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Structural Embeddedness of Political Top Executives as Explanation of Policy

Isomorphism

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ABSTRACT

This study examines structural embeddedness of political executives as an antecedent of policy isomorphism in municipalities. Surprisingly little public management research investigates the institutional and structural backgrounds for decision making and action. This paper argues that the social network of political executives constitutes a conduit in which information as well as expectations and pressures flow. The study uses rare full relational network data of Danish mayors to analyze expenditure allocation similarity, policy isomorphism, in municipalities. Results of quantitative analyses show that mayor network centrality is positively associated with municipal policy isomorphism. The effect is amplified when mayors have more political power or come from rural municipalities or ones with a smaller bureaucracy and fewer administrative professionals. The study contributes to public management literature with a multi-level framework showing how individual level networks of political executives can shape decision making and action in public organizations.

Research in public management has shown that inter-organizational networks are important for performance and decision making in public organizations (Agranoff and McGuire 2003; Schalk, Torenvlied and Allen 2010; Jokisaari and Vuori 2010). Studies have illuminated how agencies benefit from network positions (Schalk, Torenvlied and Allen 2010) and how the networks of directors influence organizational performance (O'Toole and Meier 2004). However, most network studies in public management seek to explain policy network governance and performance outcomes; relatively little is known about how structural positions in social networks can also shape and constrain decision making and action in public organizations (Berry et al. 2004). This paper focuses on the social networks of political top executives and how structural embeddedness shape organizational outcomes.

Recent studies have shown that public organizations are influenced by environmental pressures and expectations (Ashworth, Boyne and Delbridge 2009; Frumkin and Galaskiewicz 2004). This line of research uses insights from organizational institutional theory (see Scott 2008) to explain action and decision making in public organizations. The institutional perspective focuses on how decision making is often not instrumental but shaped by environmental pressures as well as normative and cultural expectations. In their study Ashworth, Boyne and Delbridge (2009) showed how organizational changes in response to a new statutory framework for the management of local government services in England, generally, were both compliant to government expectations and convergent to the norm of the field of local governments. In another study Frumkin and Galaskiewicz (2004) showed that public organizations are more susceptible to institutional pressures than are private or non-profit organizations (see also Baron, Jennings and Dobbin 1988; Edelman 1992). Still, a considerable amount of research in public management, at least implicitly, builds on the assumption that decision making and change in

public organizations is instrumental and governed by a possibility for performance improvements (e.g. Andrews, Boyne and Walker 2006; Meier and O'Toole 2001). It has been less investigated how decisions and action of public organizations also to a large degree may be constrained by institutional pressures and the structural embeddedness of key individuals. In this study the social network position of political executives is connected to policy isomorphism. I define policy isomorphism as similarity in policy, for instance expenditure allocation, between public organizations. This is a relevant outcome measure as relatively little is known about the sources of similarity and differences in policies between comparable public organizations and agencies. I argue that institutional pressures for public policy isomorphism are conveyed in the social networks of political executives. Specifically, I argue that network centrality of mayors is an important structural antecedent of policy isomorphism in municipalities. The basic argument is that mayors who are more centrally positioned in the network of mayors are also more exposed to isomorphic pressures. They are better positioned for learning from other mayors (Kraatz 1998) and become embedded in a prevailing normative order (Davis and Greve 1997). However, as opposed to a private firm context, mayors may not be able to directly import network influences into political action as they are politically and bureaucratically constrained in their individual municipalities.

The paper seeks to make four contributions to public management research. First, it highlights social networks as a source of isomorphism. Previous studies have shown that institutional theory can explain change and isomorphism in public organizations (Ashworth, Boyne and Delbridge. 2009; Frumkin and Galakiewicz 2004), but little research examines how institutional pressures are conveyed and under which circumstances they are translated into decisions and action in organizations.

Second, the study is among the first to investigate the importance of the social networks of political executives. This may be because relational social network data about these individuals is hard to acquire. In this study, I analyze interlock network data on Danish mayors which provides a rare opportunity to investigate the social embeddedness of local level politics. The paper develops hypotheses about how the effects of social networks may be distinct for political executives who are constrained by a political system and a professional administrative bureaucracy in ways a private sector manager is not.

Third, the paper is one of the few to examine the more constraining side of networks and how they might influence public organizations (Berry et al. 2004). Research on networks of public organizations often stresses networks as resources to be exploited. However, by conveying information about other organizations as well as normative pressures, social networks of executives also constitute a barrier to organizational innovation and change that deviates from what is institutionally sanctioned in the field.

Fourth, the study addresses the question of how practices diffuse in fields of public organizations (Berry and Berry 1990). The study offers insights about the mechanisms by which a complex practice diffuses by investigating how the social networks of political executives are related to the spread of policy isomorphism among Danish municipalities.

The empirical part of the paper presents a study of how the social network position of Danish mayors shape policy isomorphism in municipalities. I operationalize policy isomorphism as how much a municipality resembles the average of all municipalities in the proportion of their total expenditures that they allocate to three key policy areas; schooling, child care, and elder care. Expenditure allocation decisions are important and are subject to institutional influences for at

least two reasons. First, they are surrounded by regulative and normative expectations from regulators and the public. Second, the outcomes of expenditure allocation decisions are often hard to predict so mimetic processes are also likely to be important (DiMaggio and Powell 1983).

For municipalities the social network of their political executives, the mayors, is likely to be important for decision making as these are the people ultimately in charge of providing strategic direction and leadership. Most often the social structure of political executives is unknown.

However, in this paper I analyze full relational data on the professional interlock network of all mayors in Denmark. Danish mayors are, like political leaders in other settings, connected (or *interlocked*) through shared memberships of a wide range of boards, committees, associations, and organizations (for instance of municipal associations, public utility companies, regional councils etc.). To derive hypotheses about the importance of mayor network positions I have supplemented quantitative data from different sources with qualitative data obtained from semi-structured interviews with four mayors as well as professional journals.

Results of quantitative analyses show that municipalities with mayors that are more central in the inter-mayor network are indeed more likely to resemble the average expenditure policies of the field. Furthermore, the effects are found to be stronger for municipalities in which the mayor controls a larger number of seats in the municipality council; in municipalities where the administrative bureaucracy is smaller and easier for the mayor to dominate; and in more rural municipalities where skilled staff is harder to attract and no distinct town dominates. The results hold implication for public administration and management which are discussed in the final parts of the paper.

THEORY

Networks in Public Management Research

Networks of public organizations have been subject to an increased research interest in recent years (Kleijn 2005). This research has for instance been interested in explaining various performance outcomes of networks (Schalk, Torenvlied and Allen 2010); network management (Meier and O'Toole 2001), and how to implement policy and programs more effectively (Provan and Milward 1995; Agranoff and McGuire 2003). The networks under study have primarily been policy networks of public organizations connected to each other or to collaborators, providers, and clients (Park, Rethemeyer and Hatmaker 2009). Studies have addressed important questions about how such multi-organizational networks can improve service delivery (e.g. Provan, Huang and Milward 2009; Meier and O'Toole 2003). With an instrumental focus (Berry et al. 2004) these studies have attended to how information, orders, and knowledge are conveyed in networks of related organizations or organizational units, and how performance may be improved. Much less attention has been given to how networks also shape and constrain public organizations. Social networks are conveyors of norms, information, knowledge, expectations, and status the effect of which is likely to influence decision making and outcomes of organizations (Borgatti and Halgin 2010). Furthermore, social network analysis methodologically constitutes a way to bridge levels of analysis (Granovetter 1973) and provide micro level explanations for macro level outcomes. Ultimately, social networks connect individual actors but often outcomes are observable on an organizational level of analysis. So by studying the social networks of key individuals of organizations we may be able to acquire a better understanding of the antecedents and mechanisms of many organizational level outcomes.

