (DiMaggio & Powell, 1983; Tolbert & Zucker, 1983; Zhou, 1993) or a logic of consequences (March & Olsen, 1983).

This process is characterized by an increase in the rate of adoption of an innovation over time (Strang & Meyer, 1993; Zhou, 1993), which is followed by a greater degree of similarity among

organizations in an organizational field in their structures, policies, and technologies. The preceding assertions and claims are supported by studies conducted in different research settings such as managerial practice (Fligstein, 1985), municipal civil service reform (Knocke, 1982; Tolbert & Zucker, 1983), diffusion of licensing requirements (Zhou, 1993), international diffusion of ISO 9000 quality certificates (Guler, Guillen, Muir, & MacPherson, 2002), workplace substance abuse prevention programs (Spell & Blum, 2005), and the diffusion of personnel departments in the United States of America (Barron, Dobbin, & Jennings, 1986).

Second, institutional theorists address the role of special interest groups in the emergence, acceptance, and diffusion of new organizational practices. They claim that interest groups and stakeholders exert political pressures to promote their own version of “best management practices” in an organizational field. The assertion that institutionalization is essentially political is based on the observation that environments and organizations are highly interpenetrated. Institutionalization is a process which involves politics, through which stakeholders organize and mobilize their power to influence the field (Bacharach, Masters, & Mundell, 1995; Schneiberg & Lounsbury, 2007; Thurton & Ocasio, 2008; Tuttle & Dillard, 2007). Similarly, DiMaggio & Powell (1983) argued that the institutionalization process is essentially political and reflects the relative power of organized interests and the actors who mobilize around those interests.

Certain sectors of society are especially open to political pressures from interest groups in their institutional environments (Bacharach, Masters, & Mundell, 1995). There are two primary reasons why American public schools are especially open to interest groups’ politics and pressures (Bacharach, Masters, & Mundell, 1995). First, as public sector organizations, schools are expected to reflect the goals, values and culture of the broader society. That is why the American public education system as an institutional field is the target of institutionalization attempts by formal as well as informal actors (Bacharach, Masters, & Mundell, 1995; Cibulka, 1995; Ogawa, 1993; Rowan, 1995). Second, there is a great degree of ambiguity and uncertainty about what defines a good outcome and the process that leads to it (Bacharach, Masters, & Mundell, 1995).

The lack of agreement on these two attributes of school organization is the source of constant debate about what needs to be reformed and the methods and means of achieving the reform. That is also why the endorsement by those actors with evaluative authority is very critical for an educational innovation to gain acceptance and legitimacy in the diffusion process (Bacharach, Masters, & Mundell, 1995).

Actors seeking change oftentimes mobilize themselves collectively to assert new logics, and disrupt taken-for granted arrangements (Schneiberg & Lounsbury, 2007). The assertion is that the organizational field should come to normalize its standards; that is why it has to choose from among many alternative conceptions of reform, innovation, and organizational practice. The process of diffusion and institutionalization mimics a dynamic social model where interest groups attempt to institute their protégé of innovation and reform and organizational practices as the best practice. This process relies heavily on the ability of stakeholders to frame and codify a logic of

action that is agreeable to all the actors in the institutional environment. In other words, the acceptance of a logic of action depends on whether it promotes agreement versus disagreement, conflict and resistance between the actors (Hess, 1999; Schneiberg & Lounsbury, 2007; Thornton & Ocasio, 2008). We argue that the extent to which the actors can exert a political influence on the change process depends also on the organizational field. Organizational fields with a multi-level or federated character allow actors to exert political coercion and influence while they try to promote their version of the best practice (Schneiberg & Lounsbury, 2007). The multi-level and federated character of education allows it to be subjected to a great degree of political pressure from interest groups. Institutional researchers equate institutionalization with the degree of penetration a new practice achieves among adopters. The construct of institutionalization is defined as the degree of prevalence of a best practice among organizations. The operational definition of institutionalization is accomplished by measuring the normative pressures that stem from the cumulative force of the number of organizations within a population adopting a given organizational form or best practice or educational reform such as SBM (Barron, Dobbin, & Jennings, 1986; Burns & Wholey, 1993; Palmer, Jennings, & Zhou, 1993; Tolbert & Zucker, 1983; Zhou, 1993; Zucker, 1987). Observation that the cumulative increase in the adoption of a best management practice creates its own diffusion momentum, institutionalization and legitimation, which has led the authors to posit the following hypothesis for study:

