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Cornell University
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Chang Kil Lee and David Strang

"The International Diffusion of Public Sector Downsizing"

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Chang Kil Lee

Government of Korea

David Strang

Cornell University

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Abstract

This paper examines change in government employment among OECD countries between 1980 and 1997, with particular attention to diffusion dynamics. GMM analyses of public sector employment show mutual influence among nations that are geographically close and which trade extensively, but not among trade competitors. Disaggregated analyses show that downsizing is contagious while upsizing is not: proximate downsizers but not upsizers are imitated, and states appear influenced by evidence that downsizing is economically beneficial while ignoring evidence that it is harmful. We argue that emulation and learning are shaped by neoliberal and managerialist discourses that legitimate reductions in the size of the public sector. Major internal sources of public sector downsizing include low rates of economic growth and the parliamentary power of rightist parties.

The twentieth century as a whole, and particularly the three decades after World War II, witnessed steady growth in government size and responsibility. States developed extensive social safety nets, actively managed aggregate demand, and regulated a widening array of economic and social activity. This trajectory of expansion appeared linked to powerful forces of economic development and demographic change, and anchored in a broad political consensus (Wilensky 1975; Flora and Heidenheimer 1982; Pampel and Williamson 1988).

The 1980s and 1990s saw a sea change in public sector growth. Margaret Thatcher and Ronald Reagan led the way with privatization, out-sourcing, and load shedding of public responsibilities. But the shift in direction was not limited to radicals on the right. Country reports to the OECD during the 1990s indicate widespread efforts to reduce the public sector. In 1995, for example, Denmark commercialized its railways and gave business autonomy to its postal service; Finland reduced its Forestry Administration; France "suppressed" 7400 public sector jobs; Greece froze new government appointments; Norway promoted competition between public agencies and private firms; Spain decentralized core government functions; and Sweden reduced public sector employment by 62,000 (OECD 1995).

During the same period, discourse on the appropriate size, role, and functioning of government underwent an even sharper transformation. On the left, O'Connor (1973) and Offe (1984) argued that state growth was driven by contradictory demands for accumulation and legitimation that were ultimately unsustainable. But radical critiques of the state were soon drowned out by conservative ones. Neoliberals advocated limiting government and importing market mechanisms into the public arena (Albert 1993; Pierson 1994). Proponents of the “New Public Management” sought lean public agencies that would be responsive to citizen customers. A consensus on expanding government seemed to have been replaced by a consensus on shrinking it.

Figure 1 gives public sector employment as a percentage of the working-age population from 1965 to 1997 across OECD member states.[1] It shows that aggregate growth in government employment continued throughout the last third of the twentieth century, even when we standardize by population size. There is no general reversal in the size of the public sector, at least when we count heads. To the contrary: on average government employment doubled over some thirty years, from about six percent of the working-age population in 1965 to about 12 percent by 1997.

<Figure 1 about here.>

But Figure 1 also shows the slackening pace of public sector growth. Annual increases of about four and a half percent in the 1960s and 1970s were reduced to increases of a little more than one percent in the 1980s, and less than one percent in the 1990s. There is no dramatic inflection point, and in fact growth steadily decelerates rather than jumping from one linear trend to another. In 1994, growth in the public sector across OECD countries turned negative for the first time.

Considerable heterogeneity in national experiences underlies the aggregate trend. Great Britain’s reduction of more than 30% of its public employment was the most

[1] Data collected by Thomas Cusack from OECD and other sources (see Cusack, Notermans and Rein 1989). Analyses reported below employ a parallel data series covering the period 1980-97. We display the longer data series in Figure 1to provide a sense of the broader trajectory.

dramatic, while New Zealand and Sweden also conducted large-scale downsizing. By contrast, other governments increased in size. The fastest growers were rapidly developing states with small public sectors in 1980: public employment per capita more than doubled in Greece, and rose some 75% in Portugal. But the relative size of government also expanded in Norway and Austria, countries with large public sectors at the beginning of the period.

We work with this heterogeneity to model change in the size of the public sector between 1980 and 1997 across 26 OECD countries. The overall size of government is a composite outcome of administrative, economic, and political processes at many levels, and is influenced by a welter of "named reforms" like privatization, outsourcing, and pay for performance. But a net shrinking of the state was an explicit goal of many in the 1980s and 1990s, and one whose outcome deserves our attention. Government employment provides a good omnibus measure that emphasizes the direct provision of public services.[2]

Our analytic focus is on international diffusion. We ask whether there is evidence of linkages in public employment expansion and retrenchment, such that events in one country are tied to later events in others. We then investigate these linkages to better specify the mechanisms involved. Internal factors like fiscal crisis, economic growth, and ruling party politics are included in all models to develop a stronger test of diffusion hypotheses.

[2] Studies of government expenditure provide a second useful way of assessing theses about shrinking the public sector, and in fact suggest a similar trajectory of slow growth over the period under study. But expenditures are more heavily influenced by business cycle dynamics (like automatic increases in unemployment isurance during economic slowdowns) than are measures of public sector employment. And reductions in public employment speak directly to discussions of the relative efficiency of the public and private sectors, and the overall advantages of lean organizations, which are central to the argument we advance here.

We approach diffusion processes from the institutional perspective in sociology, a line of argument emphasizing the way cultural understandings shape organizational form (Meyer and Rowan 1977; Powell and DiMaggio 1991; Scott 1995). Institutional analyses in organizational research point to coercive, mimetic, and normative processes that promote convergence on organizational models (DiMaggio and Powell 1983). The world polity perspective applies these ideas on the global stage, viewing the historical evolution of the state as informed by a cultural project of social rationalization and expansion of the rights and competence of the individual (Boli et al 1987; Meyer et al 1996). Both applications of the institutional argument seem relevant here.

This theoretical starting point leads us to pay particular attention to policy discourses that characterize the nature and functioning of public administration. Neoliberal economic orthodoxy asserted that a bloated public sector was slowing growth. New organizational and managerial theories argued that all organizations would do more with less. We seek insight into how these discourses affected the size of the public sector, with an emphasis on diffusion and learning as key mechanisms of institutional change.