The consequences of actors being structurally embedded in social networks are the focus of many social network studies within management and sociology (Berry et al. 2004; Granovetter 1985; Uzzi 1996; Kilduff and Tsai 2003). However, a focus on the constraining effects of the social structures of key individuals has largely been neglected in public management research. While the mechanisms of network governance and performance are becoming increasingly well understood, much still needs to be learned about how the networks of public managers and political executives constrain and shape decision making and action of public organizations and agencies. In the context of private firms the effects of executive networks have been widely explored. Especially abundant are the studies of interlocked networks (Scott and Davis 2007). Firms within an industry are connected when their directors are interlocked by common memberships of the boards of other firms. Despite only consisting of few personal connections between organizations, these networks have proved to be consequential for organizational outcomes. For instance, it has been shown how interlock networks influence the creation of new offices (Rao and Sivakumar 1999) and structural changes (Palmer, Jennings and Zhou 1993). Leaders and executives in public organizations are also embedded in social networks with possible ramifications for their organizations. They may be even more so than their private sector peers as they most often are not in a competitive situation. Incentives for sharing information and knowledge may therefore be greater when they meet. Besides information, norms and culture may also be transmitted in social networks (Owen-Smith and Powell 2008). In this way networks can constrain action as attention is directed towards other organizations to which a focal organization is connected, and deviance from institutionally accepted behaviour is rendered more visible to others.

Public Organizations and Isomorphism

Similarity and isomorphism are important characteristics of fields of public organizations, however surprisingly little research has sought to illuminate the sources of these outcomes. Recent research has emphasized how public organizations are subject to profound institutional pressures generally causing them to become more similar (Ashworth, Boyne and Delbridge 2009; Frumkin and Galaskiewicz 2004). Organizational institutional theory predicts that organizations will become more similar because of coercive, normative, and mimetic institutional pressures (DiMaggio and Powell 1983). Isomorphism can therefore be an outcome of tangible rules and regulation, less tangible rule-like frameworks including norms and conventions, but also uncertainty which lead organizations to mimic what relevant peers are doing. These mechanisms may be especially salient for public sector organizations that have ambiguous goals (Chun and Rainey 2005) and work to satisfy the expectations of a multiplicity of stakeholders such as the government, public and private collaborators, interested organizations and the citizens (Frumkin and Galaskiewicz 2004). Furthermore, the mechanism of mimetic isomorphism is particularly relevant for public organizations because of the uncertainty and complexity that is inherent in many decisions. This uncertainty emerges as a result of vague and ambiguous goals and the common difficulties measuring outputs and outcomes (Wilson 1989). Studies of isomorphism have focused on similarity in organizational forms (Lee and Pennings 2002) and practices (Westphal, Gulati and Shortell 1997). For public agencies trying to maximise outputs within constrained budgets, budget allocation patterns constitute another relevant area of research. While decisions on budget allocations lies at the very core of operations in democratic political systems they are nevertheless likely to be subject to isomorphic pressures. Uncertainty about the outcomes of decisions may render learning and

imitation necessary, and norms may sanction boundaries for acceptable spending policies. Because the workings of norms and learning are distinctively social processes a way to understand their importance in relation to policy decisions is by focusing on the social networks of key individuals in political organizations. Individuals in positions to affect the action and decisions of organizations may themselves be affected by their social connectedness with other individuals in similar organizations.

Ashworth, Boyne and Delbridge (2009) make a useful distinction between compliance and convergence in organizational responses to institutional pressures. Compliance is change in the direction of a coercive pressure; convergence is change towards the norm of the field. This distinction taps into the difference between coercive and normative isomorphism, and illustrates how these need not be aligned. In their study of local governments' responses to governmental pressures for modernization, Ashworth, Boyne and Delbridge (2009) find that most changes are compliant as well as convergent in nature. While other research has documented how public organizations work with coercive, normative, and cognitive constraints on their decisions and action (e.g. Frumkin and Galaskiewicz 2004), the present study complements this research with a focus on how institutional pressures are conveyed between public organizations in networks of political executives.

How Structural Embeddedness Shape Policy Isomorphism

In a tightly connected organizational field like that of Danish municipalities, institutional theory predicts isomorphic pressures to push for similarity. Political decisions are often depicted as either rational solutions to pressing problems or the outcome of intense political struggle or

opposition and few studies have investigated more exogenous sources of policy similarity in local level politics (Houlberg 2000). Especially, a focus on the structural embeddedness of political decisions has been neglected. The data on the network of Danish mayors provides an opportunity to investigate whether and when the network position of a top level political executive matters for policy outcomes. Note that like other studies of interlock networks (e.g. Davis 1991) I investigate how individual level network embeddedness affects an organizational outcome. In this way this argument seeks to bridge levels of analysis and provide a radically different, socially embedded, explanation of policy outcomes in municipalities. The main argument I forward is that institutional expectations and pressures as well as information will be conveyed in the network of mayors, and therefore municipalities with more centrally positioned mayors will be likely to exhibit more policy isomorphism. Like other social actors political executives are embedded in structures that constrain their action. In the network literature the key argument is that actors' purposeful actions are embedded in concrete and enduring relationships that impact those actions and their outcomes (see Granovetter 1985). This argument suggests that actors, far from being free to undertake any action within their own resource constraints, are embedded in a network of relationships that influences their behavior. Political executives and public managers are embedded in a diverse array of relations to a range of differential actors (Park, Rethemayer, Hatmaker 2009). While this embeddedness is recognized in the literature, few studies have investigated its consequences.

Social networks are relational systems that transcend and intersect with the boundaries of organizations (Scott 2008). They shape patterns of information flow and status orders. In this way social networks contribute to developing and spreading shared understandings and meanings among participants. Networks of professionals, for instance connected through shared board

memberships, are likely to consist of “weak” ties (Granovetter 1973). This kind of connections provides organizations with “information regarding the ways in which other organizations are dealing with one or another problem” (Scott 2008, 143). It has been pointed out that social networks transmit information as well as normative expectations (Brass et al. 2004; Podolny and Baron 1997; 676). I therefore argue that two mechanisms explain why networks are related to the transmittal of institutional effects. First, networks facilitate learning and possible imitation (Kraatz 1998). Second, as pointed out by Podolny and Baron social relations “...create and sustain a clear normative framework within which individuals can rationally determine which courses of action are in their interest” (1997: 675). Therefore, networks embed participants in a normative framework of appropriate action and behaviour which shape their actions (Brass et al. 2004).

Different relational processes feed into these mechanisms. First, networks create increased interaction and mutual awareness among participants. Even though the action and decision making of public organizations may be visible to decision makers in other organizations from the outside, the sheer amount of information available today, through for instance databases, news media, consultants, and governmental reports, necessitates some amount of filtering. Social networks shape the attention structure of decision makers, heightening awareness about the action of organizations to which an actor has ties. This effect is illustrated by a Danish mayor:

“You always listen to other mayors. When two mayors at a meeting start discussing a problem, two or three other mayors will listen and go back home and investigate how it is done. Once there was a lot of talk about contracting of home care services and sale-and-lease-back models. You got the impression that they were good ideas. But through the network I learned about bad experiences with these practices that outweighed the possible benefits” (Danske Kommuner 2003, author’s translation).

Second, well defined status orders and patterns of coalitions are developed in networks.

Although the structural part of their argument has received less attention than their thoughts on isomorphism, DiMaggio and Powell (1983) argued early on that the policies and structures of the most central organizations in a field were more likely to be emulated by others (Owen-Smith and Powell 2008). Third, information sharing will be heightened between networked actors. While public organizations working in non-competitive environments, for instance demarcated by clear jurisdictions, may willingly share information and knowledge, social networks are likely to be the conveyor through which this often happen. Relational ties provide attention as well as opportunity for interaction. As stated by a mayor:

“We mayors talk a lot with and about each other. We keep track of what others say and do, and we are critical towards each other. It is a political exchange of ideas which often takes place at a confidential level” (Danske Kommuner 2003, author’s translation).

These processes highlight how interaction between connected actors facilitates imitation as well as spread of practices because of information exchange, norm development, and awareness of others.