H₁: The cumulative increase in the prior adoption of SBM among American states is positively related to the rate of adoption of SBM in the United States of America.

3.2. Mimetic Isomorphism and Innovation Diffusion

Research evidence suggests that states oftentimes try to find solutions to their social, economic, and political problems by emulating the policies of their neighbors (Canon, & Baum, 1981; Berry, & Berry, 1990, 1992, 1999; Grossback, Nicholson-Crotty, & Peterson, 2004). Moreover, policy innovations are emulated faster when adopting states have similar economic, social, cultural, political, ideological, and demographic attributes (Berry, & Berry, 1990, 1992; Canon, & Baum, 1981; Grossback, Nicholson-Crotty, & Peterson, 2004; Volden, 2006). Public policy researchers argue that the number of prior adopters as well as the close proximity of adopting states increases the likelihood that a particular state will decide to adopt a new public policy innovation (Berry and Berry 1990, 1992, 1994; Walker 1969).

States are more likely to notice an innovation if the greater number of neighboring states adopts it. Jensen (2003) supports this assertion by his finding that innovations gain legitimacy in the eyes of policy makers, and are therefore seen as effective solutions to problems, when they are adopted in other states (Jensen 2003). Research evidence suggests that policies that help a state gain an advantage against neighboring states are more likely to lead to bandwagon pressures among states to adopt the same policy. Berry and Berry (1990, 1992) were able to show this empirical relationship for the diffusion of state lotteries and gasoline tax.

In conclusion, a state's decision to adopt a policy innovation is affected by the policy choices of other states in the same region. The greater the extent to which a policy innovation is perceived as an effective and widely accepted legitimate solution to a problem, the greater is the likelihood of a positive state response to the policy innovation in question. Accordingly, this hypothesis tests the predictive ability of the regional diffusion explanation in the context of SBM adoption and diffusion. Consequently, it's proposed that the following hypothesis:

H₂: There is a positive relationship between the cumulative increase in the prior adoption of SBM in a given region and new adoptions in that given region.

3.3. Normative Isomorphism and the Media and Innovation Diffusion

Organizational sociologists name two primary carriers through which innovation diffuses in an organizational field. These are professional associations and networks, and professional and academic news media (DiMaggio & Powell, 1983; Scott, 2008; Strang & Meyer, 1993; Strang & Soule, 1998). Professional networks accomplish several missions and are very important conduits for the innovation diffusion that stems from normative pressures in an organizational field.

The first mission that a professional network accomplishes involves information sharing and knowledge diffusion. Professional associations are considered the key agents of the innovation diffusion process. Professional networks are instrumental in creating structures through which scientific and technological information is disseminated among members (Balla, 2001; Burns & Wholey, 1993; DiMaggio & Powell, 1983; Galaskiewicz, 1985; Robertson, Swan, & Newell, 1996; Scott, 2008; Swan & Newell, 1995). Professional networks give salience to emerging phenomena and provide fertile grounds for promoting successful new endeavors by means such as newsletters, conferences, and so forth (Roy & Seguin, 2000).