National Characteristics

Before considering diffusion processes, we briefly review some main lines of argument about internal factors that plausibly influence public employment. Incorporation of these factors makes for a stronger test of a diffusion hypothesis, and also sharpens our ability to detect the role of international influences.

Fiscal stress is one important internal source of government downsizing. Budget deficits may pressure politicians to freeze or shrink state spending and government employment. Or political leaders (like Reagan in 1980 and Bush twenty years later) who wish to cut public programs may use or foster deficits to provide political cover. Fiscal stress also helps explain why countries with very large public sectors, like Sweden, may move to decrease government employment to shift resources to the private sector.

A related argument points to the impact of poor economic performance. Governments presiding over slow growth rates and worsening balances of trade may downsize to improve economic competitiveness, while those doing well may maintain a pattern of economic expansion. This is especially true if the public sector is viewed, not as providing the needed infrastructure for economic growth, but as a luxury and hindrance to private enterprise.

Party politics and the strength of key interest groups provide a third internal source of government downsizing. Margaret Thatcher put privatization, deregulation, and managerialism on the map, and the affinity between small governments and the conservative agenda is clear. We should note, however, that administrative reforms were led from the left as well as the right. For example, Bob Hawke and the Labour Party initiated Australian efforts to shrink and restructure the state.

Trade unions have played a central role in opposition, often arguing that administrative reforms are simply covers for workforce reduction (Brewster et al 2001). This position arises in part out of generalized support for employment protections, market regulation, and the welfare state. Public sector employees are also the fastest growing segment of the union movement, and in some countries the only growing segment, and so have a direct interest in blocking downsizing efforts.

Beyond measurable economic and political differences, efforts to shrink the state can be identified with their cultural base. Castles speaks of “the awfulness of the English” in describing shifts in public management from the 1960s to the 1980s. Neoliberal and managerialist ideas are rooted in the background assumptions of Anglo-American political culture, and have been directly pursued not only in the United States and the United Kingdom but in Australia, New Zealand, and Canada.

International Diffusion

Policy diffusion can be investigated in a variety of ways (Rogers 1995 and Strang and Soule 1998 provide general reviews). Some research is “process tracing” in following the movement of a policy or practice from one location to another. This work permits careful consideration of the role played by external models, and investigation of why and how a specific instance of borrowing or imitation occurs. Other research is “pattern finding” in testing whether the timing of change reflects *a priori* hypotheses about diffusion channels and mechanisms (Strang 1991). While this paper’s empirical analysis is firmly within this second, pattern finding approach, we begin by considering some lessons from process tracing studies.

Bennett (1991) provides a fine discussion of international policy diffusion through examination of the way Canadian and British policymakers attended to the US Freedom of Information Act (FOIA). He notes that an external model can enter into national discourse in multiple ways: as a competitive spur to action (`they’ve got one, we ought to have one too’), an accessible template (`here’s a ready-made solution’), and as vicarious learning (`it works there, it can work here’). Bennett also makes the important point that an external model can crystallize opposition as well as promote mimicry. While Canada modeled its legislation on the FOIA, British policymakers were repulsed by what they regarded as the USA's "costly, cumbersome, and legalistic" approach (Jenkins, quoted in Bennett 1991:46).

Halligan (1996) traces the spread of public management policies between the United States, the United Kingdom, and Australia. A first insight is the important role of formal communication networks. These include bilateral linkages, such as regular meetings and exchange of personnel between Commonwealth countries. They also include broader inter-governmental forums like the OECD and its Public Management Committee. Stable organizational connections make knowledge of external programs and their rationales readily available.

Halligan goes on to recount several concrete instances of policy diffusion. For example, Australia adopted a "efficiency scrutiny" policy in 1986 that was patterned after the system introduced in Britain by Derek Raynor in 1979. American efforts to develop a elite corps of civil servants (the Senior Executive Service of the Civil Service Reform Act of 1978, Carter's "gift to Reagan") were mimicked in Victoria, Australia, and New Zealand. In each instance, common terminology (including the name of the policy), substantive parallels, and case histories provide compelling evidence of diffusion.

International influences can be actively pursued as well. For example, Korea set up an international benchmarking effort in the 1990s to evaluate administrative reforms undertaken by other OECD members. Between 1994 and 1997, its Task Force for Reengineering Governmental Functions collected information about restructuring efforts in the United Kingdom, Canada, the US, Australia, New Zealand, Japan, and

Germany. This effort to benchmark “best practice” informed Korean initiatives to privatize public services, make pay systems more flexible, and decrease the size of the civil service.

While we model temporal patterns rather than investigate concrete borrowings, the process tracing of reform in countries like Australia and Korea help frame our analysis. These cases suggest that diffusion is built on identifiable relationships that connect policy experts and elites. They also remind us that policies spread from one country to another not through blind mimicry but through purposeful action.

Diffusion Mechanisms

We point to three general mechanisms that may underlie international diffusion. The first is communication and mutual sense-making among peers. Much of the literature emphasizes that actors who are strongly tied and frequently interact come to “take the view of the other” and converge in their perceptions (Rogers and Kinkaid 1981). This implies that countries that are close to each other will influence each other more strongly. Closeness can be measured in a number of ways: shared organizational affiliations and participation; high volumes of trade; political alliance; a shared history, culture and language; and geographic proximity.

A second mechanism is rivalry between competitors. This idea is elaborated by Burt (1987), who points to the implicit mimicry that often arises among actors who can potentially replace or supplant each other. For example, American auto and electronics manufacturers were among the most rapid adopters of Japanese quality techniques in the

1970s and 1980s, while firms whose market share was not endangered by Japanese success were slower to respond.

A third mechanism is vicarious learning. Policymakers may treat the behaviors of other countries as experiments whose outcomes provide useful information. If changes in the size of the public sector elsewhere are accompanied by economic benefits, for example, states may seek to imitate the actions that (apparently) led to success. And by the same logic, policies that are accompanied by poor economic outcomes should be avoided.

What Diffuses?

While we assume that all policies have some probability of spreading, some may be more contagious than others. What gives real force to observation of what others do, and leads one practice to spread rapidly while another does not? A purely relational analysis does not respond to this question: it helps us understand why Swedish policy would have a larger impact on Norway than on Portugal, but not what kinds of practices are most likely to flow.