Different measures of structural embeddedness have been proposed in the literature. Actors can be said to be embedded when they have ties to a distinct group of other actors (Uzzi 1996). Their level of embeddedness depend on the extent they interact with partners to whom they are connected, or if the partners tend to interact with each other (Granovetter 1985). A way to capture structural embeddedness is by use of measures of network centrality (Provan, Huang and Milward 2009). Network centrality indicates the extent to which an actor occupies a central position in a network and is connected to other actors. (Kilduff and Tsai 2003). By being central

in a network an actor is connected to many other actors and is likely to have access to knowledge about other organizations, but also to be embedded in a normative framework of what constitutes proper or legitimate behaviour. Network centrality in this way may reflect institutional constraint as well as opportunity for information exchange (Brass et al. 2004; Scholz, Berado and Kile 2008; Borgatti and Halgin 2010). Network centrality measures have been widely used in previous research to reflect structural embeddedness (e.g. Huang and Provan 2007; Grewal, Lilien and Mallapragada 2006; Schalk, Torenvlied and Allen 2009).

Through their memberships of different organizations, committees, and boards Danish mayors meet the mayors of other municipalities. At such occasions there will be opportunities to discuss professional issues, learn about alternative ways of doing things, and provide inspiration for others (Kraatz 1998). This is illustrated in quotes from a mayor who was interviewed:

“My network [with other mayors] is used to generate knowledge and contribute to the political direction of my municipality. ...Often the formal occasion of the meetings is not important. Politics are discussed during lunch or over a cup of coffee when the meeting is over” (Mayor C, author’s translation).

Interlocked mayors will be likely to know how much other municipalities spend and how they organize specific service areas. On this background they can evaluate the efficiency and legitimacy of their own decisions. As there is no universally correct expenditure strategy in any of the municipal service areas, knowledge about how other municipalities allocate their resources may provide a valuable benchmark of how to do this. As pointed out by a mayor:

“I use the [publically available] financial key figures a lot as a way to compare my municipality with others. I discuss differences with other mayors. Some times there are good explanations for the differences other times there are opportunities for improvement. ...Take for instance school policies. I have used my contacts with other mayors to discuss ways to reduce costs by getting teachers to teach more” (Mayor B, author’s translation).

The quotes illustrate the importance of social relations with other mayors for understanding the reality behind the accounting numbers which are publically available. By being connected mayors learn about the specificities of practices that are used elsewhere. That is, the mechanism of mimetic isomorphism (DiMaggio and Powell 1983) works through the mayor network as expenditure decisions are surrounded by substantial complexity. Furthermore, normative pressures also flow in the network (Davis and Greve 1997). Mayors with central positions may be constrained by mutual expectations about what the appropriate way to solve a task is. There may be considerable pressures for living up to normative pressures as central mayors seek to maintain their status both among their peers and towards the public. Whether based on learning or norms, mayors are likely to bring input from their social networks into the decision making processes of their home municipality. In total, the baseline hypothesis is:

Hypothesis 1: When the mayor of a municipality is more central in the network of mayors, the municipality will exhibit a higher degree of policy isomorphism.

Moderating Influences in Public Organizations

The effect of relations established through people's co-affiliations have has been documented across a wide range of social settings (Borgatti and Halgin 2010). For instance the importance corporate board memberships (Mizruchi 1996; Davis 1991), memberships in clubs (McPherson 1982), and membership in production teams (Uzzi and Shapiro 2005) have been used as empirical settings. However, when transferring this type of studies to political organizations in the public sector, effects are likely to be moderated by characteristics of this setting. As opposed to executives in private firms, mayors in Denmark operate in a democratic political system. They

need a majority of votes in the municipality council to make political decisions (Christensen, Christiansen and Ibsen 1999). Furthermore, a comprehensive administrative bureaucracy exists which often influence and alter propositions before they are ready for decision in the municipality council. Typically, budgetary propositions are prepared in the administration by civil servants. They are then negotiated in a political committee before being raised in the municipality council. So even if mayors get inspired, pushed, or normatively constrained by their network position, it may not be possible to change anything at the municipality level. Therefore, the null hypothesis is also probable, and the baseline hypothesis may be conditional on other factors.

An important moderating factor to consider is the political power enjoyed by the mayor in the municipality council. More than five parties are represented in most Danish municipality councils. After elections the position as mayor is negotiated among the different parties. Sometimes a mayor's party will only have a minor part of the seats in the council, and the mayor will sit on a mandate provided by a large but often fragile coalition of many parties. In other municipalities mayors may be leading a council based on a solid majority held by only one or a few parties. The political strength of the mayor can be seen as reflected in the proportion of the votes occupied by his or her party. The effect of a network position may therefore be stronger when mayors have more political room to manoeuvre. Thus, I advance the following hypothesis:

Hypothesis 2: The effect of mayor centrality on the level of policy isomorphism in a municipality increases when the party of the mayor has a larger proportion of votes in the municipality council.

Some municipalities may be more susceptible to the influence of a mayor's network position than others. Especially, it can be expected that the size of the administrative bureaucracy of a municipality matters. The administrative organization is in charge of providing public services but also has an important role in preparing propositions and decisions for political committees and the municipality council. The civil servants and all other staff remain in office across elections and build considerable experience and expertise which is likely to supersede the knowledge of the politicians. The importance and strength of the civil servants for decision making in Danish municipalities was indicated in a recent study by Bhatti, Olsen and Pedersen (2009) that showed how municipalities with a higher proportion of highly educated administrative professionals, contract more services to private providers irrespective of political majorities and other technical factors.

In municipalities with more administrative professionals to advise the politicians of the council inputs from individuals are likely to be less important in decision making processes. Even though the mayor is still the top executive, it may be comparably harder to transform inputs and inspiration from other mayors or municipalities to decisions. Contrary to this, in smaller municipalities, with few administrative professionals, the mayors have a much more influential status as the only professional politicians and their social networks may matter much more. A smaller administrative bureaucracy shortens the way to decisions for the mayor who potentially becomes a much more influential conveyor of information and knowledge compared to larger municipalities. Smaller municipalities may also in general be more susceptible to isomorphic

pressures. Because they have a smaller administration, they may under uncertainty be likely to imitate what others have done. In total, I suggest the following hypothesis:

Hypothesis 3: The effect of mayor centrality on the level of policy isomorphism in a municipality increases when the number of administrative professionals in a municipality decreases.

A third factor that is likely to moderate the effect of mayor network embeddedness on policy isomorphism is structural characteristics of the municipality. Specifically, I expect that in more urbanized municipalities, mayor embeddedness is a less important factor for municipal decision making. Though related to the size of the bureaucracy, somewhat different mechanisms may explain why urbanization moderates the relationship between structural embeddedness and policy isomorphism in municipalities. In the provincial parts of Denmark some rather large municipalities exist where the inhabitants are scattered across a large area instead of being concentrated in a town. It is likely that mayor networks will be more influential in such settings regardless of the size.

Municipalities in which inhabitants are mainly living in a single city are likely to have a more modern and idiosyncratic orientation. Typically they have a larger proportion of younger and better educated people among their inhabitants that expects a municipality to develop or maintain an independent identity. More urbanized municipalities may also be able to attract more qualified civil servants. As stated above, this factor is likely to diminish a mayor's individual importance for specific policy decisions.

In more rural municipalities a mayor's input from network peers may oppositely be of greater importance. There is less pressure for maintaining a distinct municipal identity and highly skilled staff is harder to attract, so a mayor's input is comparatively more decisive for the policy process. Although urbanization and size of bureaucracy are likely to be correlated, for these reasons I expect an independent moderating effect of urbanization on the relationship between mayor centrality and policy isomorphism.

Hypothesis 4: The effect of mayor centrality on the level of policy isomorphism in a municipality increases when the degree of urbanization for a municipality decreases.

The last two moderating hypotheses claim that the effect of mayors' social relation may be more important in smaller and more rural municipalities. It is important to emphasize that this does not mean that I expect this type of municipalities to exhibit higher degrees of policy isomorphism. In fact the contrary is more likely. I argue that the incremental effect of network centrality on policy isomorphism is larger in this type of municipalities notwithstanding the overall level of policy isomorphism.