The second mission that a professional network accomplishes involves policy articulation (Mintrom, 1997) by means of theorization (Strang & Meyer, 1993). Mintrom and Vergari (1998) concluded that policy entrepreneurs played the role of "policy articulators" in the process that led school choice to rise to the level of a state policy making agenda. The theorization of school choice involved documenting poor academic performance, operational inefficiency, and declining public confidence in educational organizations. Policy entrepreneurs emphasized the virtues of school choice in regard to notions of efficiency and social justice and progress in American society. The reason that school choice diffused so dramatically is that policy entrepreneurs were very successful in theorizing a theory of practice and that of a population of adopters within which school choice can diffuse (Strang & Meyer, 1993).

The second carrier through which innovation diffuses is the channels of knowledge diffusion and communication. The primary claim is that diffusion is not a simple process of movement of technologies, ideas or organizational practices from one entity to another (Scott, 2008). Diffusion via the media encompasses academic as well as trade publications. That is why, in recent decades, a number of scholars have tried to understand the role of news media coverage in the diffusion and institutionalization of organizational practices and public policy reforms (Burstein, 1991; Kelly

& Dobbin, 1999; Lounsbury, 2001; Nisbet & Huges, 2006; Soule & Earl, 2001; Strang & Soule, 2001; Wejnert, 2002; Yanovotzky, 2002). The primary assertion is that news media coverage heightens the attention paid to the diffusing practice among potential adopters. The news media coverage is operationalized as the count of articles published in either mainstream newspapers or professional and academic journals of a professional field.

Social scientists propose several explanations for the role of news media in the diffusion process. The first explanation focuses on the relationship between news media coverage and issue salience. This explanation asserts that there is a direct correlation between news media attention given to a social issue and its salience. The hypothesis is that there is relationship between the news media attention to a social issue and heightened attention in public perception, which then increases the pressures on policy makers to address the issue (Nisbet & Huges, 2006; Shih, Wijaya, & Brossard, 2008).

A second explanation involves the role of professional news media as a channel of communication to frame the diffusing practice as a “culturally appropriate” and “effective” solution to an immediate social, technical or organizational problem (Lounsbury, 2001; Strang & Soule, 1998; Wejnert, 2002). The popularity of a new organizational practice in the media provides a good indicator for its widespread acceptance and diffusion over time and space (Lounsbury, 2001). This effect manifests itself convincingly when an issue like SBM attains the status of collective action in the perception of all key stakeholders (Ogawa, 1993). The effect of the media becomes stronger when a diffusing innovation accords with cultural understanding of an appropriate and effective solution for a technical or social problem (Strang & Soule, 1998).

The evidence concerning the claim that the rate of adoption increases parallel to heightened news media attention, and prior dissemination of information through professional associations and professional and academic journals led us to posit the following hypothesis:

H₃: The prior dissemination of information on SBM through academic and professional associations and academic and professional news media is positively correlated to the adoption of SBM by a state.

3.4. Temporal Context and Diffusion of an Innovation

In this hypothesis, we focus on understanding 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 in a steep increase in the rate of adoption, which may primarily reflect the effect specific to that period. This expected period effect may be triggered by either efficiency requirements (Tolbert & Zucker, 1983), passage of certain laws mandating and requiring conformity (Edelman, 1990, 1992), licensing (Zhou, 1993), legitimacy concerns (Baron et al., 1986) or isomorphism effects (Dacin, 1997). Tolbert and Zucker (1983) suggested that this process may reflect either a gradual increase in the rate of adoption over time or a sharp increase in some time period or a decrease in another period. Therefore:

H₄: 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 events specific to that particular period.

3.5. Centralized Decision Making and the Demand for the Decentralization of Authority

The twentieth century American public school organization is portrayed as a highly specialized bureaucracy with a division of formal authority between the fiduciary of school boards and full time school superintendents, and professionally trained administrators (Bidwell, 2001). This model emphasizes a highly specialized division of labor, departmentalization, hierarchical organization and controlled work process (Deal & Wiske, 1983). Wiske (1983) argues that schools are good examples of a traditional bureaucracy because this model relies on established procedures to run a school. However, the assumptions held under this model can only be valid under static and stable environments. A heavily centralized management cannot respond to specific local demands, which oftentimes require the development and adoption of unique policy alternatives. The operational inefficiency of the school organization has been severely criticized because of this inability to change and adapt to new environmental conditions.