Much recent institutional work (and some earlier diffusion research --- see Menzel 1960) argues that legitimacy accelerates diffusion. Social understandings identify some actors as exemplars who should be learned from, while the actions of others are defined as idiosyncratic or wrong-headed. For example, Fligstein (1985) argues that corporate strategies like diversification become recognizable “mental models” before they widely diffuse from initial experimenters to the business community. Davis, Diekmann and Tinsley (1994) trace the converse process as widely accepted models of diversification are delegitimated and abandoned.

Related lines of argument point to theorization (Strang and Meyer 1993): the extent to which models of behavior are developed in abstract, general terms, and where functional or causal relations are (or at least believed to be) understood. It is here that policy experts devise universally applicable innovations, as "models of action" become "models for action."[3] For example, Cole (1999) describes how American efforts to learn from Japanese management techniques were initially slowed by misunderstandings of the new quality model. As quality gurus theorized and packaged these approaches in ways that resonated with the perceptions of American managers, their diffusion accelerated.

In the 1980s and 1990s, policy discourse legitimated and theorized downsizing. Central to this discourse was the neoliberal turn in public policy, which celebrated market mechanisms and challenged the efficacy of government action. For example, public choice theory delegitimates legislators and bureaucrats as self-interested utility maximizers in sheep's clothing (Niskanen 1971). Chicago-school economists argued that even natural monopolies were disciplined by the threat of competitive entry, providing a rationale for selling off state enterprises and out-sourcing government functions to the private sector.

Emerging models of effective organization also supported downsizing. Public bureaucracies had been built around a Weberian ideal of a well defined division of labor, formally specified rules, and an ethos of professional service. The 1980s and 1990s saw a turn towards opposing ideals, first in the corporate sector, and then in public

[3] Note the strong connection between this argument and the one made by Kogut and Macpherson (2003), who track the theorists.

administration. Theorists spoke of “network organizations” and “virtual organizations,” arguing for the advantages of flexibility and rapid response over standardization and reproducibility (Piore and Sabel 1984). Osborne and Gabler (1992) offered a bestselling roadmap for how public agencies could become entrepreneurial and customer focused.

In the 1980s and 1990s, we contend that neoliberal and managerialist discourses formed a policy paradigm that increasingly framed decisions about the structure and functions of the state. The intellectual coherence of this paradigm is arguably much weaker less than that of the scientific paradigms studied by Kuhn (1970) or even previously dominant macroeconomic paradigms like Keynesianism (Hall 1989). But opponents of public sector downsizing found themselves in debates that privileged economic imagery and modes of analysis (the citizen as a customer/consumer, “responsiveness” via “empowerment”). In a discussion of resistance to neoliberalism in Denmark, hardly a bulwark of neoliberalism, Kjaer and Pedersen (2001: 239) note that “in order to become a participant in the structural policy debate, actors now had to legitimize themselves by reference to being familiar and comfortable, if not masterful, with particular and somewhat exclusive bodies of scientific knowledge.”

One analytic strategy is to model resistance to an apparently hegemonic discourse. Kjaer and Pedersen (2001; also see the papers in Czarniawska and Sevon 1996) advocate this approach, arguing that policymakers select from and rework external models by linking them to internal discourses, policy legacies, and domestic challenges. In this volume, Swank adopts another version of this strategy in considering how the spread of “market conforming” corporate tax rates was conditioned by domestic political structures.

While we appreciate the power of local variations and resistances, our strategy in this paper is to make the converse case --- to establish the power of a dominating discourse. In the 1980s and 1990s, even an unreconstructed Weberian would have been hard pressed to present state expansion as a "reform initiative." Yet plans for limiting government, and for restructuring public administration in ways that implied downsizing, were routinely framed in this fashion. When Korea organized a task force to learn from the experience of other OECD states, for example, the first *reform* it studied was "reduction in government employees"![4]

To argue for the power of neoliberal and managerialist models, we focus on the asymmetry between upsizing and downsizing. In a contest between a delegitimated past (i.e., an expanded public sector now understood to form a "burden") and a well legitimated remedy, the remedy rather than the disease should be contagious. Ideas about market efficiency and organizational empowerment indicated what sorts of policies should be attended to and learned from. Efforts to reduce staff, to decentralize government agencies and draw them into competition with the private sector, and to privatize became virtues to be emulated. And by the same token, cases of public sector expansion became vices to be shunned.

Data and Variables

We study annual change in public sector employment from 1980 to 1997 for 26 OECD member countries: Austria, Australia, Belgium, Canada, Denmark, Finland, France,

[4] **Sin Jungbu Hyuksinron** ("New Government Reforms"), Task Force for Reengineering Government Functions, Ministry of Government Administration, DonMyungSa, 1997. The eight reform areas were: "reduction of government employees," "restructuring government operations," "human resource management reforms," "budget and finance reforms," "performance management," "service quality and introduction of the market principle," "information technology in government," and "regulatory reform."

Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, New Zealand, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.

The dependent variable is the annual rate of change in the level of government employment. This is

$$\Delta \, GE_{it} = \frac{GE_{it} - GE_{it-1}}{GE_{it-1}} \times 100.$$

The scope of public sector employment is ‘general government,’ as defined in Systems of National Accounts (SNA) published by the United Nations. This includes employees of federal, state and local governments; it does not include military forces and employees of public enterprises. Data on government employment was taken from country reports to the International Monetary Fund (IMF). Data points not available from the IMF were taken from Public Sector Pay and Employment data assembled by the OECD.

National Characteristics

We develop two measures of the size of the public sector, since large governments may have both a stronger motive to downsize and also more room to do so. The ratio of government expenditure to GDP is taken from Government Finance Statistics published annually by the IMF. We also calculate the ratio of national population to government employment, which provides a second (inverse) measure of government size (population data taken from International Finance Statistics).

Indicators of national economic performance include the growth rate of gross domestic product (GDP), the trade balance (exports minus imports, standardized by total trade), and the unemployment rate. All measures are taken annually from the

International Finance Statistics of the IMF. In addition, a measure of the state's fiscal position is calculated as the central government's balance of revenues and expenditures (surpluses have positive values, deficits negative values), using data from the Government Finance Statistics of the IMF.