RESEARCH CONTEXT

I test the hypotheses in a study of 268 Danish municipalities (local governments) which are highly comparable semi-autonomous units (Greve 2006). The municipalities are in charge of providing a wide range of public services including schooling, child care, elder care, social measures, libraries, and maintenance of most roads. Denmark is known to have a very high

degree of decentralization (Greve 2006) and municipalities levy their own taxes and enjoy considerable autonomy in how they deliver their services.¹ To illustrate this point, table 1 reports descriptive statistics of the dispersion of expense levels across the three service areas that I use to measure policy isomorphism in this study. The figures reported are for 2005 which is the last year of my analysis.

Insert table 1

The two panels of the table reports summaries of the relative as well as absolute distribution of expenditures to these main areas of municipal service in Denmark. The marked dispersion between lowest and highest values is in both panels remarkable. Public organizations may often in many regards be isomorphic by design or because of tight regulation. This is clearly not the case for the expenditure decisions of Danish municipalities which thus constitutes a relevant research setting for this study of antecedents to inter-municipal similarity.

Danish municipalities are formally led by a council which is elected every fourth year. As it is also the case at the national level, the local level political scene is dominated by three large parties; Social democrats, Conservatives, and Liberals. Smaller parties and local party lists also have seats in many municipality councils. Among the elected members, the council appoints a mayor who is typically the leader of the majority party. The mayor can be re-elected and many serve numerous terms in office. The powerful position of the mayor makes the person a key individual in determining the strategic direction of the municipality, for instance when it comes

¹ The municipalities in Denmark levy their own taxes but are also subsidized by block grants from the national government. Negotiations between government and municipalities about next year's budgets are institutionalized and take place in June (Greve 2006).

to allocating the yearly budgets among service areas². The mayor is formally in charge of the municipality and is in most municipalities the only politician receiving a full time salary. The mayor performs political as well as administrative functions. For the latter task the mayor is supported most closely by a municipal director who is the leading civil servant.

As stated, Danish municipalities constitute a relevant setting for studying policy isomorphism as they have considerable freedom in allocating their budgets among the different service areas they are in charge of (Hansen 1999; Houlberg 2000). This study is not a case of regulatory compliance but rather of diffusion of an institutionalized practice. Different institutional processes are likely to influence the decision making in municipalities. The national government serve as a constituent of regulative institutions which set the wider boundaries for expenditure allocation. For all three areas under study there are mandated minimum service levels which municipalities must fulfil, and an upper limit set by budgetary constraints. However, for all areas the regulatory requirements set rather broad limits to municipal decision making (cf. table 1). More specific pressures for similarity are expected from normative and mimetic forces. For instance, citizens as well as regulative bodies have normative expectations for acceptable levels of municipal service. Furthermore, inter-municipal norms may also set constraints for acceptable limits for what constitutes decent public service delivery. Mimetic forces are likely to be especially powerful as budget allocation is complex and there is no “objectively correct” answer to the difficult question of how to allocate funds between different service areas. As means-ends relations are difficult to untangle there is uncertainty in relation to how much service as specific amount of money will provide. There is also uncertainty in relation to what service levels and

² Note that corruption is not an important issue in Denmark which ranks 2nd in the 2009 Transparency International Corruption Index.

expenditure patterns are considered legitimate among the citizens and other stakeholders. Consequently, to be legitimate in the important area of expenditure allocation, imitative behaviour and isomorphism is likely among the municipalities (Scott 2008). This process is similar to the diffusion of state lotteries among American states that was documented by Berry and Berry (1990). What diffuses in this study, however, is not a discrete practice (like state lotteries) but a less tangible and more dynamic practice, the institutionalized average spending pattern, that vary across years. Municipal compliance is not a discrete event but a continuous variable where some municipalities are close to average spending patterns and others exhibit considerable variation. Another difference to Berry and Berry's study is that while state lotteries are easily observable in other states, it is less clear what specificities, practices, and procedures form the basis of budget allocations. Therefore, direct interaction through social networks is likely to be more influential in the spread of policy isomorphism (Davis and Greve 1997).

METHODS

Dependent variable

Data from two different sources are used for analyses testing the hypotheses. The dependent variable, policy isomorphism, is based on municipal accounting data obtained from the Ministry of the Interior. I chose to focus on three of the largest and most important policy areas for the municipalities; child care, schooling, and elder care. For the present purpose these areas are interesting because municipalities have a high degree of discretion in resource allocations, and the areas constitute very large parts of the total budgets for the municipalities (cf. table 1). They are also interesting because they enjoy public attention, more so than for instance road

maintenance or libraries, and therefore they are important for the external legitimacy of the municipality as well as for politicians seeking re-election.

I obtained per capita data on the municipalities' annual spending in the three areas to calculate a composite measure of expenditure isomorphism. I calculated the variable following approaches of measuring strategic isomorphism (Deephouse 1996; Finkelstein and Hambrick 1990). For year t each expenditure dimension was divided by a municipality's total per capita operating expenses of that year to reflect the proportion of total resources allocated to that area. Next, the absolute difference between a municipality's relative spending in an area and the average relative spending of all municipalities in that area was calculated. This procedure yields a variable indicating how much a municipality deviates from the average spending in a given area measured in percent-point. These absolute differences were then multiplied by minus one to convert their meaning to similarity (isomorphism). The dependent variable *Policy Isomorphism* was created by summing the three indicators. The variable indicates in percent-points how close a municipality, in a given year, is to the average of all municipalities in their distribution of funding to these three key areas of public service. When the variable decreases by one it means that a municipality's spending on these areas relative to its total operating budget has moved away from the average of all municipalities by one percent-point in total. When the variable increases by one it means that a municipality is becoming more similar to the average such that now its combined spending on the three key areas as a proportion of total operating budget is one percent-point closer to the average.

As Denmark is a small country it makes sense to use the grand mean as reference in the construction of the dependent variable. Municipalities are able to compare themselves with other

municipalities across the country with relative ease. However, the available statistics are available only at a quite aggregated level and it is not possible for municipal actors to see what lies beneath observed increases or decreases in numbers. Personal interaction facilitates the interpretation of these data and, I argue, is part of the explanation for municipal variation in policy isomorphism. This is indicated in the following quote from a mayor:

“I participate in a so-called “key figure collaboration” with six other municipalities. When we meet we look at the numbers and learn about what this or that municipality have done to perform well. For instance, our spending in the elder care area has been steadily increasing during the last years without I hear from the citizens that our service is improving. Discussions with other mayors help put a perspective on this development and give ideas to how to reverse it” (Mayor C).

The mayor reports how available statistics form a basis for discussion, but also that this social interaction is important for active utilization of the available data.

Because the relative spending in an area is a figure which is relatively easy to compare and understand for peers as well as the broader public it is useful measure for the purpose of this article. However, I also calculated an alternative specification of the dependent variable based on deviance in the actual expenditure allocations of municipalities rather than the relative (i.e. the actual monetary amount of spending that a municipality diverges from the average). The two specifications are positively correlated (0.21; $p < 0.001$) and yield substantially similar results in the analysis. Because the relative specification of policy isomorphism says more about how the three areas are prioritized, and therefore are more likely to be subject of learning and institutional pressure, I use it in the analysis below.

Independent variables

To construct the independent variables, I use relational network data on all 271 Danish mayors in 2003. The data describes the interlocked professional network of Danish mayors by showing the mutual presence of multiple mayors in more than 600 organizations, boards, and committees. The data was collected by the respected professional journal *Danske Kommuner* (Danish Municipalities) and has not previously been analyzed for research purposes. The data was collected in two phases. In the first phase a questionnaire was distributed to the mayors. The questionnaire asked them to report which organizations they were part of outside their own organization. Phase two subsequently consisted of a comprehensive effort by the investigators, who were trained in social network analytic techniques, to locate the organizational memberships of the mayors based on archival and secondary sources. Information was acquired from a variety of sources including municipality associations, the political parties, municipality homepages, ministries, local media, article databases, and directories of business information. This effort resulted in a large database of mayors' affiliations with a wide range of organizational forums that will be used in this paper. As the data collection was financed by the professional association of municipalities (*Municipalities Denmark*) and reported back to the mayors, validity is considered to be high. In table 2, a list of the five organizations with most mayor co-memberships is reported along with examples of some of the other organizations used for creating the interlock mayor network.