Research evidence suggests that the adoption of SBM increases the efficiency of schools because of the structural changes enabling them to quickly respond to changing environments and local demands. Hence, it's proposed that states with a high rate of centralized educational decision making are more likely to be early adopters than states with a low rate of centralized educational decision making.

H₅: There is a positive relationship between centralized educational decision-making and the adoption of SBM by a state.

3.6. The Innovativeness of a State's Policy Culture and Innovation Adoption

This hypothesis claims that "innovativeness is an enduring characteristic of states or that certain states have distinctive cultures of being innovative" (Soule & Earl, 2001). The previous research and theory suggests that the degree of openness of a state's policy culture to embracing new policy innovations predicts policy adoption. The goal of this hypothesis is to capture the notion that states that are past adopters are likely to be future innovators in policy reform as well (Savage, 1978; Soule & Earl, 2001). Therefore it's proposed the following hypothesis:

H₆: There is a positive relationship between a state's policy innovativeness and the adoption of SBM by a state.

3.7. State Public Opinion Characteristics and State Policy Adoption

This study also examines the effects of public opinion characteristics on state policy outputs. There is considerable evidence that the political preference of state residents is a determinant of state policy adoption. Erikson, Wright, and McIver (1985) find a strong relationship between the mean ideological identification of state residents and an index of state policy liberalism, suggesting

that states with a high proportion of voters who identify themselves as liberals are more likely to adopt public policy innovations that are progressive and liberal in nature. The findings of Erikson, Wright, and McIver (1985) suggest that the ideology of state residents is likely to influence state policy.

It's expected to find a positive relationship between a state having a higher percentage of voters who identify themselves as liberals and Democrats and adoption of SBM in that state. Therefore, the authors propose the following hypotheses:

H₇: There is a positive relationship between a state's having a higher percentage of voters who identify themselves as Democrats and the adoption of SBM in that state.

H₈: There is a positive relationship between a state's having a higher percentage of voters who identify themselves as liberals and the adoption of SBM in that state.

4. Method

4.1. Research Setting and Dependent Variable

Event history analysis is a statistical analysis technique that belongs to the family of regression statistical modeling. The process of event history modeling starts with a decision of when to start recording the annual values of each specific variable in the study (Allison, 1995; Blossfeld, Golsch, & Rohwer; 2007; Hannan & Freeman, 1989; Singer & Willett, 2003). Event history analysts think that the start time for the time series in an event history analysis is critical. That is why it was suggested that choosing an earlier starting time would avoid the problem of observing a left censored case in regard to the study subject (Hannan & Freeman, 1989). Given the fact that the adoption of SBM by an American state is a rare event, and the first adoption took place in Florida in 1973, we start the annual recording of cases for each variable beginning with 1971. In accordance with the time of origin that is selected we constructed data on 48 states from a variety of secondary sources. In this study the authors gave very detailed attention to locate whether the event of interest happened for any of the 48 contiguous states in the United States for a time period that spanned the years from 1971 to 2000.

The effort to locate the timing of the event of interest for our study indicated that 38 states adopted SBM to mandate the implementation of SBM in public schools. That's why the total number of observations for the dependent variable of interest is 38. As it's indicated, this sample excludes the other territories of the United States, the State of Hawaii, and the State of Alaska. In one sense, these two states are excluded due to a decision made by the researcher. The exclusion of those states and territories from the study is consistent with research on the diffusion of public policies theorizing the diffusion of innovations from an institutional theory perspective (Soule & Earl, 2001, Zhou, 1993) and public policy diffusion models (Berry & Berry, 1990, 1992; 1994; Mintrom, 1997).