A measure of left party power is drawn from Woldendorp, Keman, and Budge (1998), where the composition of governing parties is coded on a 1-5 scale (1= right party dominance, 5=left party dominance). Union density measures the fraction of the non-agricultural work force that is unionized, taken from ILO statistics.

We count the number of public sector reform initiatives announced by each country each year, based on the OECD's *Issues and Developments in Public Management*. (Reform initiatives in recent years are also collected in http://www.oecd/org/puma/gvrnance/surveys.) These initiatives include not only measures focused on public sector employment but also deregulation, privatization, information technology, and human resources management.

Diffusion Effects

Our general approach to estimating diffusion effects is to relate prior events in other countries to current changes in government size within each "focal" country. For example, change in government employment at t in the United Kingdom is related to change in government employment at $t - 1$ in the United States, France, Sweden, and 22 other OECD countries.

Hypotheses about the structure of diffusion are represented by weighting influence in an appropriate way. Consider a matrix $\mathbf{W}_{ij,t}$ that gives the influence of each country *j* on every country *i*. The aggregate diffusion effect on a country *i* in year *t* is then $\sum_{j=1}^{J} (\mathbf{W}_{ij,t}\ \Delta GE_{j,t-1})$.

A "global" form of diffusion where all countries are equally influential is provided by average employment change across 25 other countries (i.e., $\mathbf{W}_{ij,t}$ equals 1 in all off-diagonal cells). While this is a possible way that influence might be organized, it is easily confused with alternative hypotheses, particularly ones pointing to common environmental stimuli that show stability over time. We thus employ global diffusion as a baseline from which to investigate more structured forms of influence.

As a diffusion mechanism, communication implies that countries in close and frequent contact are more likely to influence each other than those that are distant. We employ measures of economic exchange and geographic location as proxies. Trading relations are represented as the level of imports from the influencing country divided by all imports received by the influenced country (annual trade data is drawn from IMF's Direction of Trade tables). Geographic proximity is represented by whether two states share a common border. Neither of these generic measures capture the concrete communications involved in specific instances of influence or learning, but they should be associated with communication frequencies and mutual orientation (for example, countries sharing a common cultural heritage are likely to trade extensively with each other and/or to be geographically proximate).[5]

The notion of competitive mimicry suggests that rivals attend to each other with

[5] More historically or culturally grounded measures might seek to identify groupings like Scandanavia or Great Briatain and its English-speaking ex-settler colonies. While these measures could certainly be constructed, they also pose problems --- for example, a simple measure of national language identifies the second grouping but not the first. We opt for ease of comparability and operational transparency by focusing on trade and geographic proximity.

particular care. To examine this idea, we use bilateral trade data to construct a measure of the extent to which each pair of countries trade with the same countries. In the network literature, this is a measure of structural equivalence, where $\mathbf{W}_{ij,t}$ is a (normed) function of the correlation in import and export shares across all trade partners. Note that two countries may be competitively close without trading extensively with each other.

Finally, vicarious learning argues that countries respond not to "who does what" but to "what happens when they do it." Learning processes are modelled by multiplying lagged employment change in each country by an economic outcome of interest, and cumulating this term across cases (other than the focal country). This implies a short-term process of backwards looking adaptation, where positive coefficients indicate that countries tend to move towards the policy that worked best in the immediate past.

Three economic outcomes serve as "evidentiary weights." *Learning from economic growth* weights lagged employment change by the rate of GDP growth. *Learning from budgetary health* utilizes the state's budgetary position (for example, positive values give surpluses, negative values deficits). Finally, *learning from trade balances* uses the country's trade balance as a third signal of strong economic performance.[6]

The above measures imply a symmetrical analysis of downsizing and upsizing. For example, a country surrounded by upsizers is treated as likely to upsize (controlling for other influences) to the same degree that one surrounded by downsizers should downsize. Similarly, upsizing and downsizing success stories have the same impact --- the only difference is the direction they push observers.

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[6] This measurement strategy assumes responsiveness to short-term statistical regularities. An expanded analysis might seek to capture the role of success stories, and particularly paradigm-challenging anomalies (Kuhn 1970; Hall 1993) that provide vivid and readily interpretable evidence.

To examine whether the impact of external upsizing and downsizing operate with the same force, we distinguish these cases. For network diffusion, we measure linkages to upsizers and downsizers separately. For example, if four of the six OECD members with which France shares a common border decreased government employment in 1995 and two increased the size of their public sectors, we sum the level of downsizing in four of the neighbors to form a measure of geographic proximity to downsizing while summing the upsizing that occurred in the other two to construct a measure of geographic proximity to upsizing.

To study asymmetries in learning, we separate evidence that downsizing works from evidence that it does not (or equivalently here, that upsizing works). Once again, we construct a sum across countries of the interaction between lagged employment change and economic outcomes. But *evidence for downsizing* is restricted to those cases where downsizing is accompanied by strong performance (rapid economic growth, strong trade balances, or fiscal health) and where upsizing is accompanied by poor performance.[7] *Evidence for upsizing* cumulates the converse cases, where decreases in government employment are followed by poor outcomes or where employment increases are followed by good outcomes.

Table 1 provides descriptive statistics for all variables.

<Table 1 about here.>

Models take the form

[7] In any given year, strong (weak) performers are those whose economic growth is above (below) the mean for OECD member states for that year, or where the value of exports are greater (less) than imports, or where government revenues are greater (less) than expenditures.

$$\Delta GE_{it} = \beta_{1k} X_{it-1,k} + \beta_2 \sum_{i=1}^{N} (W_{ijt}\, \Delta GE_{jt-1}) + \beta_3\, \Delta GE_{it-1} + \omega_{it}$$

We employ General Method of Moments (GMM) estimation (Sevestre and Trognon 1995), which develops a random effects representation of autocorrelation using instrumental variables. Analyses are performed with ETS/SAS.

RESULTS

Table 2 presents regression analyses of change in government employment between 1980 and 1997. Model 1 includes only national characteristics, while subsequent models add diffusion influences. Since the former have stable effects across all models, we present them once and review them first.

Table 2 about here.