Insert table 2

It can be seen that the data involves a varied amount of organizational affiliations of both regional and national nature. Informal and social connections are not part of the data which consequently constitute a conservative test of network influence.

Affiliation networks have been studied widely in the literature. Affiliations data basically consist of a set of binary relationships between members of two sets of items (Borgatti and Halgin 2010). The two items, mayors and organizations, are related by the binary “is member of” relation. Specifically, this data can be written as an $N \times A$ matrix with N rows and A columns where N is the number of mayors and A the number organizations. The matrix records a 1 for each combination where a mayor is member of an organization and a 0 otherwise. Using Ucinet 6 (Borgatti, Everett and Freeman 2002) the $N \times A$ matrix is collapsed into an $N \times N$ matrix based on mayors’ mutual affiliations with organizations. The value of point N_i, N_j in the matrix is an integer reflecting the number of organizational co-affiliations between the mayors N_i and N_j with 0 indicating the absence of such a relation. Because I am solely interested in the presence of a tie between two mayors in this study, and not the number of co-affiliations, I dichotomize the matrix so all realized ties are denoted by a 1.

Figure 1 shows a network graph of Danish mayors in 2003.

Insert figure 1 around here labelled

Figure 1
Interlock Network of Danish Mayors 2003

In the diagram every pair of mayors that share an organizational membership is connected. It should be noted that 24 mayors are isolated as they are not connected to any other mayor in any

of the professional organizations on which data is collected. Furthermore, it is evident that some mayors are more central than others in that they have connections to a larger number of other mayors.

Actors in a network can be central in various ways, and network centrality is thus measured quite differently depending on which network dynamics are investigated (Kilduff and Tsai 2003). To measure structural embeddedness as conveyor of isomorphic pressures, I follow previous research to operationalize it as degree centrality (Huang and Provan 2007; Schalk, Torevlied and Allen 2010; Grewal, Lilien and Mallapragada 2006). This simply measures the number of other actors a focal actor is connected to - in this case the number of other mayors a specific mayor is connected to through co-memberships of organizations, boards or committees. Unlike other measures of centrality this measure does not take indirect, or second-order, ties into consideration. This makes sense in this study which examines the effects of information flows regarding the decisions made in other mayors' municipalities as well as the constraining force of being in close, direct interaction with many other mayors (Borgatti and Halgin 2010). I argue the proposed mechanisms to be "first-order" network properties in the context under study. Mayors know very well what general kinds of tasks and challenges are faced by other municipalities. However, it is only by direct personal contact that a mayor can learn about the specific details of operations in another municipality. Likewise, while normative influences may in principle be stronger when they come from a highly connected mayor, norms work most strongly as a constraining mechanism when they are shared and exercised by many actors representing a wide range of municipalities. Finally, degree centrality has the advantage of being easier to interpret. Despite the theoretical justification for using degree centrality I also ran analyses using other measures of network centrality. Specifically, it was interesting to investigate the possible

importance of second order ties. That is, if it mattered whether mayors to whom a mayor was connected were themselves connected with many others. Therefore in separate analyses I used Bonacich's power measure and the eigenvector measure which both take this into consideration. Both these measures were highly correlated with degree centrality (0.42 and 0.90 respectively) and the substantial results of the multivariate analyses were unaffected by using these alternative specifications. Because my argument is about the importance of the direct contacts that facilitates information flow and pressure I use *degree centrality* in the analysis.

The mayor network data is collected in 2003 and is, as such, valid for the election period ranging from 2002 to 2005 (elections were held in late November 2001 and 2005 with effect from January the following year). Almost all the organizations, boards and committees on which data is collected are places where mayors sit for the duration of an election term (e.g. committees at the Association of Municipalities) or places where they are personal members for a longer period (e.g. Business network groups or boards). Therefore, it is reasonable to assume a very high temporal consistency of the network data across the years under study. However, it does not make sense to extrapolate the network measures outside the election period under study.

Centrality scores for each mayor were calculated based on the interlock data using Ucinet 6 (Borgatti, Everett and Freeman 2002). In hypotheses 2 to 4 it was expected that the influence of mayor centrality on policy isomorphism is moderated by other factors. To measure the first moderation effect, I obtained data from *Statistics Denmark* on the election results for each municipality in 2001 which covers the period under study. From these data I calculated a variable measuring the *proportion of council seats* in the municipality council held by the party

of the mayor. I created an interaction term by multiplying the proportion of council seats with the degree centrality of the mayor. It should be noted that the main effect of this variable also serves as a control for the competitiveness faced by a mayor and how vulnerable his or her position is. Hypothesis 3 involved the moderating effect of administrative professionals in the municipality. Administrative professionals in Danish municipalities are organized in the union “DJØF”. These professionals have a 5 year university degree in political science, law, or economics and management, and are nowadays occupying almost all traditional civil servant positions in the municipalities. The remaining administrative employees have shorter educations and typically occupy positions as clerks or secretaries. Importantly, “DJØF” has a membership of more than 90 % of the administrative professionals in the municipalities. I include a variable measuring the number of DJØF-members employed in a municipality as a measure of bureaucratic influence (Bhatti, Olsen and Pedersen 2009). With this variable I calculated an interaction term similar to the one above. The main effect of this variable also constitutes a relevant control for the main analysis.

Finally, to test hypothesis 4 stating that mayor centrality is more important in more rural areas, I constructed an interaction term using the degree of *urbanization* obtained from the Ministry of the Interior.

To mitigate problems of multicollinearity, I mean centered the three interaction variables before multiplying them with degree centrality.

Control variables

To isolate the effects of the network measures, I include a number of control variables.

First, because budgetary changes are generally incremental it is likely that policy isomorphism within a given election period is contingent on historical decisions. To assess the importance of mayor network centrality within a period this factor has to be accounted for. To address this issue I might have included a lagged dependent variable in order to estimate changes in policy isomorphism. However, lagged dependent variables are usually highly correlated with disturbance terms (Greene 2003; Johnston and DiNardo 1997). An instrumental variables approach can resolve this problem (Angrist and Pischke 2009). To generate an instrument for the lagged dependent variable (prior policy isomorphism), I regressed policy isomorphism on five variables not entered in the main analysis: a composite municipality service level measure (calculated by the Ministry of the Interior), deviance from the average in service level, actual child care spending, actual elder care spending, and actual school spending. Then I used the predicted value of policy isomorphism, lagged by a year, as the instrumental variable in the final models (for a similar approach see Cannella, Park and Lee 2008).

Next, policy isomorphism and network centrality may reflect some dimensions of municipality stress or fiscal pressure. It is possible that municipalities that have little economic slack or have more disadvantaged inhabitants are more likely to seek benchmarks to emulate. On the other hand, this type of municipality may face tasks so idiosyncratic that they have little possibilities for learning. To control for either type of influence, I include a composite measure for the socio-economic status, the so-called *socio-economic index*, of the municipality calculated by the Ministry of the Interior. Higher values on the socio-economic index indicate higher expenditure needs due to a lower average socio-economic profile. I also include *administrative spending* per capita, *total operating costs* per capita (log transformed), and the average municipal *tax base* per capita to control for such influences.

The three areas constituting the dependent variable are all highly contingent on demographic factors that therefore are also reasonable to control for. I include three variables measuring *proportion of 0-6 year olds* (small children as proportion of whole population), *proportion of 7-16 year olds* (school children as proportion of population), and *proportion of 65+ year olds* (elderly as proportion of population). The size of the municipality is likely to be related to expenditure decisions and mayor networking. I included a variable measuring the number of inhabitants in each municipality. This is an often used proxy for municipality size as the number of citizens in many ways corresponds to the magnitude of the tasks that must be solved, for instance requirements for schooling, child care, and elder care. To correct for skewed distribution I did a logarithmic transformation to create the variable *size*.