In this study, the dependent variable of interest is treated as a discrete form of event history analysis since we did not measure the timing of SBM adoption on a continuous time scale (Allison, 1995; Blossfeld, Golsch, & Rohwer, 2007; Hannan & Freeman, 1989; Singer & Willett, 2003). For instance, the adoption of SBM may only occur after the passage of a legislative bill during legislative sessions. It's tracked the occurrence of the adoption of SBM from 1971 to 2000. The event of interest is coded "0" for each discrete time block until it occurs, when it is coded "1", and that is why the passage and enactment of the law is the major focus of this study.

Figure 4.2.1 is meant to demonstrate the diffusion of SBM during the 30 year period we examine.

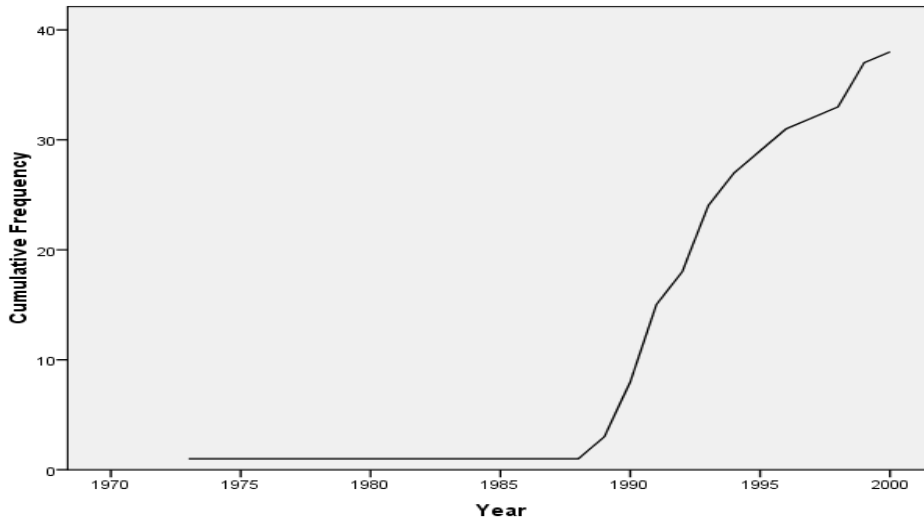


Figure 1. The cumulative increase of SBM adoptions by states: 1971 to 2000

4.2. Independent Variables

Time Periods: The measurement of this variable entailed dividing the study duration time into five periods. These time periods comprise the entire 30 years time period and they are as follows: 1971-1984. This period is characterized by the "effective schools' literature, which suggested that effective school are defined by teacher empowerment and parent participation in school decision-making. This period also defined by the "A Nation at Risk Report" released in 1983. The second time period is 1985-1987. This period is characterized by release of a report by the Carnegie Foundation in 1986. This report is called "A Nation Prepared: Teachers for the 21st Century", which emphasized SBM for teachers along with other important issues. The third period is 1988-1990. This period was dominated policy discussion of localism and excellence and business partnerships, and extensive discussion of public school problems in Education Week. The fourth period is 1991-1995. This period is characterized by the enactment of School Renewal Act by the U.S. Congress in

1994. The School Renewal Act strongly advises the participative and shared governance at school organization and offered federal grants for those states that willingly to experiment with SBM. The fifth period is 1996-2000. This period is mainly characterized by extensive state involvement in educational policy making, and state takeover of educational governance, and school choice.

Cumulative Regional Adoption: It's computed the cumulative number of SBM adoptions for year (t_i) by summing up the total frequency of SBM adoptions in each year prior to the current year (t_i) in each census division. Therefore, the cumulative frequency of regional SBM adoption in year (t_i) records all of the prior SBM adoptions in each year in each census division up to the prior year, which is denoted as (t_{-1}).