Most economic and political factors influence public sector employment in the direction we would expect, though a number of estimated effects are not statistically significant. The most substantial relationships involve the rate of economic growth (rapid growth is associated with government expansion, slow growth with contraction), government size (countries with large public sectors tend to contract relative to those with small public sectors), and political affiliation (leftist party rule promotes employment growth, rightist rule leads towards contraction).

Table 2 also shows the strong proclivity for public sector downsizing among English-speaking countries, net of economic and political conditions. We would generally interpret this effect as a product of the centrality of neoliberal and managerial visions within the political cultures of Great Britain, the US, Canada, Australia, and New Zealand. One indicator of the strength of these affinities is the weak impact of party politics within the English-speaking members of the OECD. Conservatives led the movement towards reducing and restructuring government in three of these countries, while the labor party played the key role in the other two.

Members of the EC also tend to downsize. Analyses exploring differences by decade (not shown) indicate that this effect appears in the 1990s but not the 1980s. An EC effect may thus really be an EU effect indexing Maastricht's requirement that member states "shall avoid excessive government deficits" (Article 104c(1). In addition, downsizing among member nations may reflect responses to the more general problem of structural competitiveness in the context of European integration (Kjaer and Pedersen 2001: 236-8).

We note one dog that hardly barked: the negative but statistically insignificant impact of government reform initiatives. This weak effect is compatible with the argument that reform efforts are often symbolic --- some governments may have announced vigorous programs for change but failed to measurably streamline public employment. We should not leap to the conclusion that reform initiatives are just rhetoric, however; many programs were intended to change how the public sector operates rather than how large it is.

Table 3 reports models of public employment change that include both internal conditions and diffusion influences (we do not report the effects of internal conditions, which change only modestly from those shown in Table 2). The strong positive effect of global diffusion indicates that change in government employment within the OECD as a whole is followed by movement in the same direction in each focal country. One interpretation is that all OECD members influence each other. But external shocks or broad environmental changes might simply be leading countries to act in similar ways over time, producing a relationship that looks like mutual influence.

Table 3 about here.

Models 2 and 3 find that economic exchange and geographic proximity serve to channel international diffusion. Net of aggregate trends, the rate of change in government employment in a focal country during a given year was significantly influenced by prior employment change among trade partners. Similarly, neighbors move towards in each other's direction.[8] Since both relationships are reciprocated, they imply not only that policies diffuse across borders but that influence boomerangs back to its source.

By contrast, there is little suggestion of competitively driven mimicry. Countries that trade with many of the same partners do not tend to follow each other's decisions to enlarge or diminish the public sector. This is striking, particularly because trade partnership and trade competition often go together --- countries that trade extensively with each other also tend to trade with the same third countries.

We also find little support for symmetric forms of vicarious learning, where countries adopt policies that appear to work for others. There is much variation over the 1980-97 period in the empirical relationship between public employment change and key macro-economic outcomes like economic growth, trade balances, and fiscal health. In

[8] Additional analyses (not shown) examine the lag structure of diffusion influences and prior government employment change within the focal country. Effects are strongest in the immediately preceding year, and fall off fairly smoothly over a three year period.

some years, downsizers grew faster than upsizers, while in others they grew more slowly. But these shifting signals are not systematically related to subsequent movements towards increases or decreases in the public sector.

Table 4 examines the argument that downsizing is emulated or learned about more rapidly than upsizing. As described above, we do so by distinguishing the impact of proximate countries that downsize from those that upsize, and separating evidence that downsizing is economically beneficial from evidence that it is harmful. All models continue to control for the full set of national characteristics reported in Table 2.

Table 4 about here.

Downsizing appears to be contagious, while upsizing is not. Reductions in government employment by a trade partner or neighbor lead to reductions in the size of the public sector. But increases in government employment by the same partners or neighbors have negligible effects. We also find no evidence of either upsizing or downsizing effects among trading rivals, which again suggests that proximity rather than competition appears to be the dominant diffusion mechanism.

Even more striking asymmetries appear in vicarious learning. Table 4 indicates that countries act as though they are influenced by evidence that downsizing works: they are more likely to diminish public employment after years when downsizers experienced good economic outcomes and upsizers fared poorly.[9] But they appear unmoved by

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[9] All measures are constructed so a positive coefficient indicates movement in the direction of the signal. A positive impact of *evidence for downsizing* indicates a reduction in public employment (since the interaction of positive economic outcomes and employment decreases produce negative values, as do those

countervailing information. Strong economic performance by upsizers does not lead to upsizing. Nor does weak performance by downsizers. (Again, competitive relations do not serve as a conduit for either sort of learning.)

These asymmetries emerge even though the economic record of upsizers and downsizers was in fact roughly equivalent. The correlation between change in public employment and GDP growth is .04; for trade balance, it is -.16; and for budgetary surpluses, it is -.05. Downsizing was thus accompanied by slightly slower rates of economic growth, somewhat better trade balances, and slightly healthier fiscal positions.

Deductions from these modest and statistically insignificant relationships, we think, say more about the interpreter than the evidence. For example, proponents of an expanded state might conclude from the first correlation that active states provide a social and material infrastructure that promotes economic expansion. Neoliberals might counter that states are often forced to downsize as a response to sluggish growth, and that a correlation of almost zero thus demonstrates that downsizing must have helped turn a bad situation around.[10] One way of interpreting Table 4 is to conclude that neoliberals dominated the discussion.

It is not hard to locate instances where positive outcomes associated with public sector downsizing are accepted at face value, while negative outcomes are explained away. Consider two passages from Korea's 1994 benchmarking project on public administration reform. First, a downsizing success story:

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of negative outcomes and employment increases). A positive effect of *evidence for upsizing* indicates a rise in public employment (since here both terms are either both positive or both negative).

[10] Similarly, in a discussion of the collapse of Southern Cone economies that had enacted liberalization experiments in the 1980s, Kahles (1990) notes that "...evaluations have typically varied according to initial sympathies" (p 45).