It is likely that a mayor's network position as well as potential for influencing the political process is a function of his or her tenure in office. I included the variable *mayor tenure* to control for this. Because of its highly skewed distribution I log transformed it before entering it in analyses. I also included the political party of the mayor in two dummy variables measuring whether a mayor was from either the *social democratic* party or the *liberal* party ("other parties" omitted). These parties occupy the vast majority of mayor positions. Finally, I included dummy variables for two of the years under study (2004 and 2005, leaving 2003 as reference) to make sure that results were not confounded by the election cycle or external shocks like media scandals or national elections.

The variables mentioned above are obtained from the databases of the Ministry of the Interior and the "Mayor Database". All independent variables were lagged by one year to better reflect causality (that is, variables for 2002 explain policy isomorphism in 2003 etc.). There is no data

for three municipalities (København, Frederiksberg, and Bornholm) which have a double status as municipality and county³. Thus, the total number of municipality-year observations in the analysis is 804 (268 municipalities for the three years 2003-05) but reduced to 802 due to a couple of missing values.

Analysis

For each municipality I have observations for each year in the four year election period ranging from 2002 – 2005. While some of the explanatory variables are time-invariant, including degree centrality, majority, size, mayor's party affiliation, the data contains several panels of observations for each municipality with a number of time-varying variables including policy isomorphism, and several financial figures. Different considerations guided the choice of model for the analysis. Time-invariant variables cause problems in time series estimations when one wants to include unit fixed effects. Because I use several time-invariant variables and because of the small t in this case, municipality fixed effects are neither desirable nor feasible to implement. Still, the panel structure of the data, pooling three panels of observations for each municipality, introduces some possible caveats to standard OLS assumptions. First, there may be autocorrelation between a year and the previous year. Second, errors may not be homoscedastic (have unequal variance). To address the first point I conducted a Wooldridge test which tests for serial correlation in the idiosyncratic errors of a linear panel-data model (Wooldridge 2002). This test revealed significant evidence of autocorrelation ($F= 13.278$; $p<.000$). To address the second point I conducted a likelihood ratio test of models including and not including a correction for panel level heteroscedaticity. The model including such a correction yielded a significantly better

³ At the time of this study Denmark was divided into 16 counties with the health care system as their main area of responsibility but also in charge of for instance some types of roads and high schools. The three municipalities serving a double function are, politically as well as financially, not comparable to the remaining municipalities.

fit ($p < 0.000$). Given these challenges and the panel structure of the data I employed a Prais-Winston regression with a panel-specific autoregressive disturbance structure and corrected for panel level heteroscedastic errors. The analysis was done in Stata vs. 10 (the “xtpcse” command with autocorrelation = “psar1” and the option “het” to account for heteroscedasticity). The Prais-Winston estimator is a GLS estimator corrected for first order serial correlated residuals specific to panels (municipalities) rather than across panels.

RESULTS

In table 3 descriptive statistics and correlations are reported.

Insert table 3

Some of the correlations are fairly high. To insure that multicollinearity is not a problem, I calculated variance inflation factors (VIF) for all models reported below. With averages below 3.14 and no VIFs values above 6 multicollinearity is not considered a problem in the first five models in table 4 (Kennedy 2003). In the full model with all interaction terms the VIF level is for three variables between 6 and 8, though still below the usual threshold of 10, indicating that these results should be interpreted with some caution. The average VIF for this model is 3.70. It is worth noting that the dependent variable has an average of -8.43. Remember that this variable was a measure of distance from the average spending which was multiplied by minus one so higher value indicates more policy isomorphism. On average municipalities diverge by a little more than eight percent point from the average municipality in their budget allocations to

the three focal areas. The variable ranges from -32 to -.88. The interpretation is that the municipality which is most dissimilar from the average is 32 percent-point away from the average relative spending in the three areas (this may be combined of distances of e.g. 8, 8, and 16 percent-points for the areas respectively). The closest municipality is less than a percent-point away indicating its small total distance from the averages for all three areas individually as well as combined.

Table 4 reports the results of the analyses of policy isomorphism in Danish municipalities.

Insert table 4

The results are reported in six models predicting policy isomorphism. The first model includes only the control variables. Model 2 includes the direct effect of mayor degree centrality, the subsequent three sequentially present interaction terms to examine the hypothesized conditional effects, and the final model include all variables.

Hypothesis 1 expects a positive effect of mayor centrality on municipality policy isomorphism. Degree centrality has a positive and significant coefficient in model 2 lending support for hypothesis 1. The regression coefficient of 0.04 for mayor degree centrality indicates that, *ceteris paribus*, when the mayor of municipality connects with one additional mayor, the municipality will approach the average spending in the three areas by 0.04 percent-point. Or, an expansion of a mayor's network by 13 more mayors is related to a municipality allocating its resources ½ percent point closer to average (which can be a matter of millions of dollar in budget re-

allocations). Recall from table 3 that the average expenditure distance is 8.4 percent point, so this ½ percent point change amounts to a 16.8 percent ($8.4/0.5$) decrease in an average municipality's distance from the average spending and thereby a substantial increase in policy isomorphism. Models 3 to 5 seek to further unfold this result by testing factors which may moderate the baseline result.

In hypothesis 2 it is expected that degree centrality will be more important for mayors who possess more political power in the municipality council. There is support for this expectation as municipalities with central mayors whose parties hold a higher proportion of council seats in the city council are more likely to exhibit isomorphism in regards to expenditures allocated to the most important service areas (0.59 ; $p < 0.001$). This result indicates that the importance of structural embeddedness increases with the proportion of seats controlled by the party of the mayor. Figure 2 illustrates the moderating effect of the proportion of council seats controlled by the party of the mayor.

Insert Figure 2 around here labelled:

Figure 2
Policy Isomorphism and the Interaction between Degree Centrality and Proportion of Seats

The next model tests hypothesis 3 which posits that network centrality is more important in influencing policy isomorphism for mayors in municipalities with fewer administrative professionals. There is also support for this expectation with the negative coefficient indicating the expected direction of the relation (-0.02 ; $p < 0.01$). This result suggests that it may be easier to translate learning or normative constraints from network positions in organizations with a smaller

bureaucracy. Figure 3 illustrates how the effect of degree centrality is stronger when the number of administrative professionals is smaller.

Insert Figure 3 around here labelled

Figure 3
Policy Isomorphism and the Interaction between Degree Centrality and Administrative Professionals

The final hypothesis concerns a related argument that network centrality is a better predictor of policy isomorphism in more rural municipalities. The coefficient of the interaction between centrality and urbanization is negative suggesting support for the expectation in hypothesis 4 (-0.3; $p < 0.001$). As the level of urbanization decreases the importance of network centrality for policy isomorphism increases. The moderating effect of urbanization is illustrated in figure 4.

Insert figure 4 around here labelled

Figure 4
Policy Isomorphism and the Interaction between Degree Centrality and Urbanization

Model 6 reports a “full model” with all variables. It generally supports the robustness of the hypotheses except for the interaction involving urbanization. However, multicollinearity is a concern for this model which consequently should be interpreted with caution.

Generally the analysis of policy isomorphism in Danish municipalities supports the assertion put forward that the structural embeddedness of political executives has ramifications for decision making. It also highlights some contingencies moderating this relation.

As policy isomorphism is a rarely studied phenomenon, there is reason to note the result of some of the control variables. It is interesting to note that larger municipalities score higher on the measure of policy isomorphism while municipalities with more administrative professionals, interestingly, are more idiosyncratic. Policy isomorphism is also more prevalent among municipalities with lower administrative costs per capita and with a lower tax base. Liberal mayors appear to pursue less isomorphic policies. As could be expected mayor tenure is negatively related to isomorphism indicating that mayor experience is providing more political knowledge and courage and is related to more idiosyncratic policies.