Cumulative Adoption: Cumulative frequency of SBM adoption in year (t_i) records all of the prior SBM adoptions up to the prior year, which is denoted as (t_{-1}). This variable is a time varying variable since the cumulative number of adoptions changes from the previous year to the current year.

Cumulative Dissemination: Measurement of the cumulative dissemination variable is accomplished by means of extensive database research. We collected the data using the Education Index, and Educational Research and Information Clearinghouse (ERIC) databases. These two databases disseminate published and un-published reports and fit well the purposes of this study to measure the affect of knowledge diffusion on policy adoption. The list of published reports and articles on SBM is generated by means of keywords such as "Site-Based Management", "School-Based Management", "School-Site Management", "School Restructuring", "Teacher Empowerment". The search process also involved generating lists by cross referencing those keywords. After we exhausted all combinations of cross referencing the keywords that listed, an extensive content analysis was conducted. Hence, cumulative dissemination is the total frequency of all published and presented research reports prior to the current year. This is a time varying variable since the number of published and presented research reports vary from year to year.

Policy Innovativeness: We measured this variable by using policy innovativeness index that was compiled by Savage (1978). This index is based on sixty-nine pieces of legislation passed between 1930 and 1970. Savage's "Later 20th Century Index" ranges from .51 to 1.56, with higher values indicating that a state is more innovative.

Educational Centralization: This variable is measured by an index developed by Wirt (1978). Wirt (1978) developed the State Centralization Index after he conducted a content analysis of statements of legal authority over schools in policy areas such as a state's constitution, status, court decisions, and administrative regulations. The index scores ranges from 1.86 for Wyoming to 6.00 for Hawaii as the state with the highest school centralization index. In our analysis, the centralization index ranges from 1.86 for Wyoming to 4.91 for Oklahoma. This index indicates that the higher the score, the greater the degree of centralization of school decision-making.

Ideological Liberalism: We measured the state electorate ideological liberalism variable by using an index developed by Wright, Erikson, and McIver (1985). This index was developed by those political scientists by analyzing CBS/NYT telephone polls for the period of 1976-1982. The polls are taken frequently and use the same questions for party affiliation and ideology. The index was computed after the analysis of 48 polls that were conducted. Each survey has an average sample size of 71,565 respondents. The estimated reliability coefficient of the ideology measure is reported as .816. This is a time invariant variable.

Party Identification: We measured the construct of party identification using an index developed by Wright, Erikson, and McIver (1985). The development of this measure also took place using the same CBS/NYT survey of political views of the state electorate along with a liberal/conservative scale. The average sample size of all 51 surveys was 74,667 respondents. The estimated reliability coefficient is .938. This variable is a time-invariant variable.

4.3. Statistical Model and Data Analysis Strategy

The piecewise event history method estimates the hazard of an American state adopting a law mandating the implementation of school based management at any time as a function of the time variant and time invariant covariates. Tuma (1980) proposed the basic functional form of this model in the following equation (Tuma, 1980 in Blossfeld, Golsch, & Rohwer; 2007). Then, time periods is defined by r_1, r_2, \dots, r_L . Then, the functional form is expressed as:

$$r_{jk}(t) = \exp(\alpha_{jkp} + \beta_{jk} X_{jk})$$

Where J is the origin state of no adoption of SBM by American states, k is the destination state of adoption of SBM, α_{jkp} is a constant coefficient associated with the any specific time period, and β_{jk} is a vector of coefficients, and X_{jk} is a vector of independent variables in our study. The piecewise exponential model is employed to test the hypothesized relationships in terms of periodic effects and institutionalization as it pertains to conformity to a standard organizational form.

5. Results

Table 1 reports minimum, maximum, mean, and standard deviations for the study variables of the study.