"Canada's Public Service 2000 started in November 1989. It mainly included the reduction of organizations, personnel, and budgets. In 1993 and 1994, the prime minister merged a number of small ministries, with the total declining from 32 to 23. In 1995 and 1996, federal employment was cut by 20 percent. The Canadian government has taken off since the 1990 slowdown, has gotten into economic recovery, with a 4.6% GDP growth rate in 1994 the highest among the G-7 leading countries. Canada plans to reduce government employees continuously."[11]

Now consider a contrasting case:

"It is not easy to observe the causal effects of downsizing or government reform in New Zealand. The central government has reduced employment over 60 percent, from 85,278 employees in 1985 to 32,639 employees in 1996. In 1993-94, the government finally attained budgetary surplus which seems the result of government reforms. New Zealand's economy worsened right after government reforms in 1988-89, however, and then switched direction towards growth since 1992. It is difficult to clarify the effect of government reforms on the economy."

In the first case, economic success is implicitly linked to downsizing (even if the timing is a bit off), while in the second economic difficulties accompanying downsizing lead to cautions about the complexity of causal inference.

Table 5 presents models of public sector growth and decline that combine the major diffusion mechanisms identified above --- proximity to downsizers and evidence that downsizing works. We see strong effects of trade-based proximity to downsizers net of vicarious evidence that downsizing is effective, and strong effects of evidence about economic growth and budgetary health net of both measures of network diffusion. Border adjacency and evidence about trade surpluses have weaker effects in these combined models, though all estimated effects are larger than their standard errors. On the whole, the estimated effects of proximity-based diffusion and learning from evidence for downsizing appear remarkably robust.

[11] **Sin Jungbu Hyuksinron** ("New Government Reforms"), 1997. Translations from the Korean conducted by the first author.

Table 5 about here.

DISCUSSION

Contemporary governments are immensely complex organizations. Net shifts toward their expansion or contraction are the result of multiple pressures and decisions made at different levels. Yet it is clear that the overall trajectory of these decisions shifted within OECD members in the 1980s and 1990s, as a long process of state expansion slowed and in some cases, reversed direction.

Regression analysis indicates that change in the size of the public sector is linked to both internal conditions and international diffusion. Interdependencies are particularly strong between countries linked by trade or geography, a result that we interpret as suggesting a large role for communication and mutual sense-making. We see little corresponding sign of mimicry between competitors.

Most tellingly, downsizing appears to diffuse while upsizing does not. Table 6 summarizes the pattern. We find that proximity to downsizers promotes downsizing, but that proximity to upsizers does not promote upsizing. And we find that evidence that downsizing works stimulates downsizing, while evidence that upsizing works has no observable impact.

Table 6 about here.

We understand the differential contagiousness of upsizing and downsizing as a product of their very different status within policy discourse. The neoliberal turn in political economy argued that government was wasteful and inefficient, and that markets could replace planning in many more contexts than had previously been recognized. Organizational analysts contended that smaller was better, and that government should construct an entrepreneurial ethos in decentralized public agencies. Examples of downsizing were broadcast as success stories to be mimicked, while examples of public sector growth were disattended to as parochial at best.

From a diffusion perspective this is an interesting result, since few studies contrast the contagiousness of different practices (Strang and Soule 1998). In fact, the diffusion literature is marked by a selection bias towards investigating practices that have spread in an explosive fashion. One advantage of studying change in public sector employment, rather than the more dramatic “named reforms” of the period like out-sourcing, privatization, and pay for performance (Ikenberry 1989) is that assumptions of rationality and progressiveness are not built into the choice of the dependent variable.

But the pattern documented here is consistent with growing efforts to develop a more comparative agenda. For example, Davis and Greve (1997) contrast the spread of two corporate tactics for avoiding hostile takeovers. They find that the better legitimated response (the poison pill) diffused rapidly through the weak ties of board interlocks, while the less legitimate one (golden parachutes for executives who lost their jobs) spread more slowly through the thicker ties of local business communities. Strang and Still (2003) find that corporate innovations are more likely to diffuse when their underlying goals and technologies are well understood.

A nice illustration of how frames of reference shape communication was reported to us by a Korean official of considerable international experience. He noted that he had felt “some kind of desire to exaggerate the contents and numbers of reforms” in describing his country’s experience within international arenas like OECD/PUMA meetings. The same impulse to “overstate the examples or ideas of reforms in the member countries” resurfaced when he relayed OECD experiences to government leaders at home. As Macy and Willer (2002) show, this sort of biased communication can have powerful effects in generating conformity, leading behavior that no one privately prefers to become collectively reinforced.

More than communication bias is involved, of course. We suspect that advances in the modeling of attention, pattern recognition, and decision making can help us understand why outcomes that confirm expectations are more consequential than outcomes that challenge them. For example, a Bayesian might contend that disconfirming evidence would increase uncertainty and so inhibit adaptive behavior, while confirming evidence would decrease uncertainty and thus promote a rapid response. Inquiry into the microfoundations of biased or theory-driven learning seems of fundamental value.

There are also substantial opportunities for theoretical integration across models of experiential and vicarious learning. For example, Peter Hall (1993) argues that most policy making operates within a paradigmatic frame. Experience gained from past policies and their outcomes routinely feeds back into everyday target setting, but seldom calls the paradigm itself into question. Paradigm shifts require much more --- the accumulation of anomalies (like the puzzle posed by stagflation to Keynesianism), the exhaustion of efforts to stretch the paradigm, the generation of a rival paradigm, and the emergence of a political entrepreneur ready to embrace a new paradigm and make it electorally viable. Hall's public policy analysis relates cultural paradigms to experiential learning in much the same way that we have linked them to vicarious learning.

Finally, the relationship between policy paradigms and diffusion has qualitative as well as quantitative implications --- to *how* downsizing is pursued as well as *how much* downsizing is pursued. For example, the international benchmarking project conducted by Korea pointed not to typical instances of downsizing, but to exemplary ones:

> "Korea should take lessons from .. the strong leadership for enforcing government reforms like that of Roger Douglas, New Zealand's Minister of Finance ... the argument for reducing the role of government through functional reengineering between public and private organizations as in Great Britain ... cutting back to basics as a criterion for the role of government as in the USA ... consensus process for reform as in Canada ... the simplification of administrative procedures in Germany"

In addition, experts critiqued reform efforts for their inadequacies:

> "...the downsizing programs of each country tend to be arbitrarily enforced without some scientific analysis of the process and decision in advance. Just setting a short-term or long-term ceiling for cutbacks, ignoring the costs of downsizing, or neglecting the downsizing process, is an easy option ..."