DISCUSSION AND CONCLUSION

This paper has investigated how policy isomorphism in public organizations is shaped by the structural embeddedness of political executives. Structurally embedded executives have access to comprehensive information about decision making and action in other organizations and are more susceptible to normative pressures and constraints from peers. This study illustrates how municipalities tend to converge in their expenditure allocation decisions to the norm of the field when they have mayors who are central in the mayor network. The effect is amplified when mayors have more political power, face a smaller administrative bureaucracy or come from a more rural municipality. The study contributes to our knowledge about public policy and finance, as well as our knowledge about the importance of social networks for the outcomes of public organizations. Importantly the study provides an example of how policy decisions in elected councils can be shaped and influenced by the network of political executives, and how imitation and conformity may supersede “rational” or ideologically grounded decisions.

Much public management research has an instrumental orientation focusing on governance or performance outcomes of decision making. Relatively few studies seek to examine the social and institutional context of decision making and action, for instance by documenting the importance of coercive and normative pressures (Ashworth, Boyne and Delbridge. 2009) or imitation (Frumkin and Galaskiewicz 2004). Danish municipalities exhibit substantial similarity in many respects but have opportunities for divergence in their resource allocation decisions. Some municipalities may favour tax cuts to school renewal; or extra efforts in elder care to cuts in the price for child care. Institutional theory predicts similarity to evolve in a mature field like this one because of coercive, normative, and mimetic processes (DiMaggio and Powell 1983). As municipalities have profound discretion in these policy areas, mainly normative and mimetic pressures for isomorphism are likely to exist in the field. Municipalities may be affected by the substantial uncertainty around these decisions where it is often very hard to evaluate the effects of specific input levels. In situations like those, decision makers are likely to mimic peers facing the same types of decisions (Powell and DiMaggio 1983). Networks of organizational executives constitute an important conveyor of information and learning (Kraatz 1998). This study has illustrated how the network of mayors influences the decisions taken by the municipalities. This result underlines the importance of considering the social context of political executives when examining public finance decisions (Avellaneda 2009). It has recently been shown how mayoral quality as measured by educational background and job related expertise have consequences for financial decisions in Colombian municipalities (Avellaneda 2009). The present research further highlights the importance of key individuals, and especially their network positions, for policy decisions, even in a highly democratic setting like Danish municipalities.

That interlock networks of executives matter for organizational outcomes is well documented in a private sector setting (Davis 1991; Davis and Greve 1997). However, few studies of public sector management have evoked full relational network data to extend these findings into this context (Berry et al. 2004). In public management literature the concept of network is used mostly to describe policy networks or instrumental networks facilitating public service delivery (Berry et al. 2004). This study is among the first to investigate and illustrate the constraining force of structural embeddedness. The study suggests that networks shape action by directing the attention of central actors towards the normal behaviour, the conventions, of the field. They are also likely to be more embedded in normative orders of what constitutes proper or acceptable decision making which can be sustained by peer pressure.

In their influential study Berry and Berry (1990) documented how a range of factors were associated with diffusion of state lotteries. Recent additions have studied the diffusion of job search training programs (Jokisaari and Vuoki 2010) and web site adoption (Jun and Weare forthcoming). While these studies offer important insights into how practices spread, they suffer from a common liability of many diffusion studies by focusing on the adoption of a discrete practice (Schneiberg and Clemens 2005). Most practices that organizations consider for adoption are not discrete but offer opportunities for different degrees of adoption. This study focuses on a less tangible practice, budget allocation similarity, which lies at the core of political organizations. Adoption is not modelled as a discrete process but as a dynamic and continuous variable. By studying the degree of policy isomorphism of municipalities the study offers insights about the spread of complex practices for which adoption falls on a continuum. It is

highlighted how attention to social networks of important actors are important for understanding why some organizations become similar while others differ.

The study also contributes to public management research by illustrating the usefulness and explanatory power of the institutional approach. It has been illustrated how public sectors of different countries around the world are very similar (Drori, Meyer and Hwang 2006; Sahlin-Anderson 2001), but less attention have been paid to isomorphic processes in individual public organizations or agencies within the boundaries of a country (but see Ashworth, Boyne and Delbridge 2009). Many important decisions in public organizations are taken under considerable uncertainty. As the sector furthermore is highly influenced by regulative as well as professional and normative institutions, similarity and isomorphism in structures and practices are likely outcomes as illustrated in the present and other studies (e.g. Frumkin and Galaskiewicz 2004). The institutional approach offers little prescriptive value which may be a main reason why it has not been used more in public management research. This is in sharp contrast to studies in management where institutional theory is widely used (Greenwood et al. 2008). This study aims at contributing to public management research by highlighting isomorphism as an important characteristic of the public sector, even in a core area like expenditure strategy, and social networks of executives as an important driver of the process leading to it.

There are limitations to the analysis presented in the paper. An important issue is the direction of causality. One could argue that municipalities with expenditure policies closer to the average are likely to value the maintenance of good relations with similar municipalities, for instance through mayoral networking. However, several factors speak against this interpretation. First,

mayors are “born” members of many of the formal settings under investigation where they meet other mayors. This means that while they cannot purposefully join a network to interact with a certain group of peers they *are* susceptible to influences and likely to get opportunities for learning as argued here. Second, in network theory a key point is that some connections provide highly similar information and these ties therefore are redundant to maintain (Kilduff and Tsai 2003). Mayors are busy people and it is unlikely that they will actively seek to build an elaborate set of ties to multiple similar mayors. Third, the qualitative evidence presented, though anecdotal, supports an interpretation that mayor networks are an active conveyor of learning and norms.

Another limitation is that the variable constructed to measure policy isomorphism consists of municipal expenditure on three key areas. I use three areas to get a more comprehensive measure, and to better separate conformers and non-conformers. However, future research should investigate the structural embeddedness on other types of policy decisions. The social network data used in the study is unique and provides a rare documentation of the importance of the networks of political executives for public organizations. Still, the data is partial in that it focuses on a professional interlock network. There is no data on networks of a more informal or social character which have been suggested also to be important (Davis and Greve 1997). The data has the advantage of including mayors’ memberships of more than 600 organizations, boards, committees etc. With this study having illustrated that these forums actually constitute a conveyor of information and constraint of real importance, I strongly encourage future research of a more qualitative nature to look into the dynamics of the social relations. The study stipulates a multilevel framework where individual level explanations are related to organizational level outcomes. To gain further knowledge of the underlying mechanisms that explain why

individual actors are important for understanding why some organizations are similar and others are different, qualitative studies should also investigate the strategies with which political executives seek to bring ideas and solutions learned from connected peers into their own organization. How are such ideas legitimized as acceptable? To which degree are they adapted to local circumstances?

Finally, the mayor network represents only one mode of connection between Danish municipalities. Even though mayors are highly influential people, other relations, for instance between administrative or area managers, may also be important and enhance or mitigate the effects of the mayor network investigated here.

Local level politics in Denmark is mainly focused on quite specific local problems and issues which by law are delegated to be handled in the local council. That political decisions in these elected local councils are influenced by the external social network of executives may be a finding with implications for the organization of political decision making. It may even be thought of as a democratic problem. However, I do not wish to imply that the constraining force of social networks needs to be negative. Social networks may indeed facilitate a more or less intended diffusion of information and beneficial practices that would otherwise not have been exposed to a municipality. This may be a main reason why political executives seek opportunities to get connected and interact.

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Table 1

Expenses on three main tasks of Danish municipalities in 2005

Panel A: Per capita expenditures in relation to total per capita operating expenditures

Area	Mean	Std. Dev.	Min	Max
Schooling	0.22	0.03	0.14	0.29
Child care	0.18	0.04	0.08	0.30
Elder care	0.21	0.04	0.10	0.39

Panel B: Expenditures in DKK

Area	Mean	Std. Dev.	Min	Max
Schooling per student	50,611	5,066	40,058	69,349
Child care per 3-10 year old	29,060	5,055	19,501	46,681
Elder care per 67+ year old	37,665	4,587	25,148	56,938

Note. In 2005 100 DKK was around 17 USD.