Table 1. Descriptive Statistics of Key Variables in Analysis, 1971-2000 (N=1167)

| Variable | Min | Max | Mean | SD |
|----------------------|-----|-----|------|-------|
| 1. SBM Adoption | 0 | 1 | 0.03 | 0.178 |
| 2. 1971-1984 | 0 | 1 | 0.57 | 0.496 |
| 3. 1985-1987 | 0 | 1 | 0.12 | 0.326 |
| 4. 1988-1990 | 0 | 1 | 0.12 | 0.324 |
| 5. 1991-1995 | 0 | 1 | 0.07 | 0.250 |
| 6. 1996-2000 | 0 | 1 | 0.13 | 0.333 |
| 7. Regional Adoption | 0 | 6 | 0.60 | 1.261 |

| <i>Variable</i> | <i>Min</i> | <i>Max</i> | <i>Mean</i> | <i>SD</i> |
|---------------------------------|------------|------------|-------------|-----------|
| 8. Cumulative Adoption | 0 | 38 | 6.05 | 10.271 |
| 9. Cumulative Dissemination | 0 | 1790 | 308.29 | 502.86 |
| 10. State Policy Innovativeness | 0.51 | 1.56 | 1.072 | 0.272 |
| 11. Educational Centralization | 1.86 | 4.91 | 3.520 | 0.575 |
| 12. Percent of Liberal Voters | 9.60 | 36.00 | 19.914 | 4.600 |
| 13. Percent of Democrat Voters | 20.60 | 60.00 | 38.1008 | 9.04 |

Table 2 reports the correlation coefficients between each independent variable and dependent variable, and correlation coefficients among independent variable of the study. We examine the nature of the correlation coefficients in Table 2 in two steps. First, we analyze the correlation coefficients between dependent variable and independent variables. Second, we analyze the sign, strength, and magnitude of the correlation coefficients between the independent variables of this study.

Table 2. The Correlations for Key Variables in Analysis, 1971-2000 (N=1167)

| <i>Variable</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1. SBM Adoption | 1,00 | | | | | | | | | | | | |
| 2. 1971-1984 | -,20 | 1,00 | | | | | | | | | | | |
| 3. 1985-1987 | -,07 | -,42 | 1,00 | | | | | | | | | | |
| 4. 1988-1990 | ,04 | -,42 | -,14 | 1,00 | | | | | | | | | |
| 5. 1991-1995 | ,23 | -,44 | -,14 | -,14 | 1,00 | | | | | | | | |
| 6. 1996-2000 | ,13 | -,31 | -,09 | -,09 | -,10 | 1,00 | | | | | | | |
| 7. Regional Adoption | ,13 | -,43 | -,13 | -,07 | ,40 | ,57 | 1,00 | | | | | | |
| 8. Cumulative Adoption | ,27 | -,58 | -,18 | -,07 | ,58 | ,72 | ,76 | 1,00 | | | | | |
| 9. Cumulative Dissemination | ,26 | -,67 | -,13 | ,03 | ,54 | ,73 | ,75 | ,98 | 1,00 | | | | |
| 10. State Policy Innovativeness | ,03 | ,03 | ,01 | ,001 | -,03 | -,05 | -,02 | -,06 | -,06 | 1,00 | | | |
| 11. Educational Centralization | ,034 | ,032 | 0,01 | 0,01 | -,01 | -,07 | -,07 | -,07 | -,07 | ,10 | 1,00 | | |
| 12. Percent of Liberal Voters | -,00 | -,01 | -,00 | -,00 | ,028 | ,016 | -,05 | ,03 | ,03 | ,20 | -,20 | 1,00 | |
| 13. Percent of Democrat Voters | -,00 | -,00 | -,00 | -,00 | ,022 | -,00 | ,08 | ,01 | ,01 | -,4 | ,23 | -,32 | 1,00 |

Table 2 reveals that the correlation coefficients between dependent variable and independent variables of policy innovativeness and educational centralization are positive, and low in magnitude and not significant. On other hand, the correlation coefficients between dependent variable and independent variables of percent liberal and percent democrat are negative, and not significant. These four constructs are expected to capture the influence of state policy context on state adoption of SBM. However, the lack of high correlation between these variables and dependent variable of SBM adoption may later explain why these variables fail to predict the adoption of SBM by a state. The magnitude of the correlation coefficients between dependent variable and cumulative regional adoption, and cumulative adoption, and cumulative dissemination is low but statistically significant. The sign of the correlation coefficients for those variables is positive, signaling a positive effect on the rate of adoption of SBM by states over its study period.