The recommendations that emerge from this sort of task force are well described as translation (Kjaer and Pedersen 2001). But it is a translation that "cleans up" the empirical behavior of others from the perspective of a professional ideal.

Comparisons and extensions

One of the attractive features of diffusion models is that they travel well. The spread of the same policy in different domains, or of different policies in the same domain, often reveals substantial regularities (Strang and Soule 1998). And the contextual variations that diffusion analyses identify are often theoretically generalizable.

One important comparison is between public sector and private sector downsizing. Since the late 1970s, a wide range of companies have engaged in planned, radical reductions in personnel. For example, IBM downsized by about 36 percent, or 150,000 employees, between 1991 and 1994. Despite the fervor of its advocates, much research shows that downsizing bears a heavy cost: it negatively affects the psychological health and motivation of survivors, disrupts intra-firm networks that get things done, and diminishes organizational performance (De Meuse and Vanderheiden 1994; Morris, Cascio and Young 1999).

Budros' (1997) analysis of corporate downsizing suggests factors that parallel those documented here for the public sector. On the internal side, for example, precipitants include the business cycle and low corporate productivity (mirroring measures of national economic performance), organizational size (consistent with findings about the downsizing of large states), and the views of the CEO (which parallels analysis of ruling party politics).

But corporate downsizing also provides a clear instance of mimicry. Decisions to eliminate personnel in some companies made it easier for others to follow suit --- and later, hard for others *not* to follow suit. As Budros (1997: 233) details,

> "...when few downsizings had occurred in the early 1980s, these acts were regarded as "puzzling" (Hartford Courant August 6, 1983) and it took "guts" to commit them (Business Week Aug 4, 1983:43). In the mid 1980s, staff trims were "in fashion" and so CEOs were "far less reluctant" to do some trimming. Indeed, downsizers began to hear the words: "Everyone else is doing this; how come you aren't?"

By the mid 1990s, observers noted that downsizing was being implemented in organizations that showed a healthy profit (Byrne 1994).

And as in the public sector, the corporate downsizing movement appeared within a supportive cultural context. McKinley, Mone and Barker (1998) point to the rise of ideologies of employee self-reliance. Survivors of downsizing were described as empowered, and even casualties were seen as benefiting from a harsh reminder that they should regard their careers entrepreneurially. And the lean, flat, entrepreneurial public agency advocated by public policy experts like Osborne and Gaebler (1993) is modelled on (theories of) for-profit firms. Analysis of the multi-level connections between public and private sector downsizing thus appears highly promising.

We would also point to two other public sector contexts where diffusion analysis seems useful. This paper has studied downsizing among OECD members, the world's richest and most powerful states. Examination of downsizing in the global South might identify a different set of diffusion dynamics. For example, the International Monetary Fund and the World Bank may play a key role in promoting public sector reform in poorer and more economically dependent countries, while communication among peers might take a back seat.

It would also be useful to contrast the determinants of public sector growth from the 1950s through to the 1980s with those operating in the era studied in this paper. The growth period gave rise to an extended analysis of the "logic of industrialism," of social democratic politics, and of political institutions and organizational legacies. Is an integrated model of the two eras plausible, or do efforts at institutional expansion and retrenchment call for different sorts of explanations (Pierson 1996)? By the argument developed here, we would propose a hypothesis: that before the 1980s it would have been upsizing, not downsizing, that was contagious.

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Table 1. Descriptive Statistics

Variable	Mean	S.D.
ΔGE_{it}	1.3558	2.4323
(log) GDP	5.3369	1.5434
Govt Expenditure/GDP	0.4590	0.7613
Public Employment/Population	1.7776	1.0458
Budget Deficit	-0.1141	0.1141
Unemployment rate	6.8404	4.2327
Trade Balance	0.0098	0.1583
GDP Growth Rate	0.0276	0.0269
Left Party Power	2.4487	1.4705
Union Density	42.1115	21.2801
Centrality of HR Practice	0.7511	0.3622
Government Reform Initiatives	2.7311	2.9522
EC Member	0.6923	0.4620
English-Speaking	0.1539	0.3612
Global Diffusion	1.3540	1.0115
Network Diffusion: Trade Partnership	0.8311	1.1441
Network Diffusion: Common Border	1.0963	1.9045
Network Diffusion: Trade Rivalry	15.9265	13.8936
Learning from Economic Growth	0.0497	0.0405
Evidence for Downsizing	-0.5925	0.9222
Evidence for Upsizing	0.6637	0.3650
Learning from Trade Balances	0.0488	0.1900
Evidence for Downsizing	-2.9477	3.7718
Evidence for Upsizing	2.0295	1.7833
Learning from Budgetary Health	0.1687	0.1776
Evidence for Downsizing	-2.5580	1.5259
Evidence for Upsizing	2.2566	0.6250

Table 2. GMM analysis of the annual rate of change in government employment, national characteristics. 26 OECD countries, 1980-1997.

B_0	2.83	***
(log) GDP	-0.27	***
Budget Deficit	-0.14	
Govt Expenditure/GDP	-0.34	***
Public Employment/Pop.	-0.54	
Unemployment Rate	0.02	
Trade Balance	-0.13	
GDP Growth Rate	9.00	**
Left Party Power	0.14	***
Union Density	-0.01	***
Govt Reform Initiatives	-0.08	***
EC Member	-0.45	*
English-speaking	-0.61	***
Δ GE $_{it-1}$	0.45	***
R^2	.35	
Observations	441	

***: p < .01; **: p < .05; *: p < .10

Table 3. GMM analyses of the annual rate of change in government employment, diffusion and learning effects. 26 OECD member states, 1980-1997.

Global Diffusion	.43***	.20	.30**	.45**	.32	.44**	.46***
Network Diffusion							
Trade Partnership		.27**					
Common Border			.09*				
Competitive Rivalry				.23			
Learning from …							
Economic Growth					.008		
Trade Balances						-1.42	
Budgetary Health							.46

***: p < .01; **: p < .05; *: p < .10
(note: All models control for country characteristics in Table 2.)

Table 4. GMM analyses of the annual rate of change in government employment, upsizing and downsizing effects. 26 OECD member states, 1980-1997.