Table 2

Examples of organizations etc. with mayor co-membership in 2003

Name of organization	Number of mayors among the members
<i>Five largest</i>	
Naturgas Fyn I/S (Gas company). Supervisory board.	17
KMD (IT company owned by the municipalities). Board of representatives.	15
Det skæve Danmark (The "crooked" Denmark). National committee.	13
Gruppen af nye borgmestre (The group of new mayors).	13
Kommuneres Landsforening (Municipalities Denmark). Board.	13
<i>Other examples</i>	
Odsherred Jernbane (Rail road company). Board.	4
Vensyssel Udviklingsråd (Regional development council).	9
Erhvervsråd Lolland Falster (Regional business council).	3
Horsens Folkeblad (Newspaper). Advisory board.	3
VT (Traffic company). Board of representatives.	4

Table 3
Descriptive Statistics and Correlations of Independent Variables^a

	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Policy isomorphism	-8.43	5.15	1																		
2 Proportion of seats	0.43	0.13	0.10	1																	
3 Population (ln)	9.40	0.76	0.06	-0.05	1																
4 Urbanization	0.73	0.16	-0.11	0.01	0.69	1															
5 Socio Economic Index	0.82	0.26	-0.08	-0.12	0.50	0.44	1														
6 Administrative expenses (p/c)	4.76	0.75	-0.32	-0.09	-0.10	0.13	0.37	1													
7 Administrative professionals (1/10)	0.93	2.23	-0.09	-0.08	0.66	0.41	0.37	0.07	1												
8 Total operating costs	31540.11	2979.60	-0.22	-0.13	0.19	0.26	0.62	0.64	0.19	1											
9 Tax base	130143.2	7794.62	-0.31	-0.03	0.33	0.52	0.11	0.38	0.23	0.45	1										
10 Social democratic mayor	0.30	0.46	0.07	0.07	0.24	0.25	0.28	0.07	0.10	0.19	0.04	1									
11 Liberal mayor	0.50	0.50	-0.04	0.16	-0.16	-0.26	-0.22	-0.12	-0.06	-0.16	-0.10	-0.66	1								
12 Mayor tenure	2.16	1.42	-0.13	-0.03	0.04	0.04	0.13	0.15	0.08	0.15	0.09	-0.06	0.08	1							
13 Proportion of 65+ years old	15.72	2.95	-0.04	-0.11	-0.23	-0.31	0.14	0.25	-0.14	0.18	-0.20	0.01	-0.10	0.01	1						
14 Proportion of 0-6 years old	8.75	1.08	0.04	0.09	0.13	0.20	-0.41	-0.41	0.02	-0.34	0.14	-0.11	0.15	-0.11	-0.80	1					
15 Proportion of 7-16 years old	13.64	1.26	0.12	0.07	-0.38	-0.28	-0.57	-0.27	-0.32	-0.28	-0.09	-0.21	0.21	-0.09	-0.54	0.58	1				
16 Year 2004	0.33	0.43	0.00	0.00	0.00	0.00	0.00	-0.03	0.00	-0.02	-0.09	0.00	0.00	0.00	0.00	-0.01	0.01	1			
17 Year 2005	0.33	0.43	0.00	0.00	0.00	0.01	0.02	0.25	0.00	0.38	0.45	0.00	0.00	0.00	0.04	-0.08	0.08	-0.50	1		
18 Lagged dependent variable (instr.)	-8.43	1.64	0.34	0.13	-0.46	-0.51	-0.19	-0.17	-0.40	-0.35	-0.59	-0.11	0.11	-0.04	0.22	-0.30	0.18	0.01	-0.05	1	
19 Degree Centrality	12.77	9.01	0.08	0.11	0.15	0.09	0.09	0.01	0.11	0.03	0.04	0.10	-0.01	0.03	-0.09	0.01	-0.04	0.00	0.00	0.01	1

^aN = 802. Correlations with an absolute value > 0.07 are significant with p < 0.05.

Table 4
Regression Results Predicting Policy Isomorphism^a

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Proportion of seats	1.50 (1.23)	1.42 (1.28)	-5.53** (2.03)	1.44 (1.25)	1.37 (1.17)	-4.98** (1.90)
Population (ln)	3.39*** (0.53)	3.41*** (0.49)	3.34*** (0.43)	3.53*** (0.47)	3.31*** (0.44)	3.46*** (0.47)
Urbanization	-4.36 (3.14)	-4.57 (2.96)	-4.04 (2.79)	-4.79 (2.92)	0.28 (2.91)	-3.13 (3.63)
Socio Economic Index	-2.66** (0.88)	-2.59** (0.87)	-2.51** (0.82)	-2.71** (0.86)	-2.83** (0.90)	-2.90** (0.89)
Administrative spending (p/c)	-0.20 (0.18)	-0.25 (0.18)	-0.21 (0.19)	-0.14 (0.18)	-0.15 (0.18)	-0.12 (0.18)
Administrative professionals (1/10)	-0.33*** (0.07)	-0.34*** (0.07)	-0.31*** (0.06)	-0.05 (0.13)	-0.35*** (0.07)	-0.10 (0.10)
Total Operating Costs (p/c; ln)	-0.99 (2.44)	-1.67 (2.40)	-0.59 (2.20)	-1.82 (2.26)	-0.83 (2.29)	-0.04 (2.12)
Tax base (p/c)	-0.00*** (0.00)	-0.00*** (0.00)	-0.00** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)	-0.00** (0.00)
Social Democratic Mayor	0.10 (0.39)	-0.19 (0.37)	0.35 (0.41)	-0.22 (0.33)	-0.21 (0.34)	0.16 (0.36)
Liberal Mayor	-2.01*** (0.43)	-2.00*** (0.45)	-1.38** (0.44)	-2.12*** (0.45)	-2.15*** (0.43)	-1.59*** (0.45)
Mayor Tenure (ln)	-0.81** (0.27)	-0.73** (0.27)	-0.66* (0.27)	-0.76*** (0.23)	-0.86*** (0.25)	-0.80** (0.24)
Proportion of 65+ years old	0.11 (0.09)	0.09 (0.09)	0.16 (0.09)	0.07 (0.09)	0.09 (0.09)	0.15 (0.10)
Proportion of 0-6 years old	0.65* (0.31)	0.51 (0.28)	0.62* (0.28)	0.55* (0.27)	0.57* (0.28)	0.64* (0.28)
Proportion of 7-16 years old	0.34 (0.18)	0.40* (0.17)	0.43* (0.19)	0.35* (0.17)	0.29 (0.16)	0.38* (0.16)
Year 2004	0.50** (0.16)	0.52** (0.16)	0.39* (0.17)	0.54*** (0.16)	0.55*** (0.16)	0.39* (0.17)
Year 2005	1.48*** (0.35)	1.51*** (0.34)	1.22*** (0.36)	1.57*** (0.33)	1.60*** (0.34)	1.28*** (0.36)
Lagged dependent variable (instrument)	1.05*** (0.13)	1.00*** (0.14)	1.08*** (0.15)	1.00*** (0.13)	1.02*** (0.13)	1.07*** (0.15)
Degree Centrality		0.04* (0.02)	0.03 (0.02)	0.07*** (0.02)	0.06*** (0.02)	0.06*** (0.02)
Centrality x Proportion of seats			0.59*** (0.15)			0.56*** (0.16)
Centrality x Administrative professionals				-0.02** (0.01)		-0.01** (0.00)
Centrality x Urbanization					-0.30*** (0.07)	-0.09 (0.10)
Constant	-11.73 (25.51)	-4.75 (24.96)	-17.61 (23.71)	-3.31 (23.66)	-12.93 (24.26)	-23.25 (23.59)
<i>N</i>	802	802	802	802	802	802
<i>R</i> ²	0.860	0.871	0.868	0.879	0.865	0.878
chi2	805.49	892.75	704.20	981.33	1096.77	781.89

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$