The analysis of Table 2 reveals that several of the significant correlation coefficients are larger than 0.70. In summary, multi collinearity is a concern when analyzing the models that estimate the effects of cumulative dissemination and cumulative adoption variables on SBM adoption by a state. The analysis is reported in Table 3.

Table 3. 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 |
|----------------------------------|-----------------------|-----------------------|----------------------|---------------------|---------------------|----------------------|
| 1985-1987 | -14.1524 (2562.58) | - | -13.26 (2530.474) | - | -.1374 (2089) | -.14479 (4630) |
| 1988-1990 | 3.34** (1.08) | - | 5.046** (1.376) | - | 3.3447** (1.080) | 5.0220** (1.376) |
| 1991-1995 | 4.452** (1.024) | - | 4.775** (1.385) | - | 4.515** (1.025) | 4.724** (1.379) |
| 1996-2000 | 4.095** (1.06) | - | 5.283** (1.973) | - | 4.208** (1.063) | 5.201** (1.960) |
| Cumulative Regional Adoption | - | -.2974** (.1282) | -.2757** (.1302) | - | - | -.3054** (.1401) |
| Cumulative Adoption | - | .1728 (1219) | .4059** (.1752) | - | - | .41273** (.1761) |
| Cumulative Dissemination | - | -.00119 (.00232) | -.0077** (.00373) | - | - | -.0077** (.00374) |
| Policy Innovativeness | - | - | - | .24944 (.7187) | .6149 (.7608) | .50166 (.7697) |
| Education Centralization | - | - | - | .20199 (.3246) | .2707 (.3298) | .1350 (.3309) |
| Percent Liberal | - | - | - | -.01684 (.04066) | -.05061 (.0438) | -.076* (.0461) |
| Percent Democrat | - | - | - | -.00286 (.0228) | -.0105 (.02157) | -.0108 (.04616) |
| Intercept | -6.493** (1.00) | -4.551** (.303046) | -6.7078** (1.006) | -4.06** (1.775) | -6.76** (1.9823) | -5.875** (2.11) |
| Log-likelihood | -12.5738 | -24.8557 | -7.7007 | -49.991 | -11.101 | -6.0353 |
| Likelihood Ratio (X^2) | 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 |
| df | 4 | 3 | 7 | 4 | 8 | 11 |
| # of State Years | 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 3 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 3 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 3 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 3. 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 3.

On the other hand, Model 3 in Table 3 tests the significance of time period, cumulative regional adoption, cumulative adoption, and cumulative dissemination together. For hypothesis 3 we 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 3 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 3, 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 3 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 is expected to find a positive relationship between a state's policy innovativeness and subsequent adoption of SBM by a state. For Hypothesis 6 is expected to find a positive relationship between centralized educational decision-making and the adoption of SBM by a state. For Hypothesis 7 is 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 3 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 -0.07638 ($p < .10$). The sign of the percent liberal variable is counter to what we expected to find.

6. 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 our research was to determine the correlates of SBM adoption by a state. We 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 our 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. We 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, our results concerning the regional diffusion hypothesis are fairly consistent. This body of research has often found little if any relationship 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 & 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 we did not find evidence as stated in regional diffusion hypothesis, our 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? Our 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 our 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 our 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 we 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. We expected to find positive relationship between prior dissemination of information on SBM and the likelihood a state adopts SBM. In this hypothesis, we 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. We 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 our 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 our 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 section, are related to nature of data used in the analysis. For example our 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.

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