Global Diffusion	.21	.37***	.28	.32***	.31***	.31***
Network Diffusion ...						
Trade Partnership						
Downsizing	.003**					
Upsizing	.001					
Common Border						
Downsizing		.17**				
Upsizing		-.004				
Competitive Rivalry						
Downsizing			.035			
Upsizing			-.004			
Learning from …						
Economic Growth						
Evidence for downsizing				.24***		
Evidence for upsizing				-.17		
Trade Balances						
Evidence for downsizing					.05**	
Evidence for upsizing					.08	
Budgetary Health						
Evidence for downsizing						.17*
Evidence for upsizing						.11

***: p < .01; **: p < .05; *: p < .10
(Note: All models control for country characteristics in Table 2.)

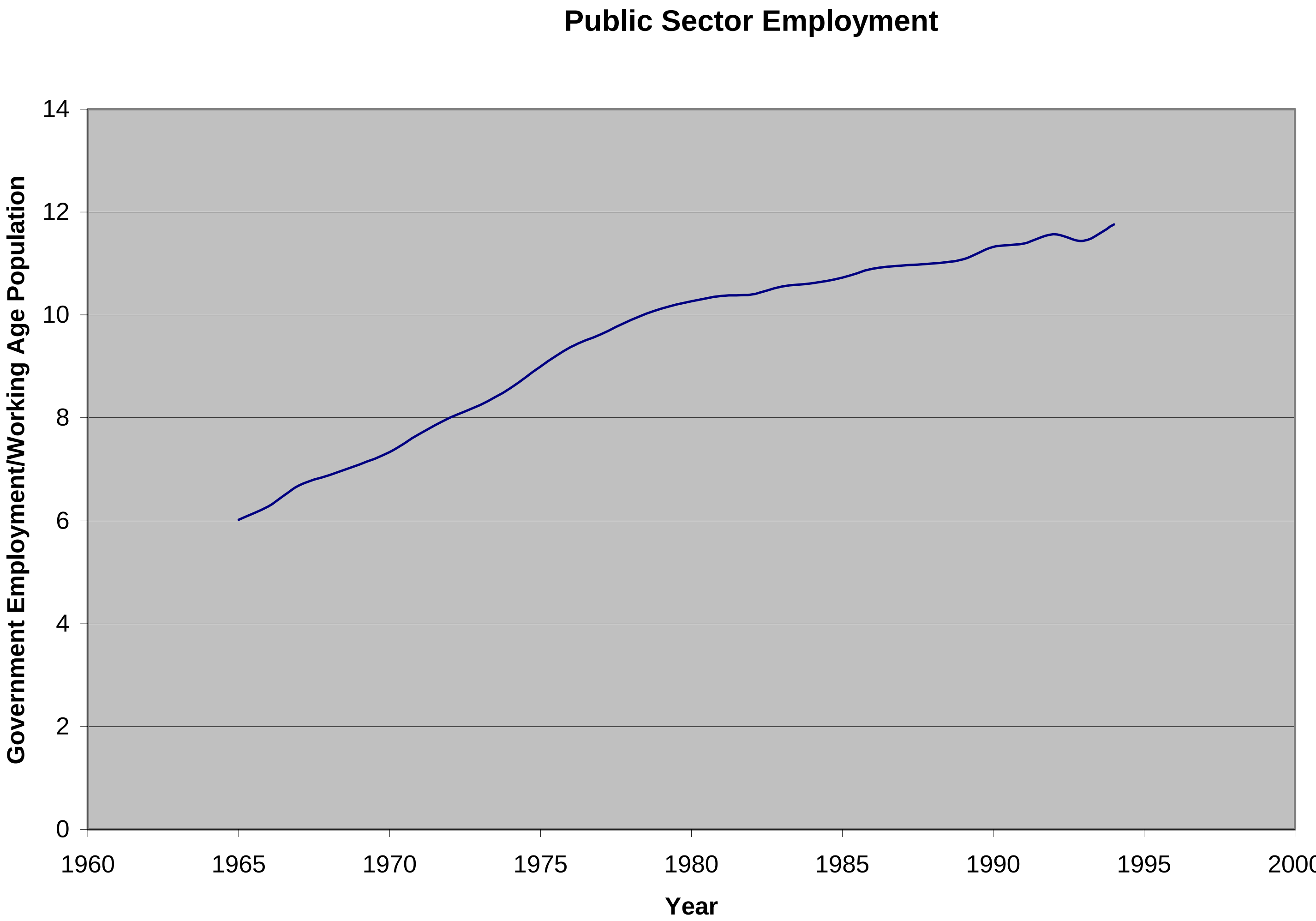
Table 5. GMM analyses of the annual rate of change in government employment, network diffusion and vicarious learning effects in combination. 26 OECD member states, 1980-1997.

Global Diffusion	.20*	.16	.17	.29***	.26**	.27**
Network Diffusion ...						
Trade Partner						
Downsizing	.003**	.003**	.003**			
Shared Border						
Downsizing				.10	.10	.11
Learning from …						
Economic Growth						
Evidence for downsizing	.22**			.20**		
Trade Balances						
Evidence for downsizing		.02			.06	
Budgetary Health						
Evidence for downsizing			.14**			.14**

***: p < .01; **: p < .05; *: p < .10
(Note: All models control for country characteristics in Table 2.)

Table 6. Asymmetries in emulation and learning in change in the size of the public sector, 26 OECD member states, 1980-1997.

	Network Emulation	Vicarious Learning
Downsizers		
Proximity to ...	Promotes Downsizing	
Strong Economic Performance		Promotes Downsizing
Weak Economic Performance		No Impact
Upsizers		
Proximity to ...	No Impact	
Strong Economic Performance		No Impact
Weak Economic Performance		Promotes Downsizing


Public Sector Employment
Government Employment/Working Age Population
14
12
10
8
6
4
2
0
1960
1965
1970
1975
1980
1985
1990
1995
2000
Year